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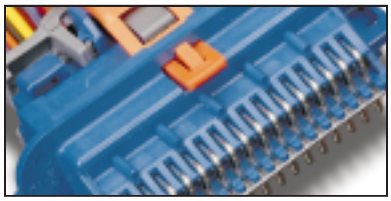

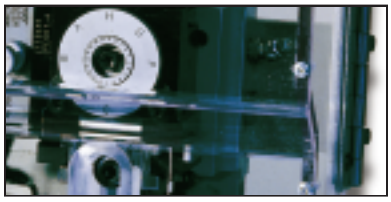

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DELPHI

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http://delphi.com/products/connect

Power & Signal GROUP

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This 2003 Global Connection Systems Catalog contains information and application guidelines for a representative sample of the available Delphi Connection Systems products. These products are subjected to extensive mechanical, electrical, and environmental testing procedures to assure superior quality and performance.

We have made every effort to ensure that the information contained in this document is accurate; however, changes are often made to update our specifications, part numbers, or introduce new product families. An application or sales engineer can help you determine which product best suits your application guidelines. Our global engineering, manufacturing network, and distribution capabilities are available to help you select the most suitable product.

We recommend that you use this catalog as a guide only. For additional part numbers and specifications contact your sales account manager or call your regional support representative at the number listed below.

Specifications subject to change without notice.

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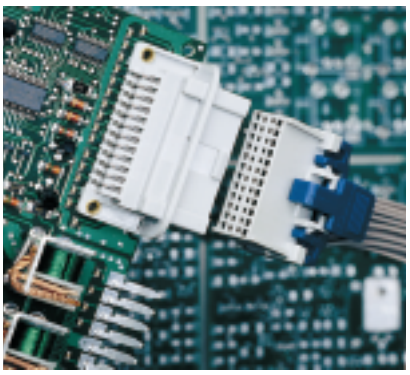
EXPERIENCE

Delphi Connection Systems is a leading supplier of electrical and electronic connection systems, building on its reputation as the world leader in the design, development and manufacture of power and signal distribution systems.

Over the past 110 years, we have continually developed innovative connection systems which continue to exceed the most strenuous performance requirements, and which provide solid value for our customers.

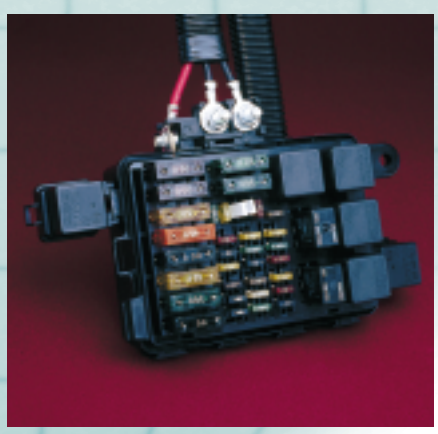
In partnership with our customers, we have been able to anticipate their needs for reliable and cost effective connection systems. That kind of customer focus helps us work towards *Driving Tomorrow's Technology.*



GLOBAL NETWORK

Today, we can support your needs anywhere in the world. With facilities in more than 30 countries on six continents, we employ nearly 90,000 people to support our customers with quality products and systems delivered to your door.

Our global network of comprehensive services includes design, engineering, manufacturing and logistics support. We also provide assistance in training, quality systems development, program management and ergonomic analysis. We will tailor a program to your needs and utilize any combination of these capabilities. Above all, we respect our customer's unique requirements and manage each of their programs in strict confidence.



MILESTONES

1890	1898	1930	1956	1970	1979	1981	1981
Packard Electric was founded by William Doud Packard and James Ward Packard, Warren, Ohio	James Ward Packard develops the first Packard automobile.	Ring Terminal - enables faster installation, easier servicing and greater reliability for high current applications.	56 Series- provides detachable electrical connectors between two or more circuits.	Edge board printed circuit- enables integration of electronic modules to wiring systems.	Weather Pack - the first use of low pressure environmental seals. Set the industry standard for sealing technology. First use of connector locks.	Micro-Pack 100 - a family of electronic connection systems designed to meet the needs of low-energy; high-density applications.	Acquired Kabelwerke Reinshagen GmbH, Wuppertal, Germany and its operations across Europe.

http://delphi.com/products/connect

North American Region 1-800-PACKARD
European Region 49-202-291-2000
Asia Pacific Region 65-730-9900
South American Region 55-12-378-2002

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GLOBAL QUALITY SYSTEM

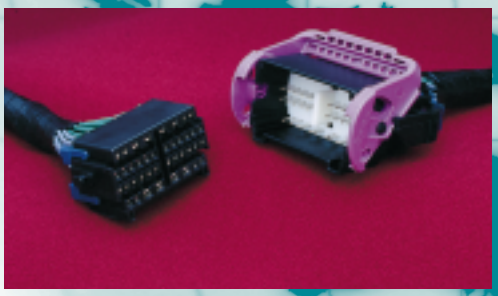
Our customers are assured of consistently high quality and excellent service through disciplined adherence to a comprehensive quality management system. This system surpasses the requirements of internationally recognized quality standards. Throughout the world, our quality system is consistent in each of our locations.

OUR STRENGTH

Nearly 90,000 people around the world employed by Delphi Packard Electric Systems provide both the technical skills and the drive for Excellence needed to be a world leader in Power and Signal Distribution Systems, electrical and electronic systems architecture, and connection systems.

We work to develop partnerships with our customers to clearly identify and exceed their expectations. Our global teams are thorough, responsive, and customer focused.

As a leader in electrical and electronic connection systems, our key is a global communication network linking all of our employees. By leveraging our resources and expertise regionally, we bring the solutions right to your door—wherever that is.



1982	1990	1993	1994	1995	1995	1997	1999
Metri-Pack - utilizes internationally standardized male blade series.With its extended product range, Metri-Pack systems offer significant design and application versatility.	Micro-Pack 100W - the environmentally sealed version of the Micro-Pack series. First 3mm sealed electronic connection.	Acquired Packard-Hughes Interconnect providing advanced technologies such as gold dot, fiber optics and smart products.	Bussed Electrical Centers - utilizes a unique routed wire technology to eliminate splices in the wiring assembly while providing a convenient location to house fuses, relays and other devices.	Automotive Components Group changed its name to Delphi Automotive Systems to establish itself as a global automotive component supplier.	Surpassed $5 billion in total sales to 16 of the top 20 OEM's in 34 countries.	GT Connection Systems - designed with global customer input at every phase. One of the lowest connector engage forces in the industry.	Delphi Automotive Systems becomes a completely independent company. Packard Electric Systems is part of Delphi's Safety, Thermal and Electrical Sector.

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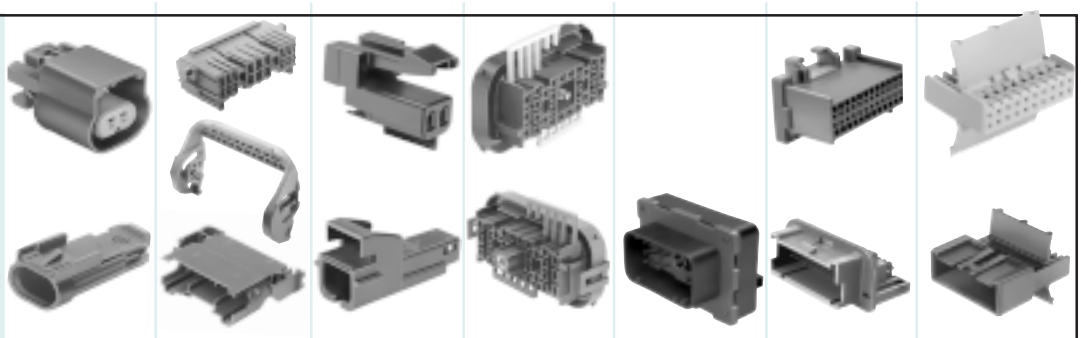
Product Family Selection Guide

Use this as a general guide to find the Product Family to meet your product application needs.
See pages 6 and 7 for specific product line technical data.



	GT Series	GT Lever Lock	Metri-Pack	Junction Systems	Metri-Pack Headers	Micro-Pack	Ducon Series
Unsealed	■	■	■	■	■	■	■
Sealed	■	■	■	■	■	■	■
Max. Continuous Current (amps)							
Low	■	■	■	■	■	■	■
Medium	■	■	■	■	■		■
High			■				■
Tangless Terminals	■	■	▲		▲	▲	
Secondary Terminal Lock or Primary Lock Reinforcement	■	■	■	■	▲	■	■
Secondary Connector Lock	■	■	▲		▲	▲	
In-Line Connections	■	■	■	■		▲	■
Device Connections	■	■	■		■	■	■
PC Board Connections					■	■	
Mechanical Assist		■	▲	■	▲	▲	▲
Conforms to ISO/ SAE Performance Requirements	■ (USCAR)	■ (USCAR)	■ (USCAR)	■	■	■	■
Conforms to ISO/ SAE Blade Standards	■ (USCAR)	■ (USCAR)	■ (USCAR)	■	■	■ (Pin)	■

■ Available ▲ This feature is available on some systems. http://delphi.com/products/connect

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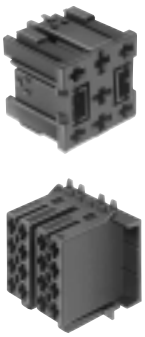
Lamp Sockets	Splice Savers	Weather-Pack	 VF Connections	DS Connections	Electrical Centers	Temperature Sensors	56 Series
■	■		■		■	■	■
■	■	■		■		■	
■	■ ■	■ ■	■ ■ ▲	■ ■	■ ■ ■	■	■ ■ ■
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Product Family Features

Use this as a guide to find the specific product to meet your product application needs.

Product Family	Male Terminal Size Width X Thickness (mm)	Maximum Continuous Current* (AMPS)	Cable Range (mm²)	Functional Temperature Range (°C) -40 to...	Low Energy Termination Resistance mΩ@20mV
GT Series					
150 GT (3.5 Centerline)	1.5 X 0.80	15	0.80-0.35 (SAE) 1.0-0.35 (DIN)	125	< 10
150 GT	1.5 X 0.64	15	1.0-0.35	125	< 10
280 GT	2.8 X 0.64	25	5.0-0.35	125	< 10
GT Lever Locks (Mxd.)	1.5 X 0.64 2.8 X 0.64	15 - 25	5.0-0.35	125	< 10
Metri-Pack(M/P)					
150.2 M/P SlimLine	1.5 X 0.80 (Mating Blade)	14	1.0-0.35	125	< 10
280.1 M/P SlimLine	2.8 X 0.80 (Mating Blade)	30	1.0-0.35	125	< 10
150 M/P	1.5 X 0.80	14	1.0-0.35	125	< 10
280 M/P	2.8 X 0.80	30	5.0-0.35	125	< 10
480 M/P	4.8 X 0.80	42	5.0-0.35	125	< 10
630 M/P	6.3 X 0.80	46	5.0-0.35	125	< 10
Maxi-Fuse 800 M/P	8.0 X 0.80	60	8.0-2.0	125	< 10
Mixed M/P	1.5, 2.8, 4.8, 6.3 X 0.80	14 - 46	5.0-0.35	125	< 10
Junctions M/P	1.5, 2.8, 4.8, 6.3 X 0.80	14 - 46	5.0-0.35	125	< 10
150 M/P Headers	1.5 X 0.80	14	1.0-0.35	125	< 10
280 M/P Headers	2.8 X 0.80	30	5.0-0.35	125	< 10
Micro-Pack					
100	1.0 DIAMETER	5	1.0-0.35	85	< 10
100W (Sealed)	1.0 DIAMETER	7.5	0.80-0.35	125	< 10
Ducon Series					
Ducon 0.8	0.8	15	1.0-0.5	135	< 10
Ducon 1.5	1.5 X 0.8	25	2.5-0.5	135	< 10
Ducon 2.8	2.8 X 0.8	33	2.5-0.5	135	< 10
Ducon 4.8	4.8 X 0.8	45	6.0-0.5	135	< 10
Ducon 6.3	6.3 X 0.8	55	6.0-1.5	135	< 10
Ducon Mixed	1.5 X 0.8 2.8 X 0.8 4.8 X 0.8	15 25 45	2.5-0.5	135	< 10
Weather Pack	Pin and Sleeve	20	3.0-0.35	125	< 10
Splice Savers					
150 GT	1.5 X 0.64	15	1.0-0.35	125	< 10
280 M/P	2.8 X 0.64	25	5.0-0.35	125	< 10
Lamp Sockets	–	4	0.80-0.35	85	–
VF Connections					
VF 2.8	2.8 X 0.80	19	2.5-0.5	125	< 10
VF 6.3	4.8 X 0.80	33	2.5-0.5	135	< 10
DS Connections					
DS 2.8	2.8 X 0.80	19	2.5-0.5	125	< 10
Temperature Sensors	1.5 X 0.80	14	1.0-0.35	125	< 10
56 Series	6.3 X 0.80	49	5.0-0.22	125	< 10

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model.

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Voltage Drop mV/amp	Centerline Spacing (mm) Unsealed	Sealed	Connector Material	Female Terminal Material (Plating)	Male Terminal Material (Plating)	Product Family
						GT Series
< 10.0	–	3.5	PA6 10% GF & 20% GB PA66 HS IM	Tin Brass (Tin)	Tin Brass (Tin)	**150 GT (3.5 Centerline)**
< 10.0	4.0	4.5	PA6 10% GF & 20% GB	Tin Brass (Tin)	Tin Brass (Tin)	**150 GT**
< 4.0	5.5	6.5	PA6 10% GF & 20% GB	Tin Brass (Tin)	Tin Brass (Tin)	**280 GT**
See Above	See Above	See Above	PA66 HS IM	Tin Brass (Tin)	Tin Brass (Tin)	**GT Lever Locks (Mxd.)**
						Metri-Pack (M/P)
< 10.0	–	3.5	PA66 HS IM	Silicon Bronze (Tin)	–	**150.2 M/P SlimLine**
< 3.0	–	5.0	PA66 HS IM	Silicon Bronze (Tin)	–	**280.1 M/P SlimLine**
< 10.0	3.5	6.0	PA66 HS IM, PA6 PBT, PBT 30% GF	Silicon Bronze (Tin)	Tin Brass (Tin)	**150 M/P**
< 3.0	5.0	7.7	PA66 HS IM, PA6 PBT, PBT IM, PBT 30% GF	Tin Brass (Tin)	Tin Brass (Tin)	**280 M/P**
< 3.0	6.9	9.5	PA66 HS IM, PA6	Tin Brass (Tin)	Tin Brass (Tin over Copper)	**480 M/P**
< 3.0	8.5	10.8	PA66 HS IM, PA6	Tin Brass (Tin)	Tin Brass (Tin over Copper)	**630 M/P**
< 3.0	10.3	–	PA66 HS IM, PBT 30% GF	Tin Brass (Silver Nickel)	Tin Brass (Silver Nickel)	**Maxi-Fuse 800 M/P**
See Above	See Above	See Above	See Above	See Above	See Above	**Mixed M/P**
See Above	See Above	See Above	See Above	See Above	See Above	**Junctions M/P**
< 10.0	–	4.0	PBT 30% GF, PET 30% GF, PA66 HS IM	Silicon Bronze (Tin)	Brass (Tin)	**150 M/P Headers**
< 3.0	6.9	–	PA66 HS IM, PBT 30% GF	Tin Brass (Tin)	Copper Alloy (Tin)	**280 M/P Headers**
						Micro-Pack
< 10.0	3.0	–	PBT, PA66 HS IM	Copper Nickel Alloy (Tin)	Tin Brass (Tin)	**100**
< 10.0	–	3.5	PBT, PA66 HS IM	Phosphor Bronze (Gold)	Brass Wire (Gold)	**100W (Sealed)**
						Ducon Series
< 4.0	3.0	–	PA6, PA66	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon 0.8**
< 4.0	4.5	–	PA6	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon 1.5**
< 4.0	–	6.0	PA6	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon 2.8**
< 4.0	6.8	–	PA6	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon 4.8**
< 4.0	–	10.8	PA66	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon 6.3**
< 4.0	–	6.0, 10.0	PA66	Copper Nickel Silicon Alloy (Tin)	Copper Nickel Silicon Alloy (Tin)	**Ducon Mixed**
< 3.0	–	7.7	PA6	Tin Brass (Tin)	Tin Brass (Tin)	**Weather Pack**
						Splice Savers
< 10.0	3.4	4.5	PA66 HS IM	Tin Brass (Tin)	Tin Brass (Tin)	**150 GT**
< 5.0	5.0/6.3	–	PA66 HS IM	Tin Brass (Tin)	Tin Brass (Tin)	**280 M/P**
< 10.0	–	–	PA66 HS IM	Tin Brass (Tin)	–	**Lamp Sockets**
						VF Connections
< 4.0	5.0	–	PA66	Tin Brass (Bronze)	Tin Brass (Bronze)	**VF 2.8**
< 4.0	8.0	–	PA66 15% GF	Tin Brass (Bronze)	Tin Brass (Bronze)	**VF 6.3**
						DS Connections
< 4.0	–	5.0	PA66 30% GF	Tin Brass (Bronze)	Tin Brass (Bronze)	**DS 2.8**
< 10.0	3.5	3.5	PBT 30% GF, PA6 10% GF & 20% GB, PEI 30% GF, PA66 33% GF, PA6, PA66 HS IM	Tin Brass (Tin)	Annealled StainlessSteel (Nickel)	**Temperature Sensors**
< 3.0	10.2	–	PA66 HS IM, PP	Brass (Tin)	Brass (Tin)	**56 Series**

Materials are standard for the designated product line, optional materials may be available.

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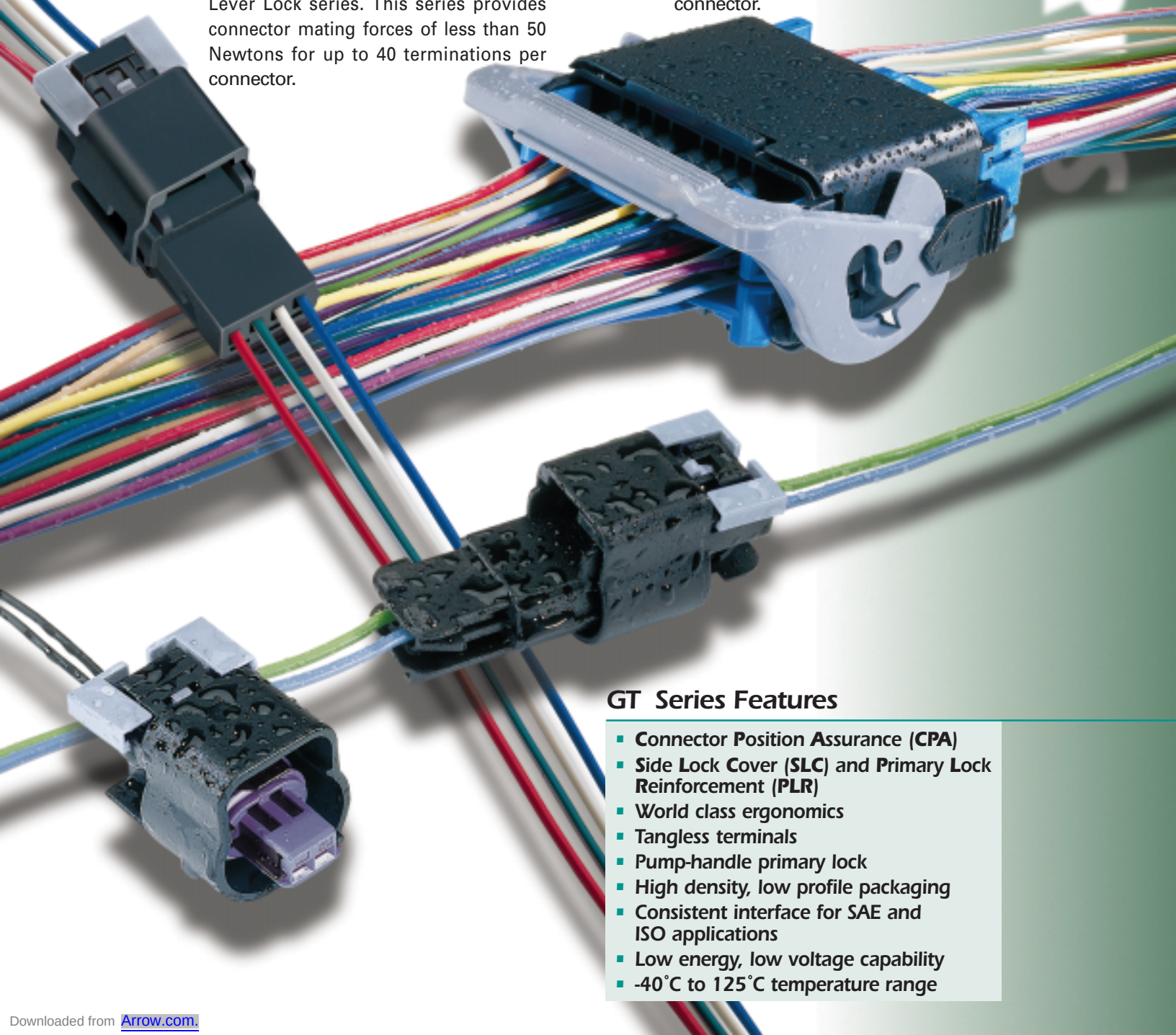
GT Series

150, 280 & Lever Lock

The GT Connection System™ features tangless terminals and offers one of the lowest connector engage forces in the industry. Designed for both 1.50 and 2.80mm blade width applications, GT achieves superior electrical performance that meets or exceeds all known customer requirements, including USCAR standards. The unsealed systems are available in cavity variations between 2-way and 16-way. To maintain world class ergonomics, Delphi Packard introduced the GT Lever Lock series. This series provides connector mating forces of less than 50 Newtons for up to 40 terminations per connector.

The sealed GT Connection System™ utilizes a new two-rib cable seal. This seal is smaller and uses less material than traditional three rib seal designs without impacting performance. The sealed systems are available in cavity variations between 2-way and 16-way. To maintain world class ergonomics, Delphi Packard introduced the sealed GT Lever Lock series. This series provides connector mating forces of less than 50 Newtons for up to 40 terminations per connector.



GT Series Features

- Connector Position Assurance (CPA)
- Side Lock Cover (SLC) and Primary Lock Reinforcement (PLR)
- World class ergonomics
- Tangless terminals
- Pump-handle primary lock
- High density, low profile packaging
- Consistent interface for SAE and ISO applications
- Low energy, low voltage capability
- -40˚C to 125˚C temperature range

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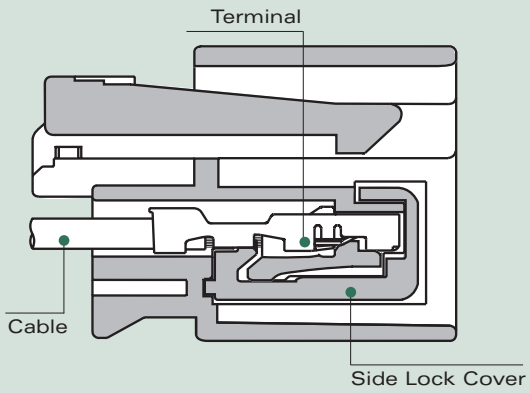
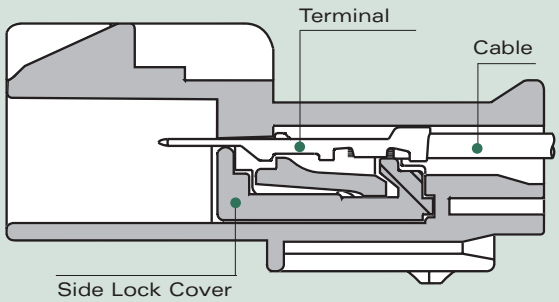
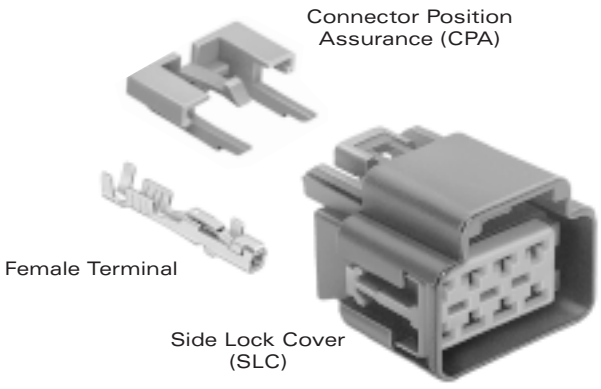
Cross Sectional View



Female Connector Assembly



Male Connector Assembly



Female Connector Assembly

GT 150 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12191811	0.50-0.35	Tin Brass	Tin
12191812	1.00-0.75	Tin Brass	Tin

GT 150 FEMALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector	Color	Material
2	15332129	Black	PA6 10% GF & 20% GB
3	15332132	Black	PA6 10% GF & 20% GB
4	15332135	Black	PA6 10% GF & 20% GB
5	15332138	Black	PA6 10% GF & 20% GB
6	15332141	Black	PA6 10% GF & 20% GB
8	15332145	Black	PA6 10% GF & 20% GB
10	15332153	Black	PA6 10% GF & 20% GB
12	15332161	Black	PA6 10% GF & 20% GB
14	15332169	Black	PA6 10% GF & 20% GB
16	15332177	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

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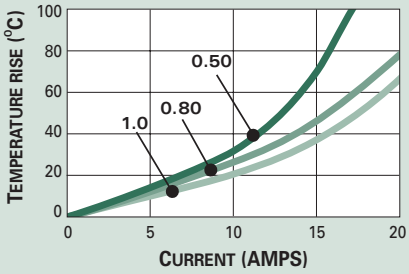
Unsealed System Application Information

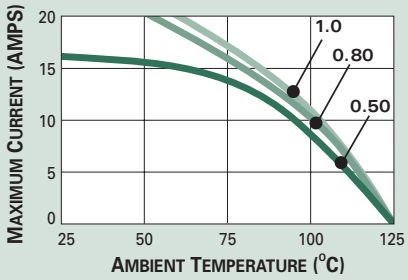
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <10.0mV/amp
CENTERLINE SPACING (mm): 4.0
BLADE WIDTH (mm): 1.5

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector Assembly

Male Terminal

Side Lock Cover (SLC)

GT 150 MALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector	Color	Material
2	15332130	Black	PA6 10% GF & 20% GB
3	15332133	Black	PA6 10% GF & 20% GB
4	15332136	Black	PA6 10% GF & 20% GB
5	15332139	Black	PA6 10% GF & 20% GB
6	15332142	Black	PA6 10% GF & 20% GB
8	15332150	Black	PA6 10% GF & 20% GB
10	15332158	Black	PA6 10% GF & 20% GB
12	15332166	Black	PA6 10% GF & 20% GB
14	15332174	Black	PA6 10% GF & 20% GB
16	15332182	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

GT 150 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304701	0.50-0.35	Tin Brass	Tin
15304702	1.00-0.75	Tin Brass	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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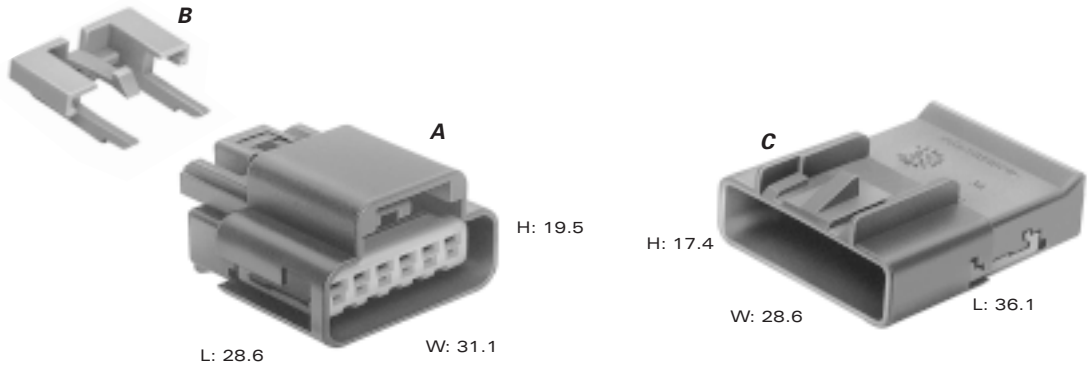

Total Mated Length: 52.1mm

A

PART NO: **15332129**
DESCRIPTION: Connector Assembly 2F
SIZE: 28.6L x 19.5H x 15.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332132**
DESCRIPTION: Connector Assembly 3F
SIZE: 28.6L x 19.5H x 19.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332135**
DESCRIPTION: Connector Assembly 4F
SIZE: 28.6L x 19.5H x 23.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332138**
DESCRIPTION: Connector Assembly 5F
SIZE: 28.6L x 19.5H x 27.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332141**
DESCRIPTION: Connector Assembly 6F
SIZE: 28.6L x 19.5H x 31.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15332130**
DESCRIPTION: Connector Assembly 2M
SIZE: 36.1L x 17.4H x 12.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332133**
DESCRIPTION: Connector Assembly 3M
SIZE: 36.1L x 17.4H x 16.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332136**
DESCRIPTION: Connector Assembly 4M
SIZE: 36.1L x 17.4H x 20.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332139**
DESCRIPTION: Connector Assembly 5M
SIZE: 36.1L x 17.4H x 24.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332142**
DESCRIPTION: Connector Assembly 6M
SIZE: 36.1L x 17.4H x 28.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

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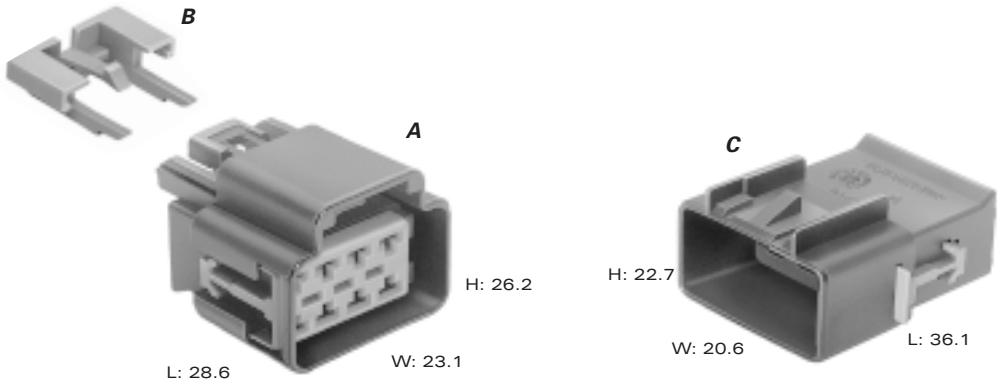

Total Mated Length: 52.1mm

A

PART NO: **15332145**
DESCRIPTION: Connector Assembly 8F
SIZE: 28.6L x 26.2H x 23.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332153**
DESCRIPTION: Connector Assembly 10F
SIZE: 28.6L x 26.2H x 27.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332161**
DESCRIPTION: Connector Assembly 12F
SIZE: 28.6L x 26.2H x 31.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332169**
DESCRIPTION: Connector Assembly 14F
SIZE: 28.6L x 26.2H x 35.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

PART NO: **15332177**
DESCRIPTION: Connector Assembly 16F
SIZE: 28.6L x 26.2H x 39.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 10

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15332150**
DESCRIPTION: Connector Assembly 8M
SIZE: 36.1L x 22.7H x 20.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332158**
DESCRIPTION: Connector Assembly 10M
SIZE: 36.1L x 22.7H x 24.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332166**
DESCRIPTION: Connector Assembly 12M
SIZE: 36.1L x 22.7H x 28.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332174**
DESCRIPTION: Connector Assembly 14M
SIZE: 36.1L x 22.7H x 32.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

PART NO: **15332182**
DESCRIPTION: Connector Assembly 16M
SIZE: 36.1L x 22.7H x 36.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 11

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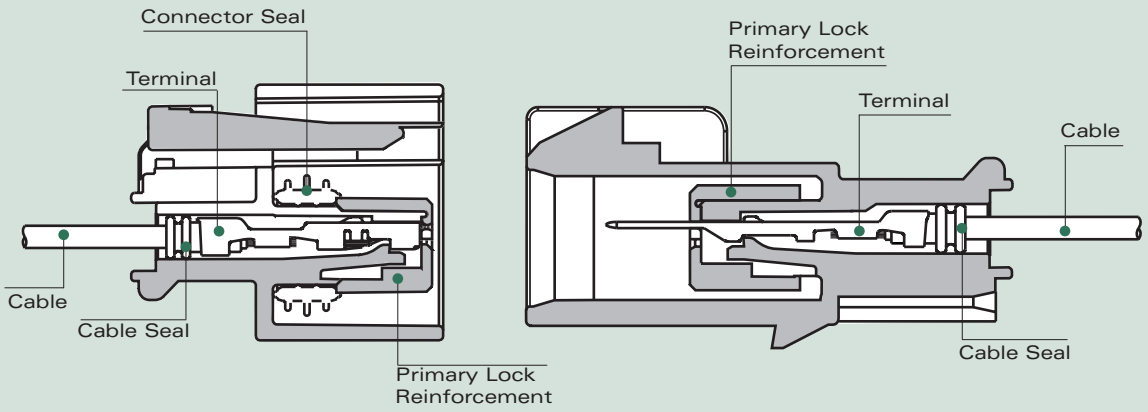
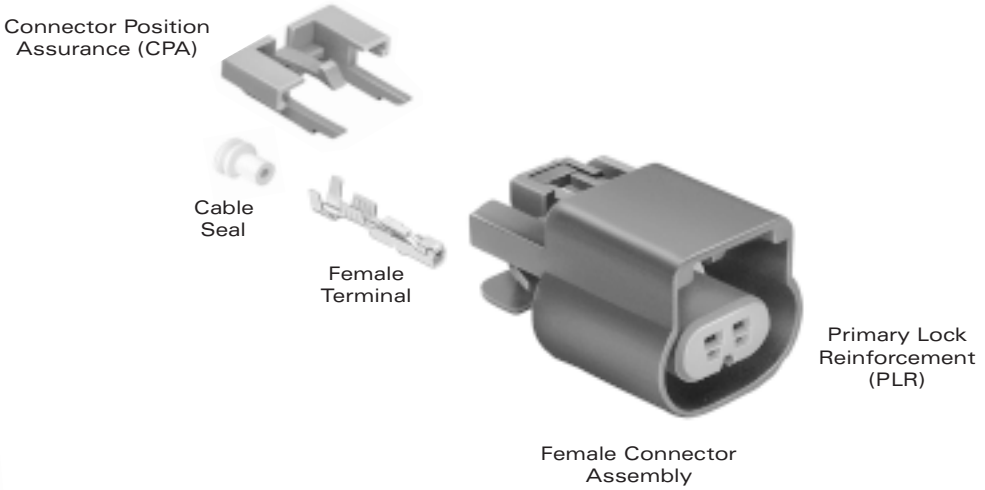
Cross Sectional View



Female Connector Assembly

Male Connector Assembly



GT 150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12191818	0.50-0.35	Tin Brass	Tin
12191819	1.00-0.75	Tin Brass	Tin

GT 150 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191152	15366021	1.20-1.85	Silicone	White
12191153	15366060	1.86-2.25	Silicone	Blue

GT 150 FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
2	15326801	Black	PA6 10% GF & 20% GB
3	15326808	Black	PA6 10% GF & 20% GB
4	15326815	Black	PA6 10% GF & 20% GB
5	15326822	Black	PA6 10% GF & 20% GB
6	15326829	Black	PA6 10% GF & 20% GB
8	15326835	Black	PA6 10% GF & 20% GB
10	15326842	Black	PA6 10% GF & 20% GB
12	15326849	Black	PA6 10% GF & 20% GB
14	15326856	Black	PA6 10% GF & 20% GB
16	15326863	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement (PLR) and Connector Seals are included in the Connector Assemblies listed in this section.

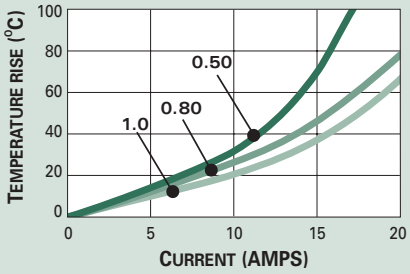
Downloaded from Arrow.com.

Sealed System Application Information

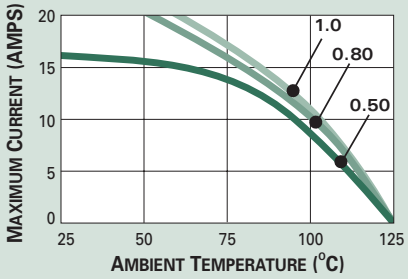
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <10.0mV/amp
CENTERLINE SPACING (mm): 4.5
BLADE WIDTH (mm): 1.5

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

GT 150 MALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
2	15326806	Black	PA6 10% GF & 20% GB
3	15326813	Black	PA6 10% GF & 20% GB
4	15326820	Black	PA6 10% GF & 20% GB
5	15326827	Black	PA6 10% GF & 20% GB
6	15326833	Black	PA6 10% GF & 20% GB
8	15326840	Black	PA6 10% GF & 20% GB
10	15326847	Black	PA6 10% GF & 20% GB
12	15326854	Black	PA6 10% GF & 20% GB
14	15326861	Black	PA6 10% GF & 20% GB
16	15326868	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement (PLR) is included in the Connector Assemblies listed in this section.

GT 150 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326268	0.50-0.35	Tin Brass	Tin
15326269	1.00-0.75	Tin Brass	Tin

GT 150 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
15305171	4.0mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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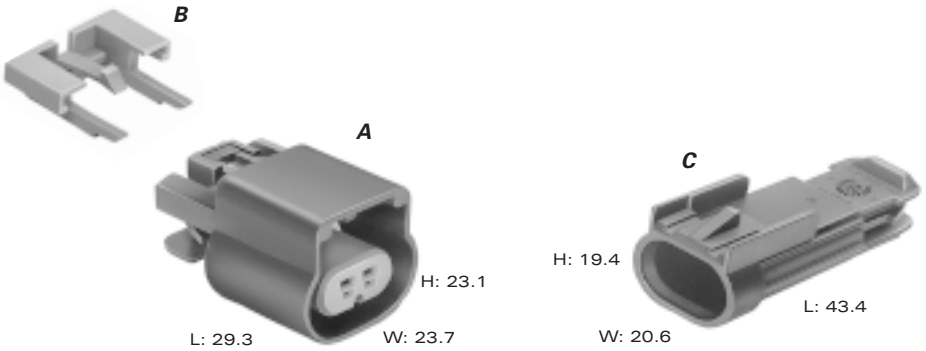

Total Mated Length: 56.7mm

A

PART NO: **15326801**
DESCRIPTION: Connector Assembly 2F
SIZE: 29.3L x 23.1H x 23.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326808**
DESCRIPTION: Connector Assembly 3F
SIZE: 29.3L x 23.1H x 28.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326815**
DESCRIPTION: Connector Assembly 4F
SIZE: 29.3L x 23.1H x 32.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326822**
DESCRIPTION: Connector Assembly 5F
SIZE: 29.3L x 23.1H x 37.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326829**
DESCRIPTION: Connector Assembly 6F
SIZE: 29.3L x 23.1H x 41.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326806**
DESCRIPTION: Connector Assembly 2M
SIZE: 43.4L x 19.4H x 20.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326813**
DESCRIPTION: Connector Assembly 3M
SIZE: 43.4L x 19.4H x 25.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326820**
DESCRIPTION: Connector Assembly 4M
SIZE: 43.4L x 19.4H x 29.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326827**
DESCRIPTION: Connector Assembly 5M
SIZE: 43.4L x 19.4H x 34.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326833**
DESCRIPTION: Connector Assembly 6M
SIZE: 43.4L x 19.4H x 38.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

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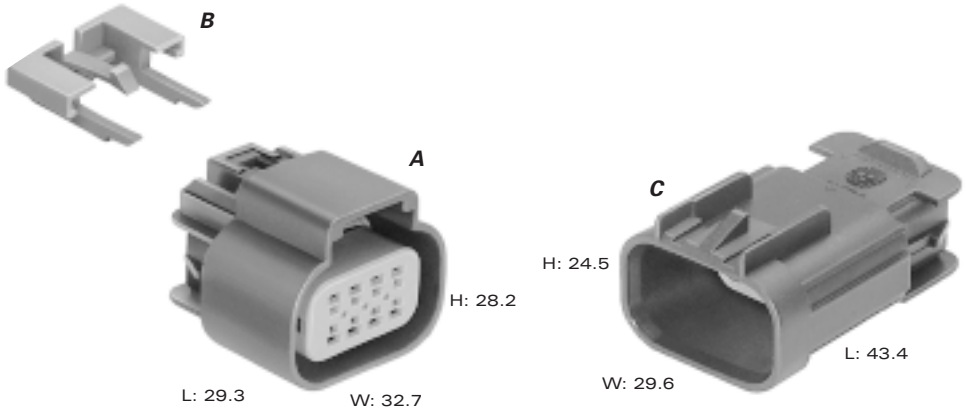

Total Mated Length: 56.7mm

A

PART NO: **15326835**
DESCRIPTION: Connector Assembly 8F
SIZE: 29.3L x 28.2H x 32.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326842**
DESCRIPTION: Connector Assembly 10F
SIZE: 29.3L x 28.2H x 37.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326849**
DESCRIPTION: Connector Assembly 12F
SIZE: 29.3L x 28.2H x 41.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326856**
DESCRIPTION: Connector Assembly 14F
SIZE: 29.3L x 28.2H x 46.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

PART NO: **15326863**
DESCRIPTION: Connector Assembly 16F
SIZE: 29.3L x 28.2H x 50.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 14
SEALS/PLUGS: See Page 14, 15

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326840**
DESCRIPTION: Connector Assembly 8M
SIZE: 43.4L x 24.5H x 29.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326847**
DESCRIPTION: Connector Assembly 10M
SIZE: 43.4L x 24.5H x 34.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326854**
DESCRIPTION: Connector Assembly 12M
SIZE: 43.4L x 24.5H x 38.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326861**
DESCRIPTION: Connector Assembly 14M
SIZE: 43.4L x 24.5H x 43.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

PART NO: **15326868**
DESCRIPTION: Connector Assembly 16M
SIZE: 43.4L x 24.5H x 47.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 15
SEALS/PLUGS: See Page 14, 15

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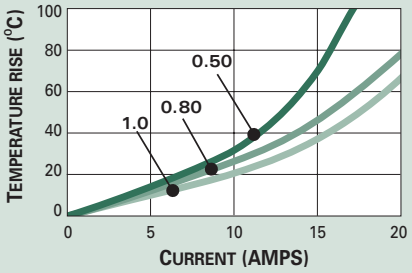
Sealed System Application Information

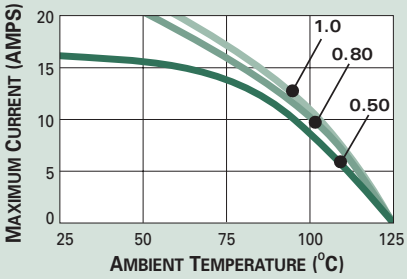
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <10.0mV/amp
CENTERLINE SPACING (mm): 3.5
BLADE WIDTH (mm): 1.5

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*

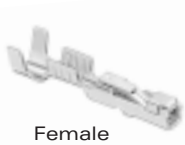


TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Cable Seal



Female Terminal

Mushroom Indexed Primary Lock Reinforcement (PLR)

Unshrouded Female Connector Assembly

GT 150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326266	0.50-0.35	Tin Brass	Tin
15305350	1.00*-0.75	Tin Brass	Tin

*Accomodates 1.00 European Ultra Thin Wall Cable.
Accomdates 0.80 SAE Ultra Thin Wall Cable

GT 150 FEMALE UNSHROUDED CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Indexing	Color	Material
2	15336024	Mushroom	Black	PA6 10% GF & 20% GB
2 TBI	15336027	Mushroom	Black	PA6 10% GF & 20% GB
3	15336029	Mushroom	Black	PA6 10% GF & 20% GB
4	15354716	Mushroom	Black	PA6 10% GF & 20% GB

GT 150 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191155	15366022	1.47-1.85	Silicone	Green
—	15305351	1.70-2.10	Silicone	Yellow

GT 150 CAVITY PLUG*

Part #	Material	Color
15305169	Silicone	Orange

*Cavity plugs seal unused female and male cavities.

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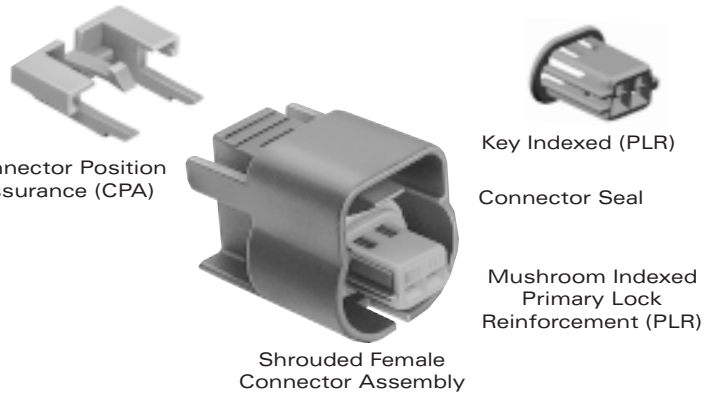
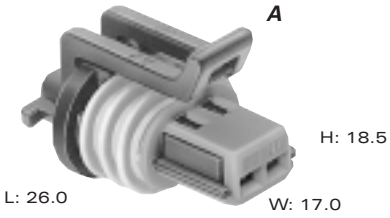


GT 150 FEMALE SHROUDED CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Indexing	Color	Material
2	15336004	Mushroom	Black	PA6 10% GF & 20% GB
2	15355317	Mushroom	Black	PBT 20% GF
3	15336121	Mushroom	Black	PA66 HS IM
3	15355323	Mushroom	Black	PBT 20% GF
4	15355331	Mushroom	Black	PA66 HS IM
4	15355331	Mushroom	Black	PBT 20% GF
5	15326389	Mushroom	Black	PA66 HS IM
5	15355268	Mushroom	Black	PBT 20% GF
6	15336013	Mushroom	Black	PBT 20% GF
2	15335987	Key	Black	PA6 10% GF & 20% GB
2	15355319	Key	Black	PBT 20% GF
3	15326556	Key	Black	PA66 HS IM
3	15355325	Key	Black	PBT 20% GF
4	15336001	Key	Black	PA66 HS IM
4	15355329	Key	Black	PBT 20% GF



Unshrouded Female Mushroom Indexed

A

PART NO: **15336024**
DESCRIPTION: Connector Assembly 2F
SIZE: 26.0L x 18.5H x 17.0W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18

PART NO: **15336027**
DESCRIPTION: TBI Connector Assembly 2F
SIZE: 26.0L x 11.0H x 20.5W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
NOTE: Mates to Throttle Body Injector.

PART NO: **15336029**
DESCRIPTION: Connector Assembly 3F
SIZE: 26.0L x 18.5H x 20.5W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18

PART NO: **15354716**
DESCRIPTION: Connector Assembly 4F
SIZE: 26.0L x 18.5H x 24.0W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18

GT CONNECTOR ASSEMBLY/METRI-PACK PULL-TO-SEAT REPLACEMENT CROSS REFERENCE

GT Connector Assembly	Description	Metri-Pack Pull-To-Seat
15336024	Connector Assembly 2F	12162193, 12162194, 12162195
15336027 TBI	Connector Assembly 2F	12162204, 12162206, 12162208, 12162215, 12162216, 12162217, 12162218
15336029	Connector Assembly 3F	12162182, 12162183, 12162184, 12162185, 12162186
15336035	Connector Assembly 4F	12124846, 12129192, 12162188, 12162189, 12162190, 12162191

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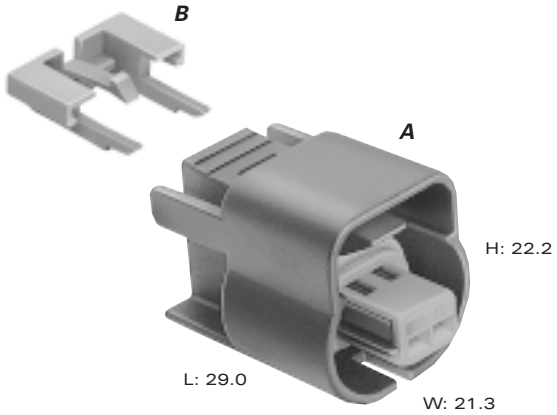


Shrouded Female
Mushroom Indexed

A

PART NO: **15336004***
DESCRIPTION: Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
*See Page 19 for alternative material

PART NO: **15336121***
DESCRIPTION: Connector Assembly 3F
SIZE: 29.0L x 22.2H x 24.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
*See Page 19 for alternative material

PART NO: **15355331***
DESCRIPTION: Connector Assembly 4F
SIZE: 29.0L x 22.2H x 28.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
*See Page 19 for alternative material

PART NO: **15326389***
DESCRIPTION: Connector Assembly 5F
SIZE: 29.0L x 22.2H x 31.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
*See Page 19 for alternative material

PART NO: **15336013***
DESCRIPTION: Connector Assembly 6F
SIZE: 29.0L x 22.2H x 35.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 18
SEALS/PLUGS: See Page 18
*See Page 19 for alternative material

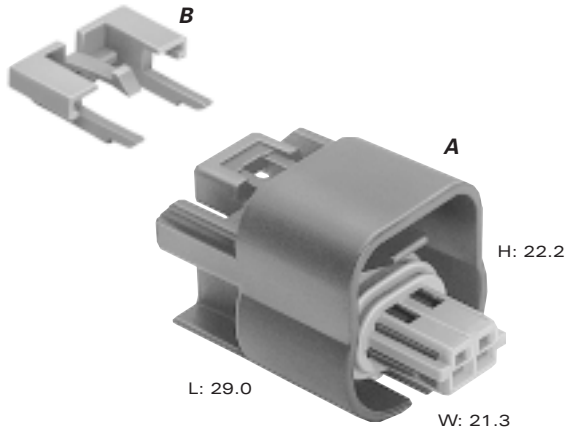
B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

GT CONNECTOR ASSEMBLY/METRI-PACK *SlimLine* CROSS REFERENCE

GT Connector Assembly	Description	Metri-Pack Pull-To-Seat
15336004, 15355317	Connector Assembly 2F	12162193, 12162194, 12162195
15336121, 15355323	Connector Assembly 3F	12162182, 12162183, 12162184, 12162185, 12162186
15326559, 15355331	Connector Assembly 4F	12124846, 12129192, 12162188, 12162189, 12162190, 12162191
15326389, 15355268	Connector Assembly 5F	12162825, 12162826, 12162827
15336013, 15326829	Connector Assembly 6F	12066317, 12162210, 12162260, 12162261, 12162262

Downloaded from Arrow.com.



Shrouded Female
Key Indexed

A PART NO: **15335987***
DESCRIPTION: Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 19
SEALS/PLUGS: See Page 19
*See Page 19 for alternative material

PART NO: **15326556***
DESCRIPTION: Connector Assembly 3F
SIZE: 29.0L x 22.2H x 24.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 19
SEALS/PLUGS: See Page 19
*See Page 19 for alternative material

PART NO: **15336001***
DESCRIPTION: Connector Assembly 4F
SIZE: 29.0L x 22.2H x 28.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 19
SEALS/PLUGS: See Page 19
*See Page 19 for alternative material

B PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

GT CONNECTOR ASSEMBLY/METRI-PACK *SlimLine* CROSS REFERENCE

GT Connector Assembly	Description	Metri-Pack Pull-To-Seat
15335987, 15355319	Connector Assembly 2F	12162197, 12162198, 12162199
15326556, 15355325	Connector Assembly 3F	12162278, 12162279, 12162280
15336001, 15355329	Connector Assembly 4F	12162833, 12162834

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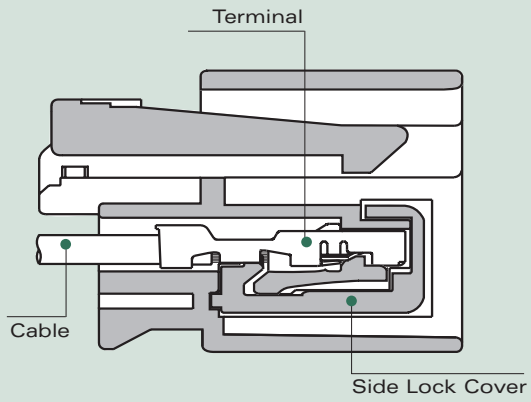
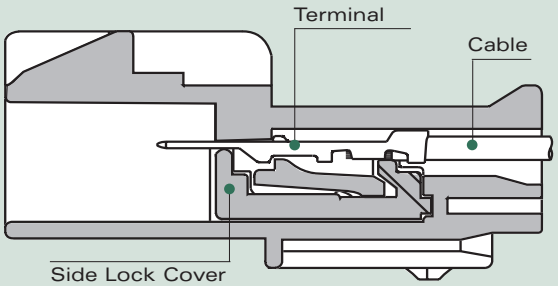
Cross Sectional View



Female Connector Assembly



Male Connector Assembly

Connector Position Assurance (CPA)

Female Terminal

Side Lock Cover (SLC)

Female Connector Assembly

GT 280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304710	0.50-0.35	Tin Brass	Tin
15304711	1.00-0.75	Tin Brass	Tin
15304712	3.00-1.50	Tin Brass	Tin
15304713	5.00-4.00	Tin Brass	Tin

GT 280 FEMALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Conn. Asm.	Color	Material
2	15326870	Black	PA6 10% GF & 20% GB
3	15326877	Black	PA6 10% GF & 20% GB
4	15326886	Black	PA6 10% GF & 20% GB
5	15326893	Black	PA6 10% GF & 20% GB
6	15326900	Black	PA6 10% GF & 20% GB
8	15326924	Black	PA6 10% GF & 20% GB
10	15326931	Black	PA6 10% GF & 20% GB
12	15326110	Black	PA6 10% GF & 20% GB
16	15326952	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

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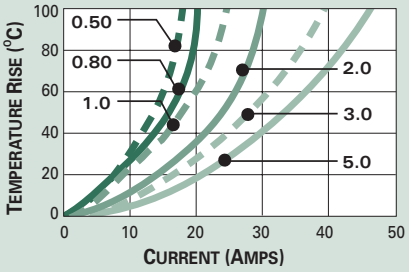
Unsealed System Application Information

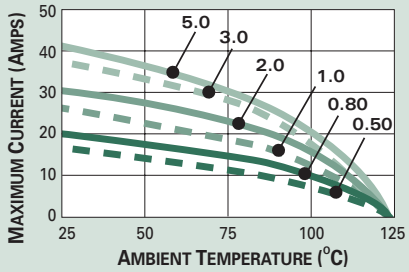
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 5.5
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Terminal

Side Lock Cover (SLC)

Male Connector Assembly

GT 280 MALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector	Color	Material
2	15326874	Black	PA6 10% GF & 20% GB
3	15326881	Black	PA6 10% GF & 20% GB
4	15326890	Black	PA6 10% GF & 20% GB
5	15326897	Black	PA6 10% GF & 20% GB
6	15326904	Black	PA6 10% GF & 20% GB
8	15326928	Black	PA6 10% GF & 20% GB
10	15326935	Black	PA6 10% GF & 20% GB
12	15326942	Black	PA6 10% GF & 20% GB
16	15326956	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

GT 280 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304722	0.50-0.35	Tin Brass	Tin
15304723	1.00-0.75	Tin Brass	Tin
15304724	3.00-1.50	Tin Brass	Tin
15304725	5.00-4.00	Tin Brass	Tin

SECTION NOTES:

Contact your regional suppot representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Special consideration must be used when applying terminals 15304713 and 15304725 due to cavity space limitations.

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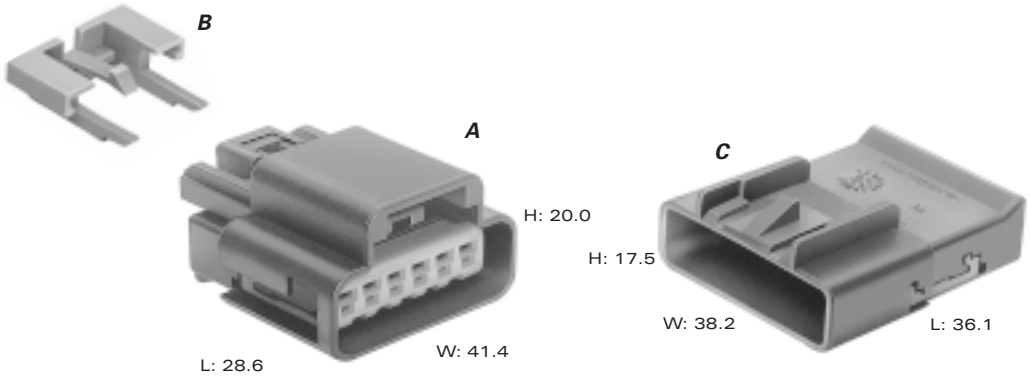

Total Mated Length: 48.7mm

A

PART NO: **15326870**
DESCRIPTION: Connector Assembly 2F
SIZE: 28.6L x 20.0H x 19.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326877**
DESCRIPTION: Connector Assembly 3F
SIZE: 28.6L x 20.0H x 24.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326886**
DESCRIPTION: Connector Assembly 4F
SIZE: 28.6L x 20.0H x 30.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326893†**
DESCRIPTION: Connector Assembly 5F
SIZE: 28.6L x 20.0H x 35.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326900**
DESCRIPTION: Connector Assembly 6F
SIZE: 28.6L x 20.0H x 41.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326874**
DESCRIPTION: Connector Assembly 2M
SIZE: 36.1L x 17.5H x 16.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326881**
DESCRIPTION: Connector Assembly 3M
SIZE: 36.1L x 17.5H x 21.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326890**
DESCRIPTION: Connector Assembly 4M
SIZE: 36.1L x 17.5H x 27.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326897**
DESCRIPTION: Connector Assembly 5M
SIZE: 36.1L x 17.5H x 32.7W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326904**
DESCRIPTION: Connector Assembly 6M
SIZE: 36.1L x 17.5H x 38.2W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

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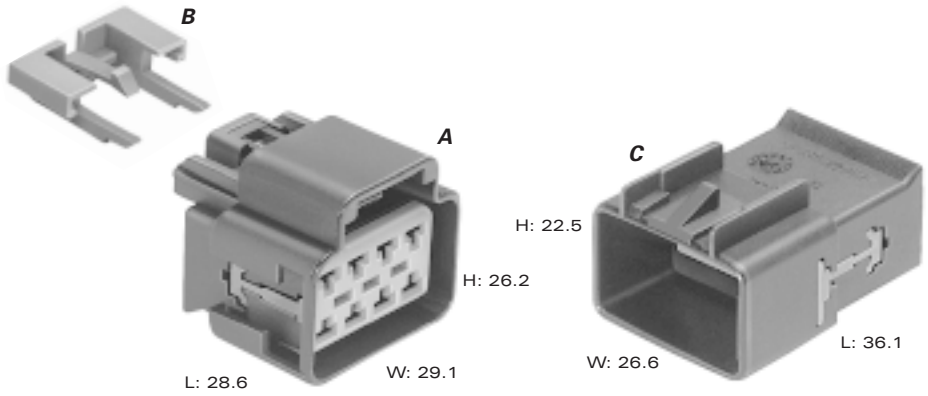

Total Mated Length: 48.7mm

A

PART NO: **15326924**
DESCRIPTION: Connector Assembly 8F
SIZE: 28.6L x 26.2H x 29.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326931**
DESCRIPTION: Connector Assembly 10F
SIZE: 28.6L x 26.2H x 34.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326110**
DESCRIPTION: Connector Assembly 12F
SIZE: 28.6L x 26.2H x 40.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

PART NO: **15326952**
DESCRIPTION: Connector Assembly 16F
SIZE: 28.6L x 26.2H x 51.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 22

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326928**
DESCRIPTION: Connector Assembly 8M
SIZE: 36.1L x 22.5H x 26.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326935**
DESCRIPTION: Connector Assembly 10M
SIZE: 36.1L x 22.5H x 32.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326942**
DESCRIPTION: Connector Assembly 12M
SIZE: 36.1L x 22.5H x 37.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

PART NO: **15326956**
DESCRIPTION: Connector Assembly 16M
SIZE: 36.1L x 22.5H x 48.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 23

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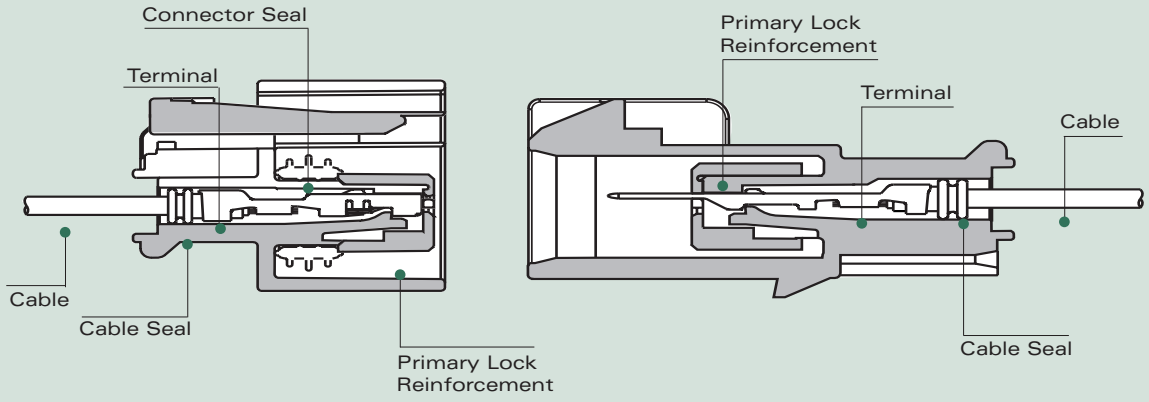
Cross Sectional View



Female Connector Assembly

Male Connector Assembly

Connector Position Assurance (CPA)

Cable Seal

Female Terminal

Connector Seal

Primary Lock Reinforcement (PLR)

Female Connector Assembly

GT 280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15304718	0.50-0.35	Tin Brass	Tin
15304719	1.00-0.75	Tin Brass	Tin
15304720	3.00-1.50	Tin Brass	Tin
15326004	5.00-4.00	Beryllium Copper	Tin

GT 280 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191221	15366065	1.20-1.85	Silicone	Orange
12191222	15366066	1.86-2.25	Silicone	Yellow
12191223	15366067	2.50-3.20	Silicone	Tan
–	12191235	3.40-3.90	Silicone	Purple

GT 280 FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material
2	15326679	Black	PA6 10% GF & 20% GB
3	15326614	Black	PA6 10% GF & 20% GB
4	15326631	Black	PA6 10% GF & 20% GB
5	15326642	Black	PA6 10% GF & 20% GB
6	15326635	Black	PA6 10% GF & 20% GB
8	15326654	Black	PA6 10% GF & 20% GB
10	15326660	Black	PA6 10% GF & 20% GB
12	15326910	Black	PA6 10% GF & 20% GB
14	15326917	Black	PA6 10% GF & 20% GB
16	15326666	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement (PLR) and Connector Seals are included in the Connector Assemblies listed in this section.

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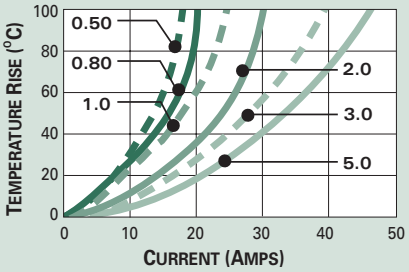
Sealed System Application Information

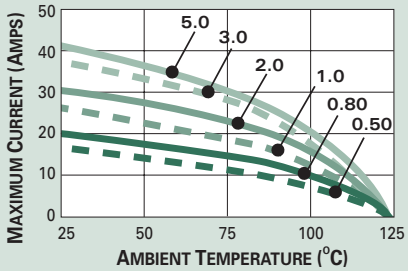
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 6.5
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

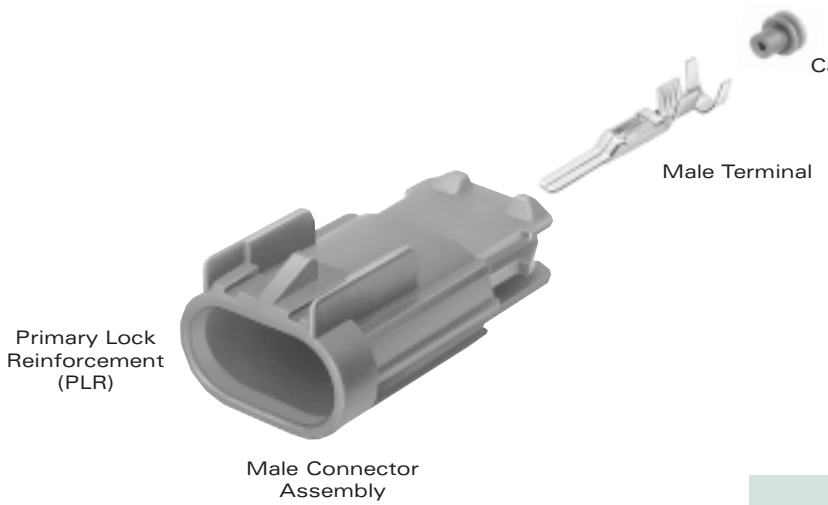
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the listed below.



GT 280 MALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
2	15326678	Black	PA6 10% GF & 20% GB
3	15326623	Black	PA6 10% GF & 20% GB
4	15326633	Black	PA6 10% GF & 20% GB
5	15326647	Black	PA6 10% GF & 20% GB
6	15326640	Black	PA6 10% GF & 20% GB
8	15326655	Black	PA6 10% GF & 20% GB
10	15326661	Black	PA6 10% GF & 20% GB
12	15326915	Black	PA6 10% GF & 20% GB
14	15326922	Black	PA6 10% GF & 20% GB
16	15326667	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement is included in the Connector Assemblies listed in this section.

GT 280 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15304730	0.50-0.35	Tin Brass	Tin
15304731	1.00-0.75	Tin Brass	Tin
15304732	3.00-1.50	Tin Brass	Tin

GT 280 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
15305170	5.8mm	Silicone	White

*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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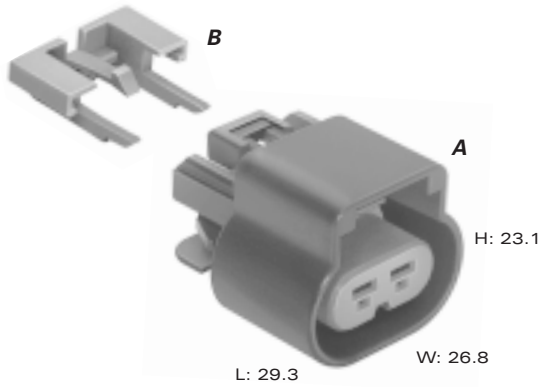

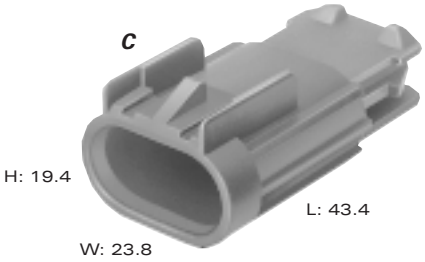

Total Mated Length: 56.7mm

A

PART NO: **15326679**
DESCRIPTION: Connector Assembly 2F
SIZE: 29.3L x 23.1H x 26.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326614**
DESCRIPTION: Connector Assembly 3F
SIZE: 29.3L x 23.1H x 33.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326631**
DESCRIPTION: Connector Assembly 4F
SIZE: 29.3L x 23.1H x 39.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326642**
DESCRIPTION: Connector Assembly 5F
SIZE: 29.3L x 23.1H x 46.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326635**
DESCRIPTION: Connector Assembly 6F
SIZE: 29.3L x 23.1H x 52.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326678**
DESCRIPTION: Connector Assembly 2M
SIZE: 43.4L x 19.4H x 23.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326623**
DESCRIPTION: Connector Assembly 3M
SIZE: 43.4L x 19.4H x 30.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326633**
DESCRIPTION: Connector Assembly 4M
SIZE: 43.4L x 19.4H x 36.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326647**
DESCRIPTION: Connector Assembly 5M
SIZE: 43.4L x 19.4H x 43.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326640**
DESCRIPTION: Connector Assembly 6M
SIZE: 43.4L x 19.4H x 49.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

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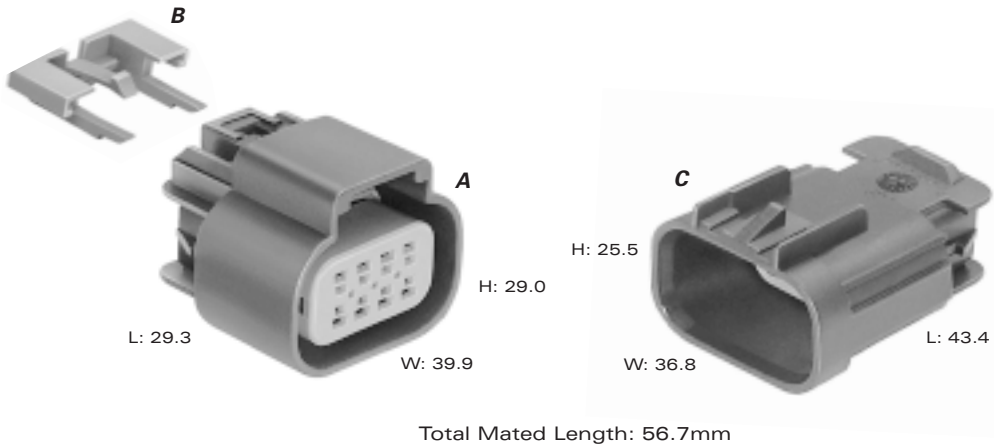

Total Mated Length: 56.7mm

A

PART NO: **15326654**
DESCRIPTION: Connector Assembly 8F
SIZE: 29.3L x 29.0H x 39.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326660**
DESCRIPTION: Connector Assembly 10F
SIZE: 29.3L x 29.0H x 46.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326910**
DESCRIPTION: Connector Assembly 12F
SIZE: 29.3L x 29.0H x 52.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326917**
DESCRIPTION: Connector Assembly 14F
SIZE: 29.3L x 29.0H x 59.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

PART NO: **15326666**
DESCRIPTION: Connector Assembly 16F
SIZE: 29.3L x 29.0H x 65.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 26, 27

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

PART NO: **15326655**
DESCRIPTION: Connector Assembly 8M
SIZE: 43.4L x 25.5H x 36.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326661**
DESCRIPTION: Connector Assembly 10M
SIZE: 43.4L x 25.5H x 43.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326915**
DESCRIPTION: Connector Assembly 12M
SIZE: 43.4L x 25.5H x 49.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326922**
DESCRIPTION: Connector Assembly 14M
SIZE: 43.4L x 25.5H x 56.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

PART NO: **15326667**
DESCRIPTION: Connector Assembly 16M
SIZE: 43.4L x 25.5H x 62.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 27
SEALS/PLUGS: See Page 26, 27

Downloaded from Arrow.com.

GT 280 Connection Systems are designed to mate to most headlamps, including a variety of daytime running lamps, high beam, and dual filament BULBS.

A PART NO: **15336116**
DESCRIPTION: Connector Assembly 2F
SIZE: 35.8L x 23.8H x 29.4W
COLOR: Black
MATERIAL: PA6 20% GF & 10% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 84, 85

B PART NO: **15336117**
DESCRIPTION: Connector Assembly 2F
SIZE: 35.8L x 23.8H x 29.4W
COLOR: Brown
MATERIAL: PA6 20% GF & 10% GB
TERMINALS: See Page 26
SEALS/PLUGS: See Page 84, 85

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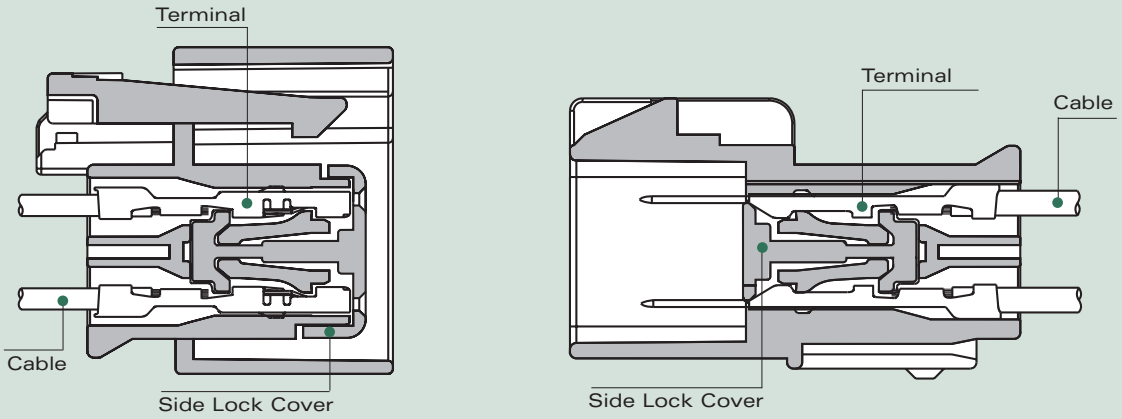
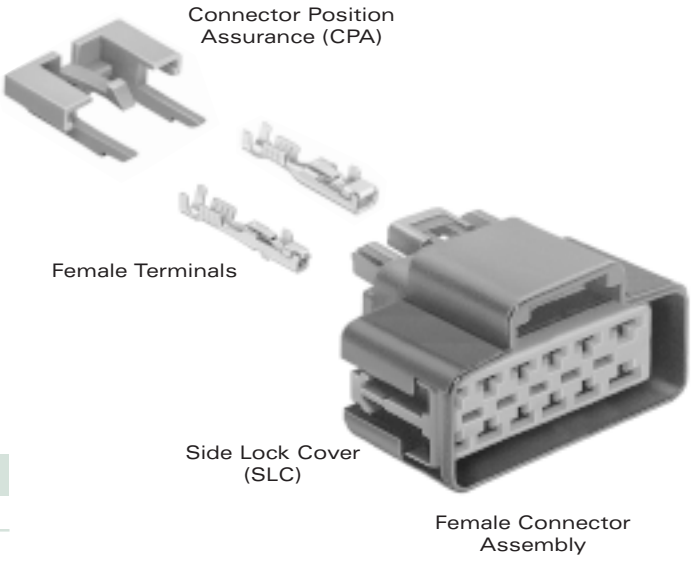
•150/280 MIXED

Cross Sectional View



Female Connector Assembly

Male Connector Assembly



Female Connector Assembly

GT 150 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12191811	0.50-0.35	Tin Brass	Tin
12191812	1.00-0.75	Tin Brass	Tin

GT 280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304710	0.50-0.35	Tin Brass	Tin
15304711	1.00-0.75	Tin Brass	Tin
15304712	3.00-1.50	Tin Brass	Tin
15304713	5.00-4.00	Tin Brass	Tin

GT MIXED FEMALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector	Color	Material
12	15336205	Black	PA6 10% GF & 20% GB
16	15336219	Black	PA6 10% GF & 20% GB
18	15326082	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

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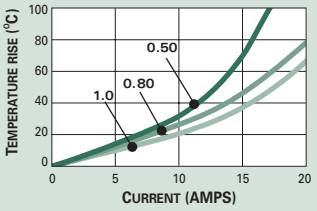
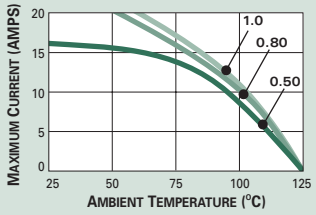
Unsealed System Application Information

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*

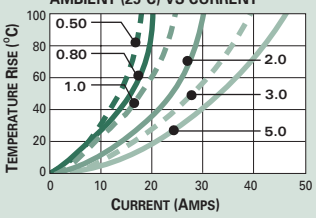


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

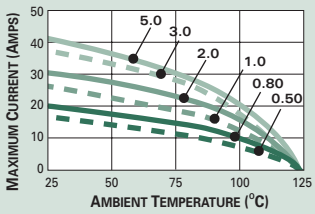
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 4.0
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 5.5
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance contact your regional support representative at the number listed below.

Male Terminals

Side Lock Cover (SLC)

Male Connector Assembly

GT 150 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304701	0.50-0.35	Tin Brass	Tin
15304702	1.00-0.75	Tin Brass	Tin

GT 280 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304722	0.50-0.35	Tin Brass	Tin
15304723	1.00-0.75	Tin Brass	Tin
15304724	3.00-1.50	Tin Brass	Tin
15304725	5.00-4.00	Tin Brass	Tin

GT MIXED MALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector	Color	Material
12	15336209	Black	PA6 10% GF & 20% GB
16	15336224	Black	PA6 10% GF & 20% GB

Side Lock Covers (SLC) are included in the Connector Assemblies listed in this section.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Special consideration must be used when applying terminals 15304713 and 15304725 due to cavity space limitations.

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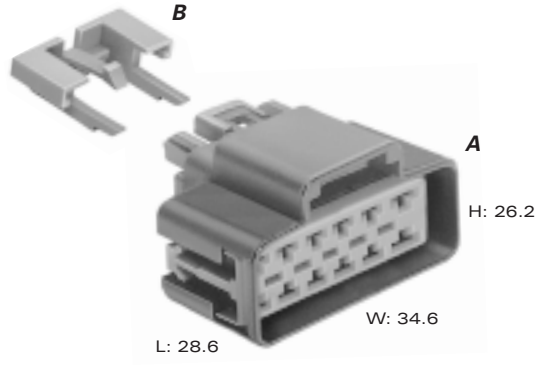
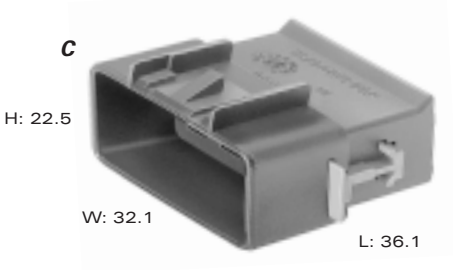
•150/280 MIXED





Total Mated Length: 56.7mm

A

PART NO: **15336205**
DESCRIPTION: Connector Assembly 12F
SIZE: 28.6L x 26.2H x 34.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 32

PART NO: **15336219**
DESCRIPTION: Connector Assembly 16F
SIZE: 28.6L x 26.2H x 42.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 32

PART NO: **15326082**
DESCRIPTION: Connector Assembly 18F
SIZE: 28.6L x 26.2H x 46.6W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 32

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

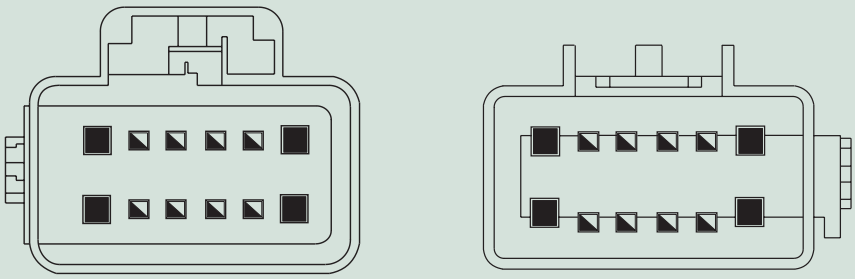
C

PART NO: **15336209**
DESCRIPTION: Connector Assembly 12M
SIZE: 36.1L x 22.5H x 32.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 33

PART NO: **15336224**
DESCRIPTION: Connector Assembly 16M
SIZE: 36.1L x 22.5H x 40.1W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 33

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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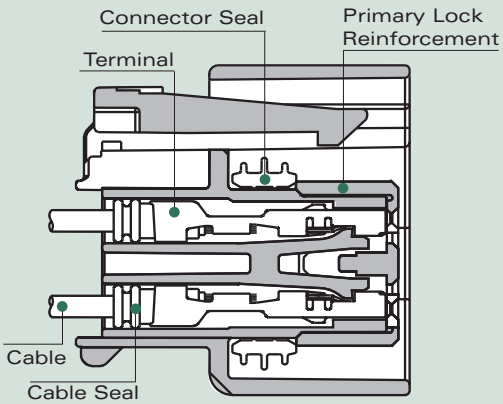
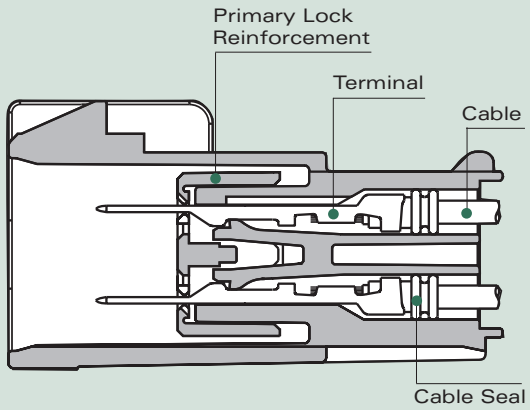
Cross Sectional View



Female Connector Assembly



Male Connector Assembly

Connector Position Assurance (CPA)

Cable Seals

Female Terminals

150

280

Primary Lock Reinforcement (PLR)

Female Connector Assembly

GT 150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12191818	0.50-0.35	Tin Brass	Tin
12191819	1.00-0.75	Tin Brass	Tin

GT 280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15304718	0.50-0.35	Tin Brass	Tin
15304719	1.00-0.75	Tin Brass	Tin
15304720	3.00-1.50	Tin Brass	Tin
15326004	5.00-4.00	Beryllium Copper	Tin

150

280

GT 150 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191152	15366021	1.20-1.85	Silicone	White
12191153	15366060	1.86-2.25	Silicone	Blue

GT 280 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191221	15366065	1.20-1.85	Silicone	Orange
12191222	15366066	1.86-2.25	Silicone	Yellow
12191223	15366067	2.50-3.20	Silicone	Tan
–	12191235	3.40-3.90	Silicone	Purple

GT MIXED FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
12	15326939	Black	PA6 10% GF & 20% GB
14	15336037	Black	PA6 10% GF & 20% GB
16	15326084	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement (PLR) and Connector Seals are included in the Connector Assemblies listed in this section.

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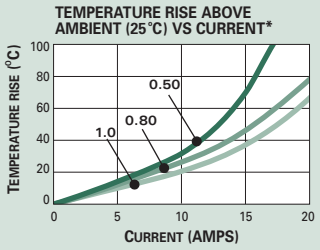
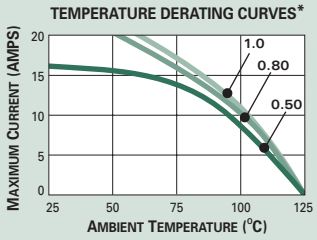
Sealed System Application Information

GT 150 SERIES TERMINALS–Tin Plated

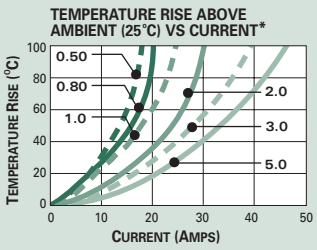


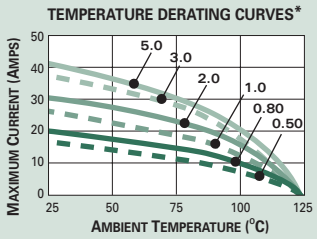


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 4.5
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated

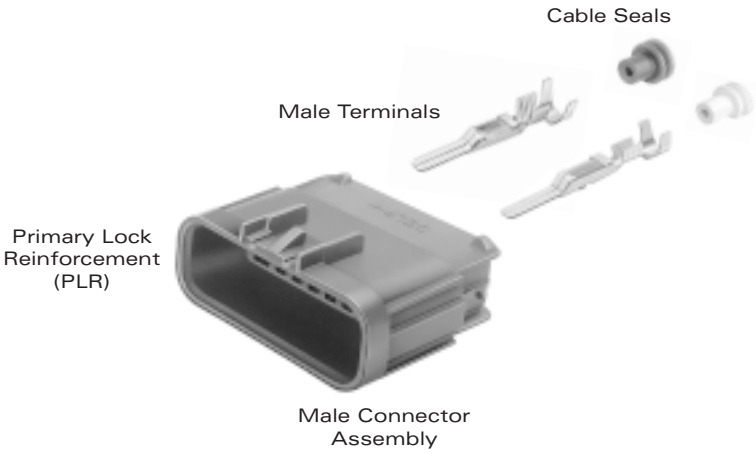




CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 6.5
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



GT 150 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326268	0.50-0.35	Tin Brass	Tin
15326269	1.00-0.75	Tin Brass	Tin

GT 280 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15304730	0.50-0.35	Tin Brass	Tin
15304731	1.00-0.75	Tin Brass	Tin
15304732	3.00-1.50	Tin Brass	Tin

GT 150 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
15305171	4.0mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

GT MIXED MALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
12	15336034	Black	PA6 10% GF & 20% GB
14	15422562	Black	PA6 10% GF & 20% GB
16	15326085	Black	PA6 10% GF & 20% GB

Primary Lock Reinforcement (PLR) is included in the Connector Assemblies listed in this section.

GT 280 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
15305170	5.8mm	Silicone	White

*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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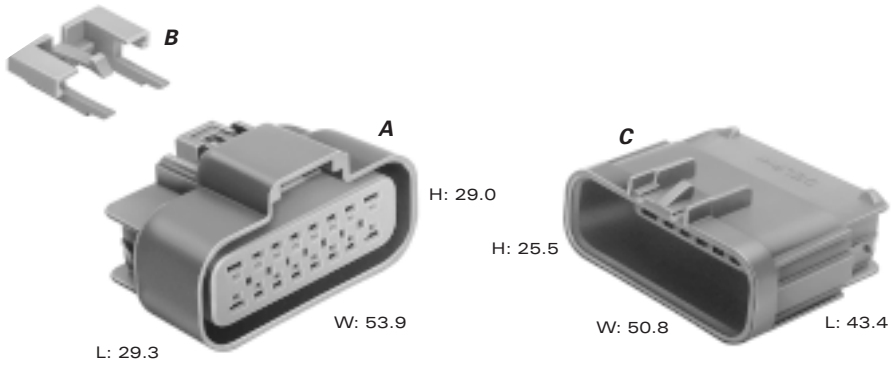


Total Mated Length: 56.7mm

A

PART NO: **15326939**
DESCRIPTION: Connector Assembly 12F
SIZE: 29.3L x 29.0H x 44.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 36
SEALS/PLUGS: See Page 36, 37

PART NO: **15336037**
DESCRIPTION: Connector Assembly 14F
SIZE: 29.3L x 29.0H x 49.4W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 36
SEALS/PLUGS: See Page 36, 37

PART NO: **15326084**
DESCRIPTION: Connector Assembly 16F
SIZE: 29.3L x 29.0H x 53.9W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 36
SEALS/PLUGS: See Page 36, 37

B

PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C

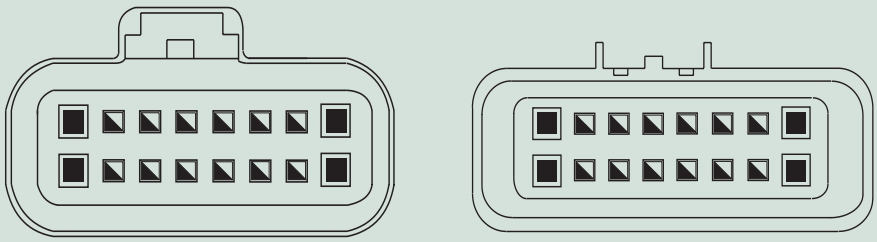
PART NO: **15336034**
DESCRIPTION: Connector Assembly 12M
SIZE: 43.4L x 25.5H x 41.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 37
SEALS/PLUGS: See Page 36, 37

PART NO: **15422562**
DESCRIPTION: Connector Assembly 14M
SIZE: 43.4L x 25.5H x 46.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 37
SEALS/PLUGS: See Page 36, 37

PART NO: **15326085**
DESCRIPTION: Connector Assembly 16M
SIZE: 43.4L x 25.5H x 50.8W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 37
SEALS/PLUGS: See Page 36, 37

KEY:
- ◪ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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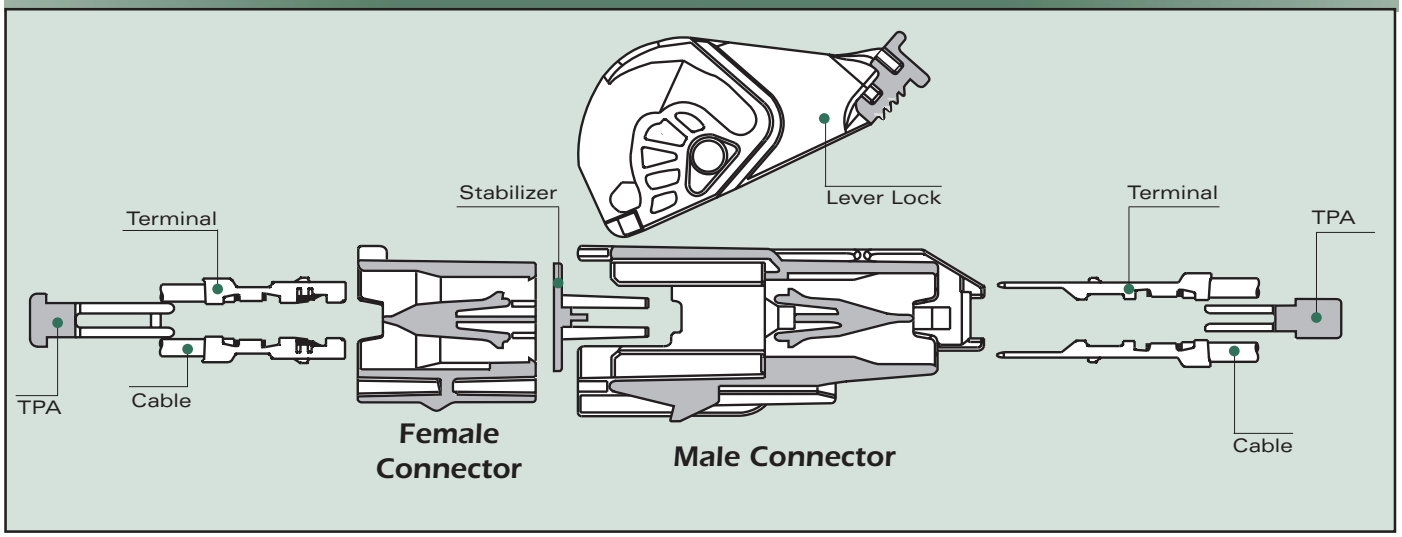
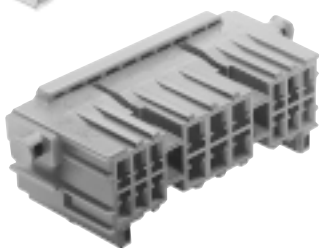
Cross Sectional View



Terminal Position Assurance (TPA)

Female Terminals



Female Connector

GT 150 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12191811	0.50-0.35	Tin Brass	Tin
12191812	1.00-0.75	Tin Brass	Tin

GT 280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304710	0.50-0.35	Tin Brass	Tin
15304711	1.00-0.75	Tin Brass	Tin
15304712	3.00-1.50	Tin Brass	Tin
15304713	5.00-4.00	Tin Brass	Tin

GT FEMALE LEVER LOCK CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
18	15304692	Black	PA66 HS IM	15304694
22	15317325	Lt. Gray	PA66 HS IM	15317326
30	15304908	Black	PA66 HS IM	15304913
40	15359287	Black	PA66 HS IM	15304842

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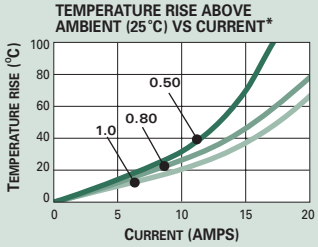
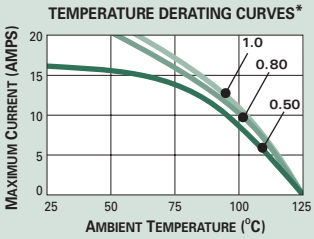
Unsealed System Application Information

GT 150 SERIES TERMINALS–Tin Plated

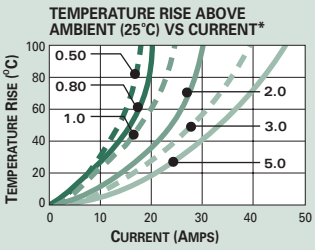


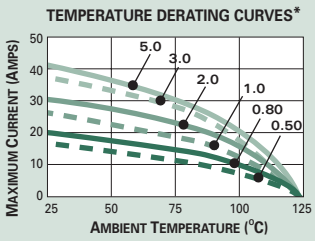


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 4.0
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated

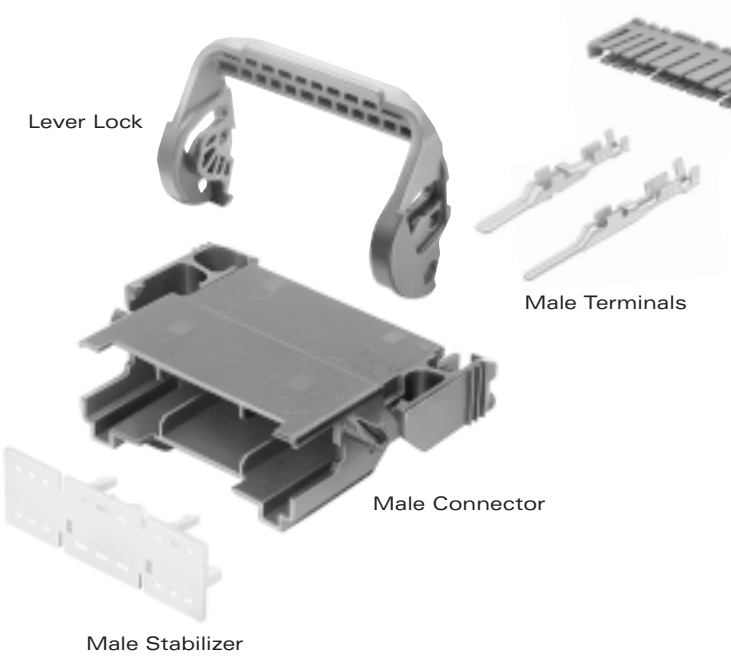




CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 5.5
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



GT 150 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304701	0.50-0.35	Tin Brass	Tin
15304702	1.00-0.75	Tin Brass	Tin

GT 280 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15304722	0.50-0.35	Tin Brass	Tin
15304723	1.00-0.75	Tin Brass	Tin
15304724	3.00-1.50	Tin Brass	Tin
15304725	5.00-4.00	Tin Brass	Tin

GT MALE LEVER LOCK CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA	Stabilizer	Lever Lock
18	15336468	Black	PA66 HS IM	15304695	15418982	15317550
22	15317322	Lt. Gray	PA66 HS IM	15317323	15418983	15317321
30	15326762	Black	PA66 HS IM	15304912	15418984	15326799
40	15336417	Black	PA66 HS IM	15304841	15326177	15336387

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Special consideration must be used when applying terminals 15304713 and 15304725 due to cavity space limitations.

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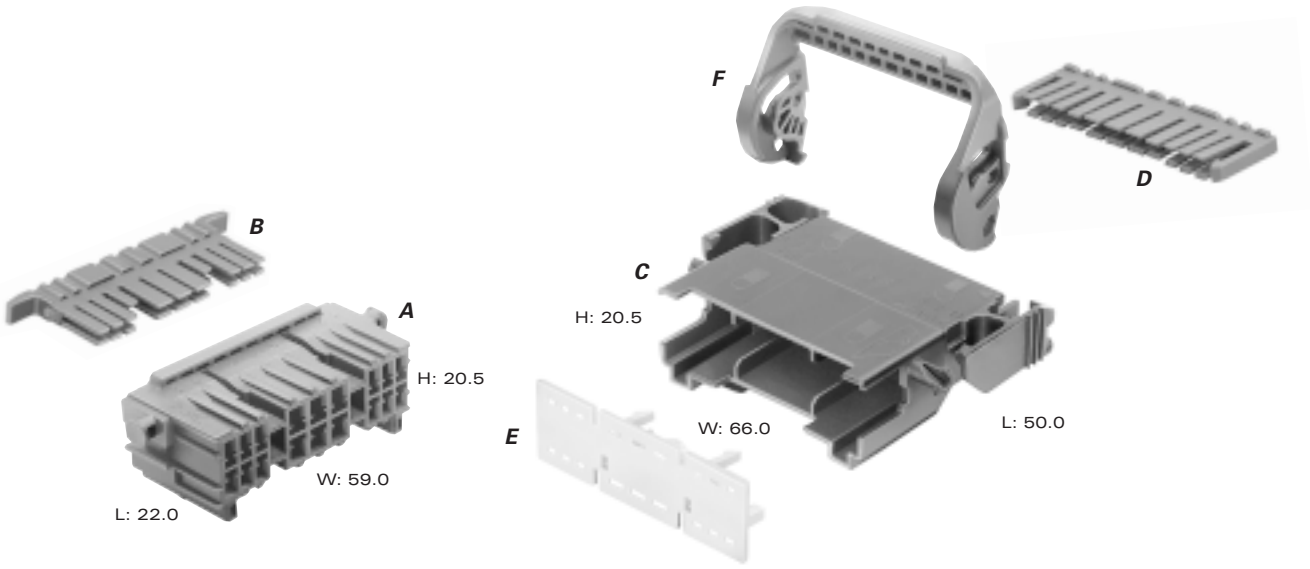


Total Mated Length: 63.8mm

A PART NO: **15304692 (Black)**
15304690 (Md. Gray)

DESCRIPTION: Connector 18F
SIZE: 22.0L x 20.5H x 59.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 40

B PART NO: **15304694**

DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

C PART NO: **15336468 (Black)**
15336467 (Md. Gray)

DESCRIPTION: Connector 18M
SIZE: 50.0L x 20.5H x 66.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 41
CLIP: 12084149

D PART NO: **15304695**

DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

E PART NO: **15418982**

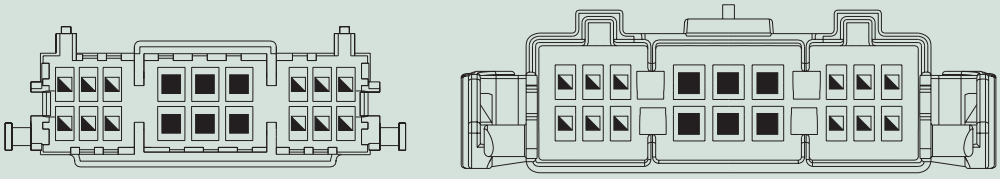
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

F PART NO: **15317550**

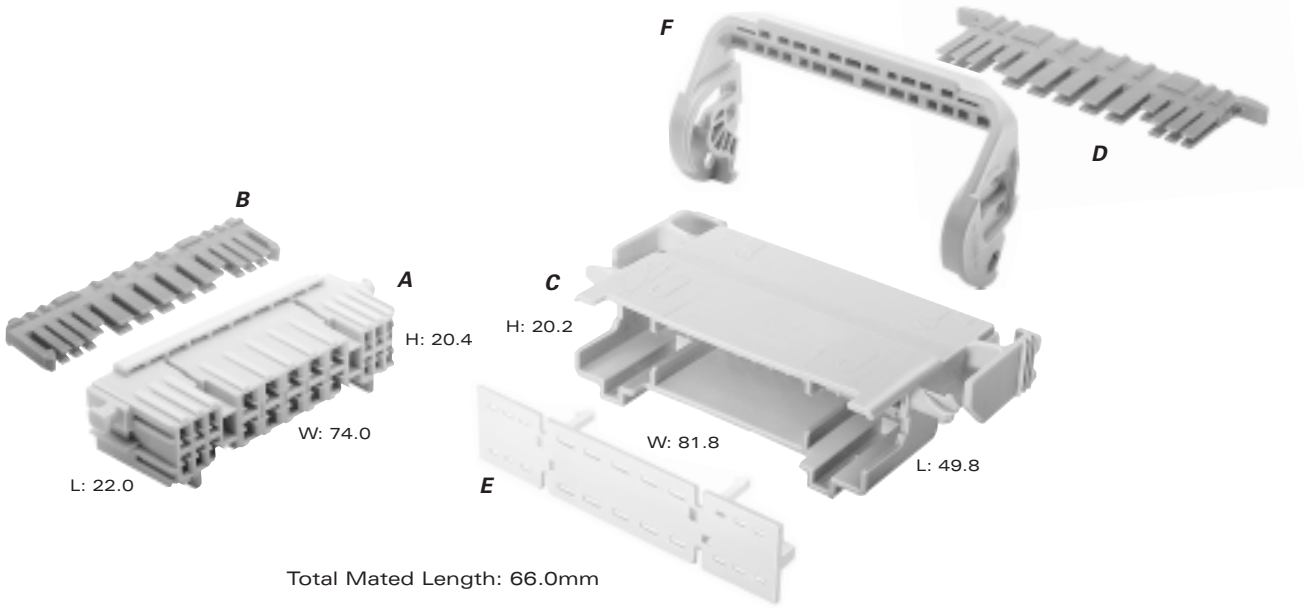
DESCRIPTION: Lever Lock
COLOR: Purple
MATERIAL: PA66 HS IM

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



Total Mated Length: 66.0mm

A PART NO: **15317325 (Lt. Gray)**
15326063 (Md. Gray)
DESCRIPTION: Connector 22F
SIZE: 22.0L x 20.4H x 74.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 40

B PART NO: **15317326**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

C PART NO: **15317322 (Lt. Gray)**
15326064 (Md. Gray)
DESCRIPTION: Connector 22M
SIZE: 49.8L x 20.2H x 81.8W
MATERIAL: PA66 HS IM
TERMINALS: See Page 41
CLIP: 12110290

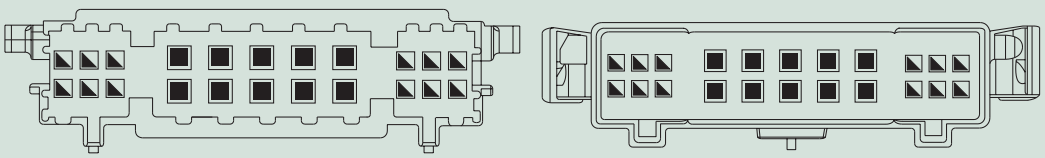
D PART NO: **15317323**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

E PART NO: **15418983**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

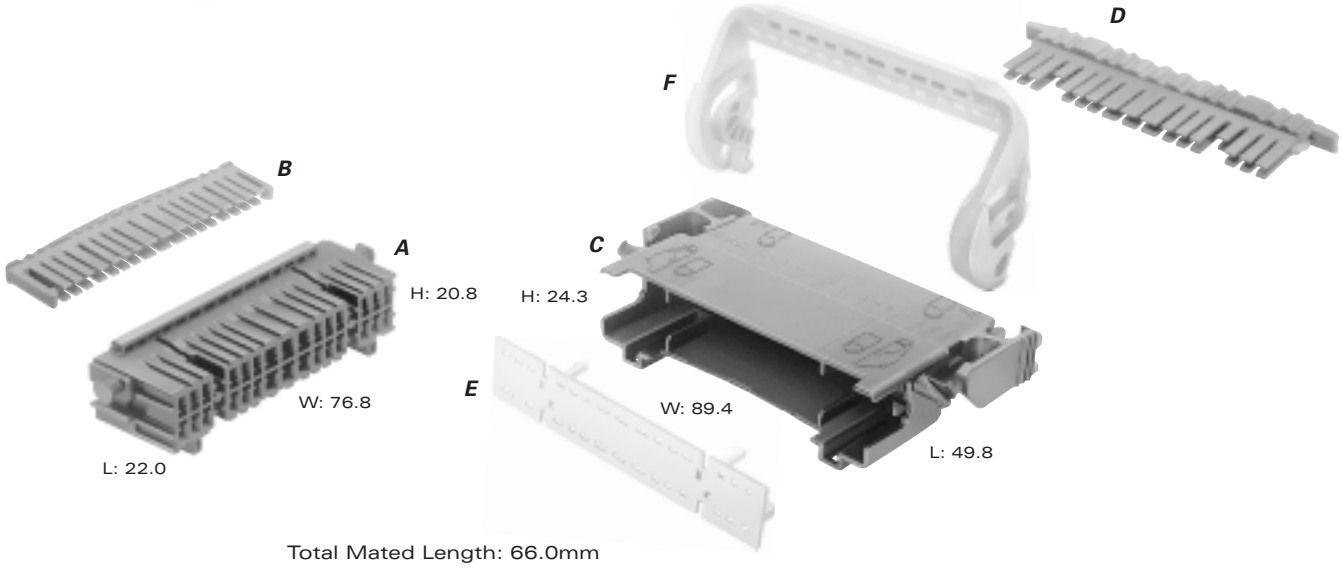
F PART NO: **15317321**
DESCRIPTION: Lever Lock
COLOR: Blue
MATERIAL: PA66 HS IM

KEY:
◹ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



Total Mated Length: 66.0mm

A PART NO: **15304908**
DESCRIPTION: Connector 30F
SIZE: 22.0L x 20.8H x 76.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 40

B PART NO: **15304913**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

C PART NO: **15326762**
DESCRIPTION: Connector 30M
SIZE: 49.8L x 24.3H x 89.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 41

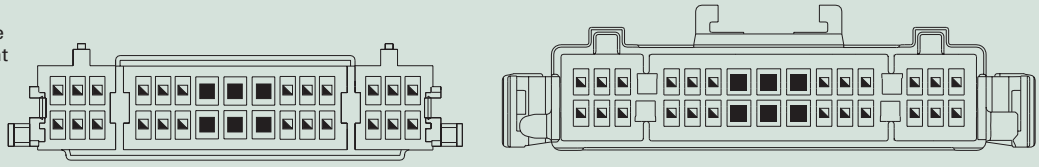
D PART NO: **15304912**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

E PART NO: **15418984**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

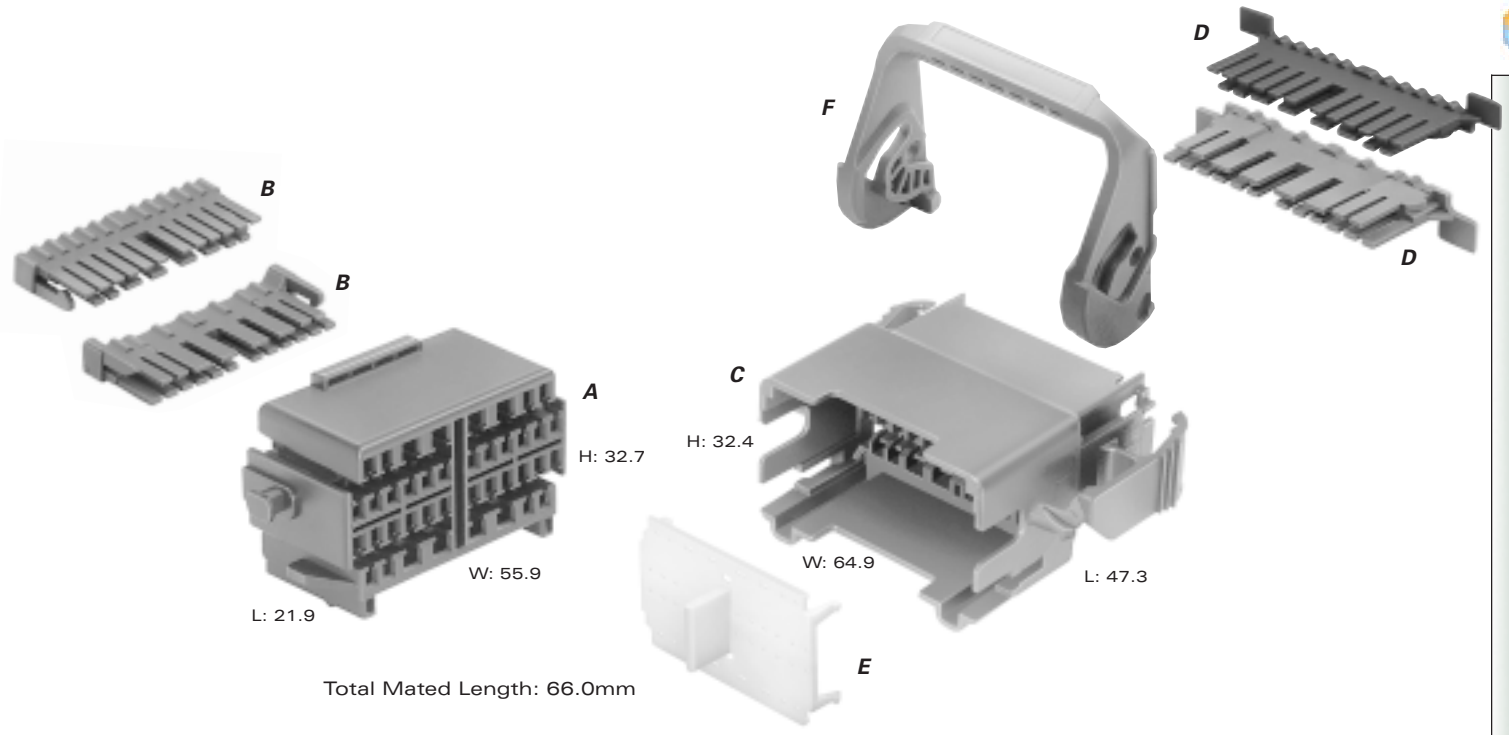
F PART NO: **15326799**
DESCRIPTION: Lever Lock
COLOR: Natural
MATERIAL: PA66 HS IM 14% GF

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



A PART NO: **15359287 (Black)**
15393744 (Gray)
DESCRIPTION: Connector 40F
SIZE: 21.9L x 32.7H x 55.9W
MATERIAL: PA66 HS IM
TERMINALS: See Page 40

B PART NO: **15304842**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Blue
MATERIAL: PBT

C PART NO: **15336417 (Black)**
15305216 (Gray)
DESCRIPTION: Connector 40M
SIZE: 47.3L x 32.4H x 64.9W
MATERIAL: PA66 HS IM
TERMINALS: See Page 41

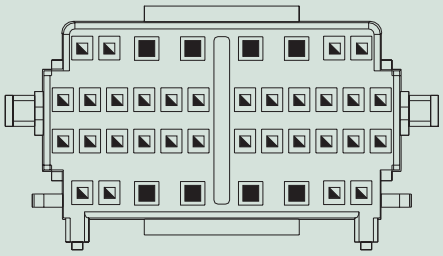
D PART NO: **15304841**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Blue
MATERIAL: PBT

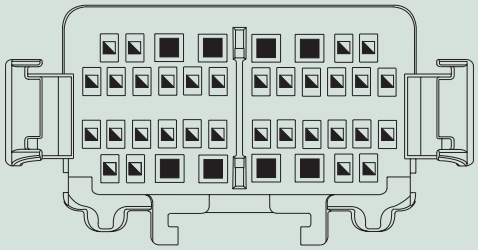
E PART NO: **15326177**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

F PART NO: **15336387**
DESCRIPTION: Lever Lock
COLOR: Natural
MATERIAL: PA66 HS IM 14% GF

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

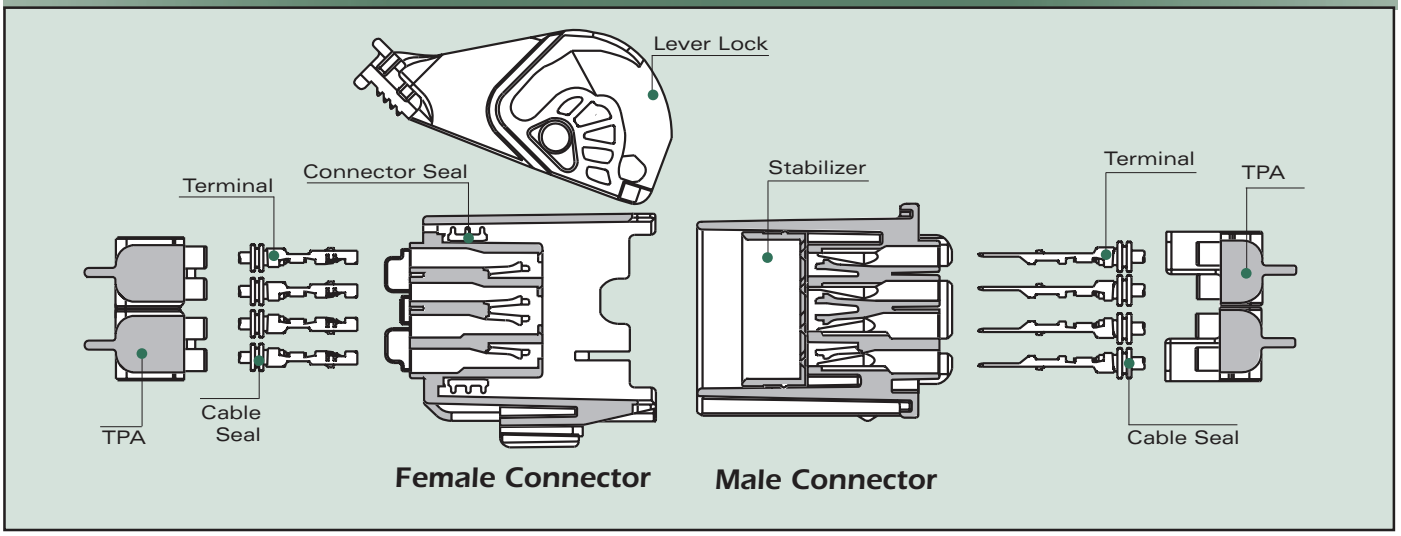




Downloaded from Arrow.com.

• LEVER LOCK

Cross Sectional View



150

280

GT 150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12191818	0.50-0.35	Tin Brass	Tin
12191819	1.00-0.75	Tin Brass	Tin

GT 280 FEMALE TERMINALS SEALED

Part # Dia. 5.2 (mm)	Part # Dia. 5.8 (mm)	Cable Range (mm²)	Material	Plating
15304715	15304718	0.50-0.35	Tin Brass	Tin
15304716	15304719	1.00-0.75	Tin Brass	Tin
15304717	–	2.00-1.50	Tin Brass	Tin
–	15304720	3.00-1.50	Tin Brass	Tin
–	15326004	5.00-4.00	Beryllium Copper	Tin

150

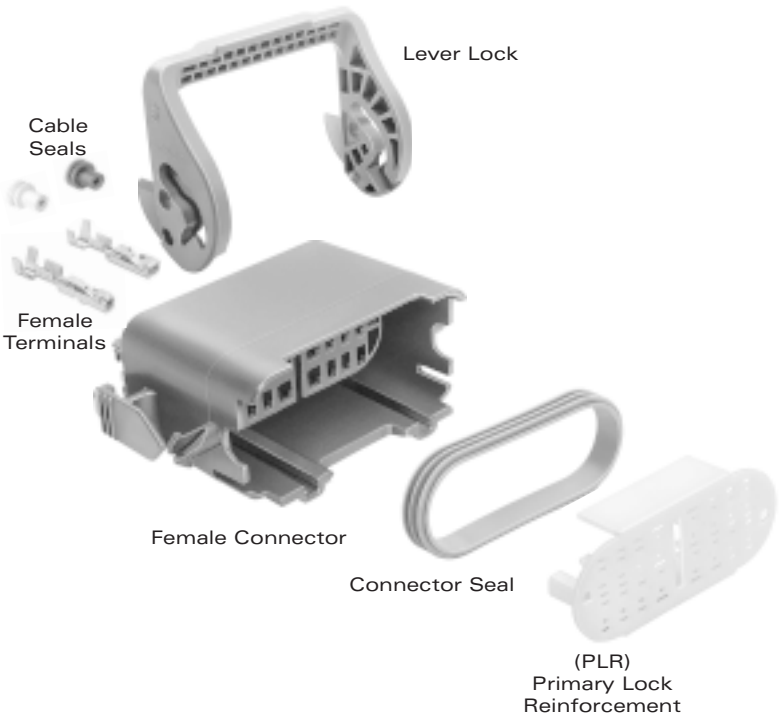
280

GT 150 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191152	15366021	1.20-1.85	Silicone	White
12191153	15366060	1.86-2.25	Silicone	Blue

GT 280 CABLE SEALS

	Reel Part #	Loose Part #	Cable Diameter	Material	Color
280 5.8mm	12191221	15366065	1.20-1.85	Silicone	Orange
	12191222	15366066	1.86-2.25	Silicone	Yellow
	12191223	15366067	2.50-3.20	Silicone	Tan
	–	12191235	3.40-3.90	Silicone	Purple
280 5.2mm	12191156	15366063	1.20-1.85	Silicone	Gray
	12191157	15366064	1.86-2.25	Silicone	Purple
	12191154	15366061	2.09-2.66	Silicone	Dk. Red



GT FEMALE LEVER LOCK CONNECTORS SEALED

# Cavities	Connector	Color	Material	PLR	TPA	Connector Seal	Lever Lock
24	15366099	Black	PA6 10%GF & 20% GB	15373422	–	15336177	15369322
38	15336418	Black	PA66 HS IM	–	15304904	15304905	15336267

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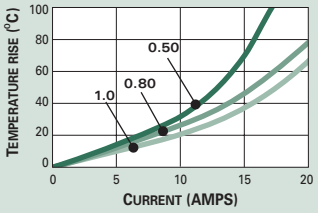
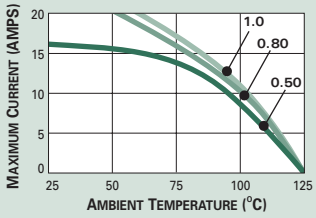
Sealed System Application Information

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*

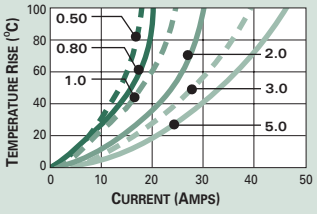


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

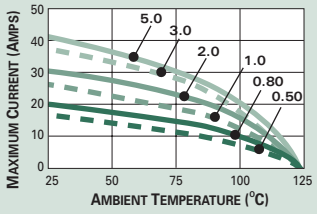
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 4.5
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



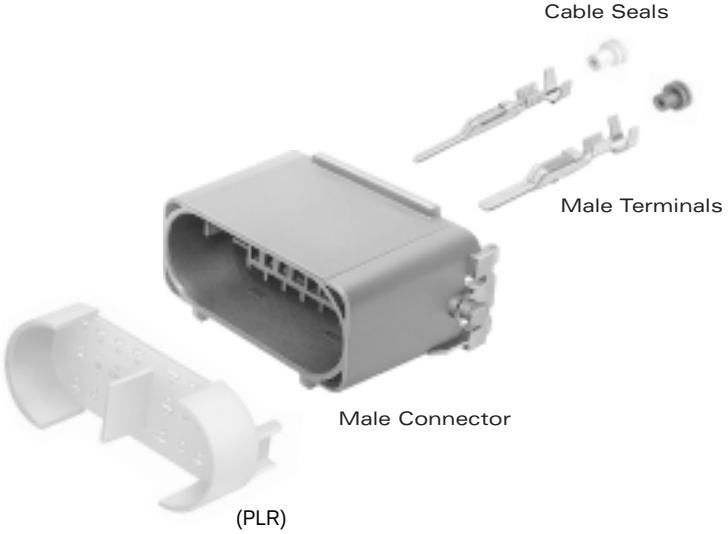
TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-25
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 6.5
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



GT 150 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326268	0.50-0.35	Tin Brass	Tin
15326269	1.00-0.75	Tin Brass	Tin

GT 280 MALE TERMINALS SEALED

Part # Dia. 5.2 (mm)	Part # Dia. 5.8 (mm)	Cable Range (mm²)	Material	Plating
15304727	15304730	0.50-0.35	Tin Brass	Tin
15304728	15304731	1.00-0.75	Tin Brass	Tin
–	15304732	3.00-1.50	Tin Brass	Tin
15304729	–	2.00-1.50	Tin Brass	Tin

GT 150 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
15305171	4.0mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

GT 280 CAVITY PLUG*

Part #	Cavity Diameter	Material	Color
12059168	5.2mm	Silicone	Dk. Red
15305170	5.8mm	Silicone	White

*Cavity plugs seal unused female and male cavities.

GT MALE LEVER LOCK CONNECTORS SEALED

# Cavities	Connector	Color	Material	PLR	TPA	Stabilizer
24	15336173	Black	PA66 HS IM 14% GF	15355131	–	–
38	15317380	Black	PA66 HS IM	–	15304903	15304902

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimension as specified.

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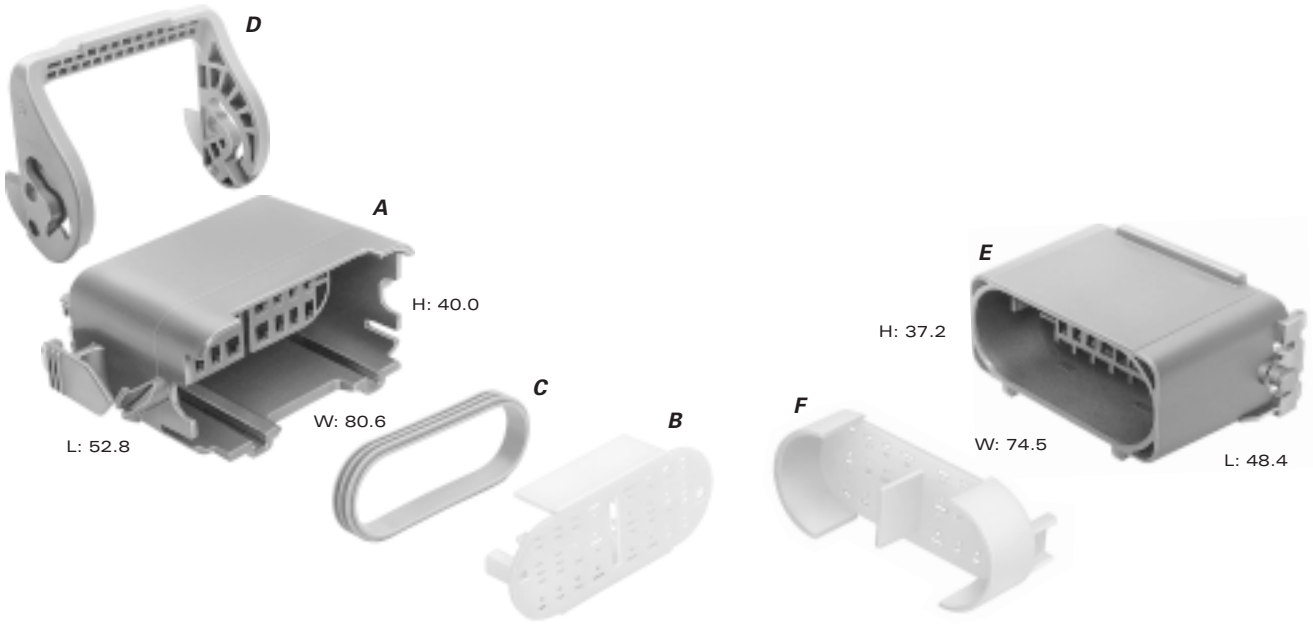


Total Mated Length: 72.0mm

A PART NO: **15366099**
DESCRIPTION: Connector 24F
SIZE: 52.8L x 40.0H x 80.6W
COLOR: Black
MATERIAL: PA6 10%GF & 20% GB
TERMINALS: See Page 46
SEALS/PLUGS: See Page 46, 47

B PART NO: **15373422**
DESCRIPTION: PLR
COLOR: Natural
MATERIAL: PA66 HS IM

C PART NO: **15336177**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

D PART NO: **15369322**
DESCRIPTION: Lever Lock
COLOR: Md. Gray
MATERIAL: PA66 HS IM

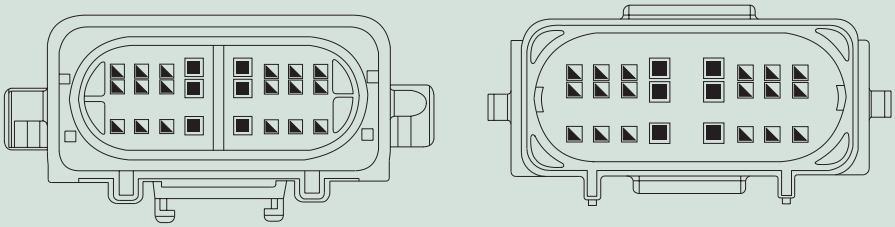
E PART NO: **15336173**
DESCRIPTION: Connector 24M
SIZE: 48.4L x 37.2H x 74.5W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 47
SEALS/PLUGS: See Page 46, 47

F PART NO: **15373421**
DESCRIPTION: PLR
COLOR: Md. Gray
MATERIAL: PA66 HS IM

KEY:
◪ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

System Note:
For 280 Series sealed cavities use 5.8mm cavity diameter terminals and seals from pages 46 and 47.



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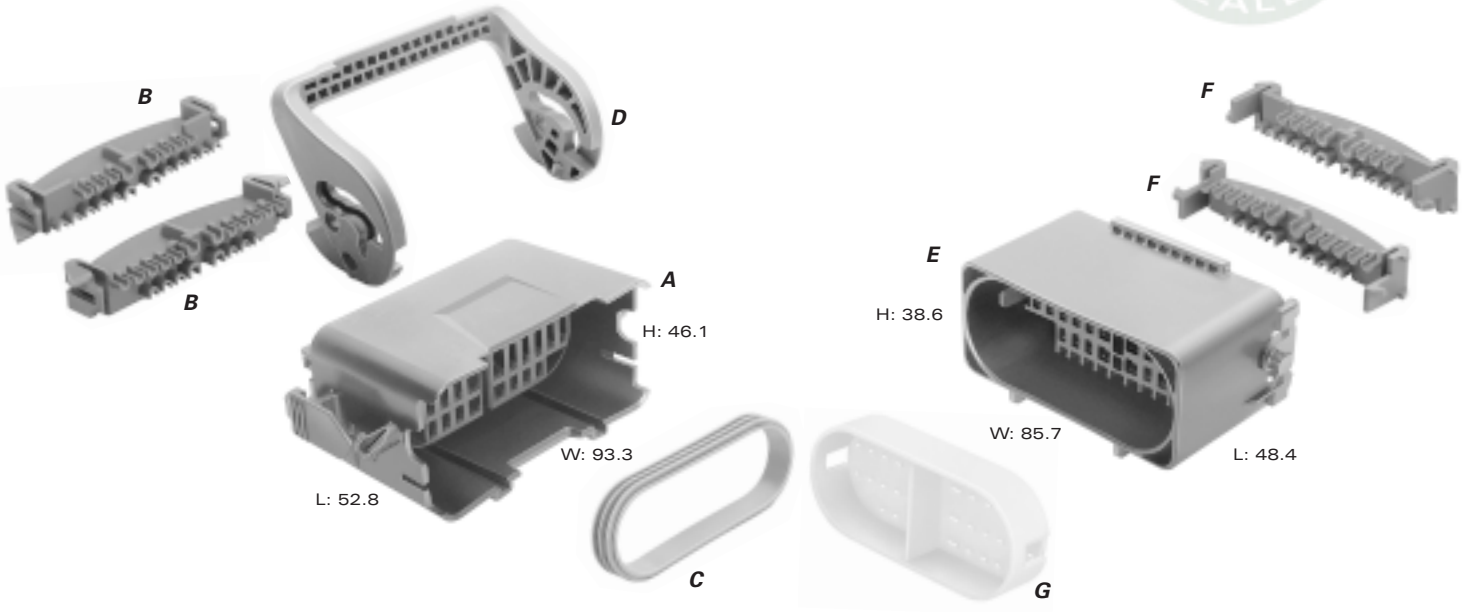


Total Mated Length: 91.1mm

A PART NO: **15336418**
DESCRIPTION: Connector 38F
SIZE: 52.8L x 46.1H x 93.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 46
SEALS/PLUGS: See Page 46, 47

B PART NO: **15304904**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Lt. Gray
MATERIAL: PBT

C PART NO: **15304905**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

D PART NO: **15336267**
DESCRIPTION: Lever Lock
COLOR: Dk. Gray
MATERIAL: PA66 HS IM 14% GF

E PART NO: **15317380**
DESCRIPTION: Connector 38M
SIZE: 48.4L x 38.6H x 85.7W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 47
SEALS/PLUGS: See Page 46, 47
CLIP: 12084149

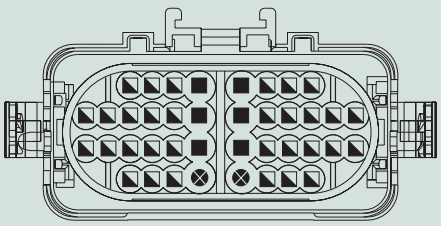
F PART NO: **15304903**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Lt. Gray
MATERIAL: PBT

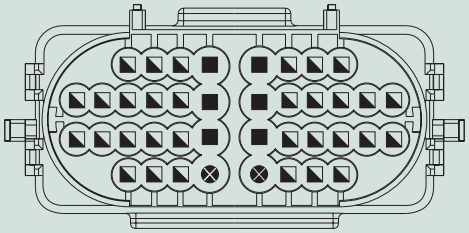
G PART NO: **15304902**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

KEY:
- ◪ 150 SERIES
- ■ 280 SERIES
- ⊗ Blocked Cavity

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

System Note:
For 280 Series sealed cavities use 5.2mm cavity diameter terminals and seals from pages 46 and 47.





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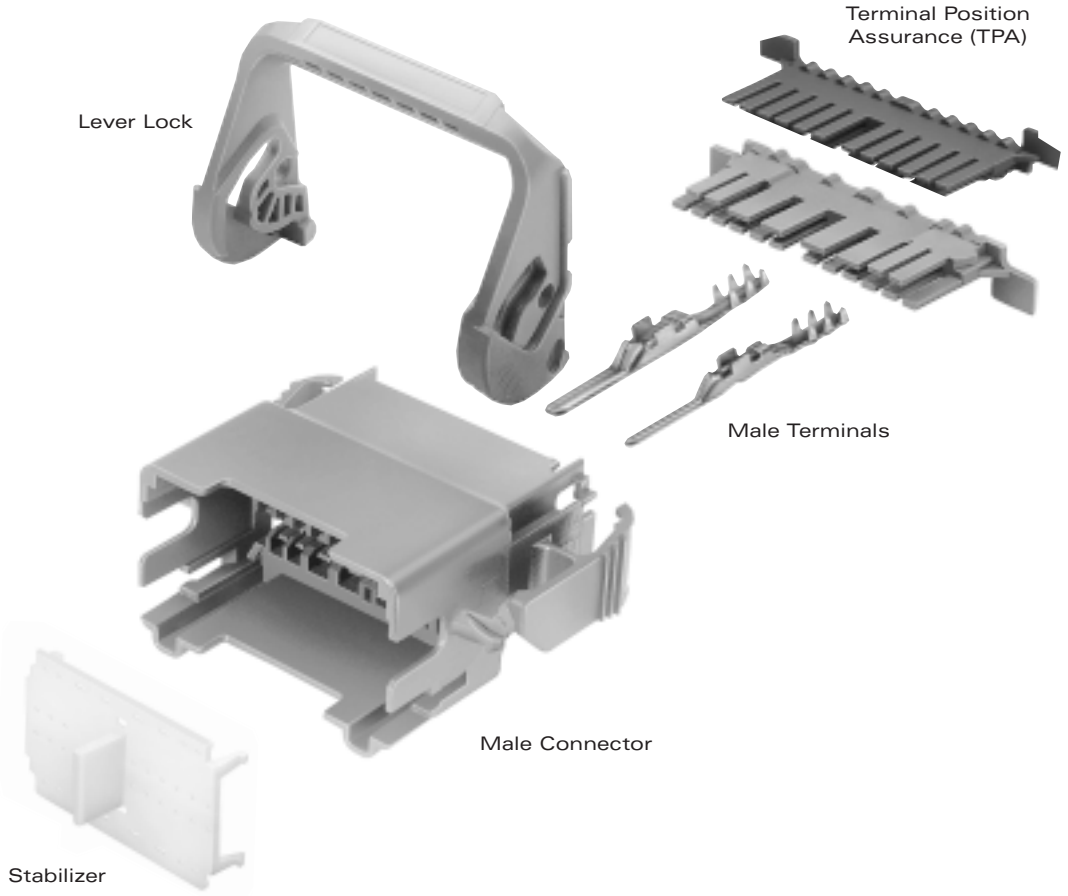
• LEVER LOCK

FLEXIBLE PRINTED CIRCUIT APPLICATION



GT MALE LEVER LOCK CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA	Stabilizer	Lever Lock
30	15317735	Brown	PA66 HS IM	15317828	15418984	15326799
40	15317694	Brown	PA66 HS IM	15355380	15326177	15336387

GT 150 MALE TERMINALS UNSEALED

Part #	Material	Plating
15317814	Tin Brass	Tin

GT 280 MALE TERMINALS UNSEALED

Part #	Material	Plating
15317815	Tin Brass	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Flex Circuit Systems mate to conventional female connection systems.

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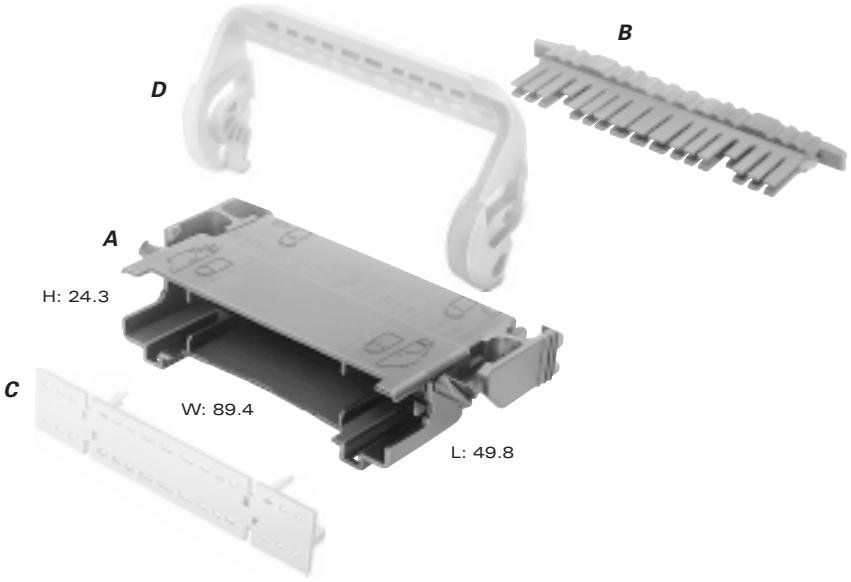


SYSTEM NOTES:

- Conventional mating connector
  15305216 (Female) Brown
  15304913 (TPA) Blue
- Terminals See Page 40.

A PART NO: **15317735**
DESCRIPTION: Connector 30M
SIZE: 49.8L x 24.3H x 89.4W
COLOR: Brown
MATERIAL: PA66 HS IM
TERMINALS: See Page 50

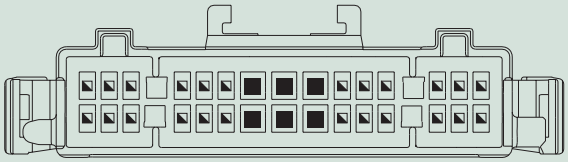
B PART NO: **15317828**
DESCRIPTION: TPA
COLOR: Green
MATERIAL: PBT

C PART NO: **15418984**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

D PART NO: **15326799**
DESCRIPTION: Lever Lock
COLOR: Natural
MATERIAL: PA66 HS IM 14% GF

KEY:
◹ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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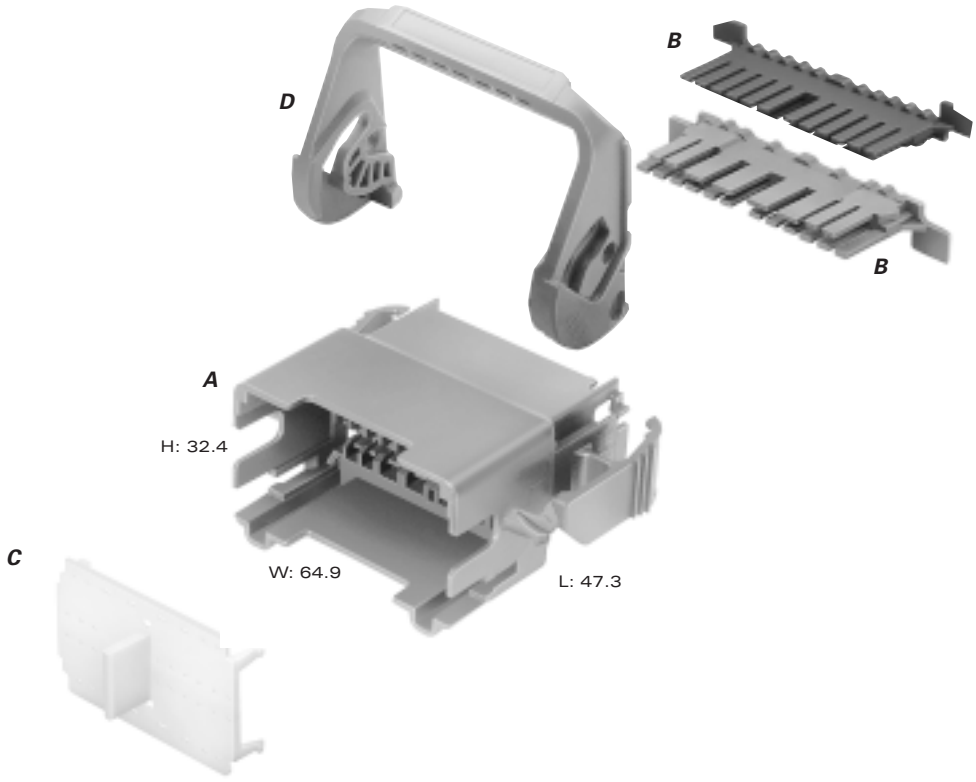
LEVER LOCK

FLEXIBLE PRINTED CIRCUIT APPLICATION



SYSTEM NOTES:

- Conventional mating connector
  15305218 (Female) Brown
  15304342 (TPA) Blue
- Terminals See Page 40.

A PART NO: **15317694**
DESCRIPTION: Connector 40M
SIZE: 47.3L x 32.4H x 64.9W
COLOR: Brown
MATERIAL: PA66 HS IM
TERMINALS: See Page 50

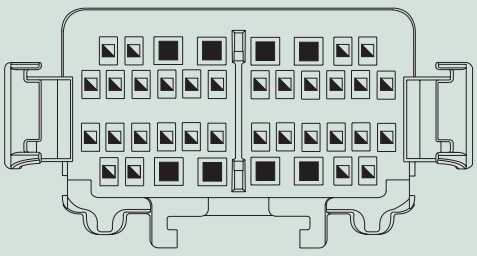
B PART NO: **15355380**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Green
MATERIAL: PBT HM IS

C PART NO: **15326177**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: PA66 HS IM

D PART NO: **15336387**
DESCRIPTION: Lever Lock
COLOR: Natural
MATERIAL: PA66 HS IM 14% GF

KEY:
- ◪ 150 SERIES
- ■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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Metri-Pack Series

METRI-PACK SERIES 150

150

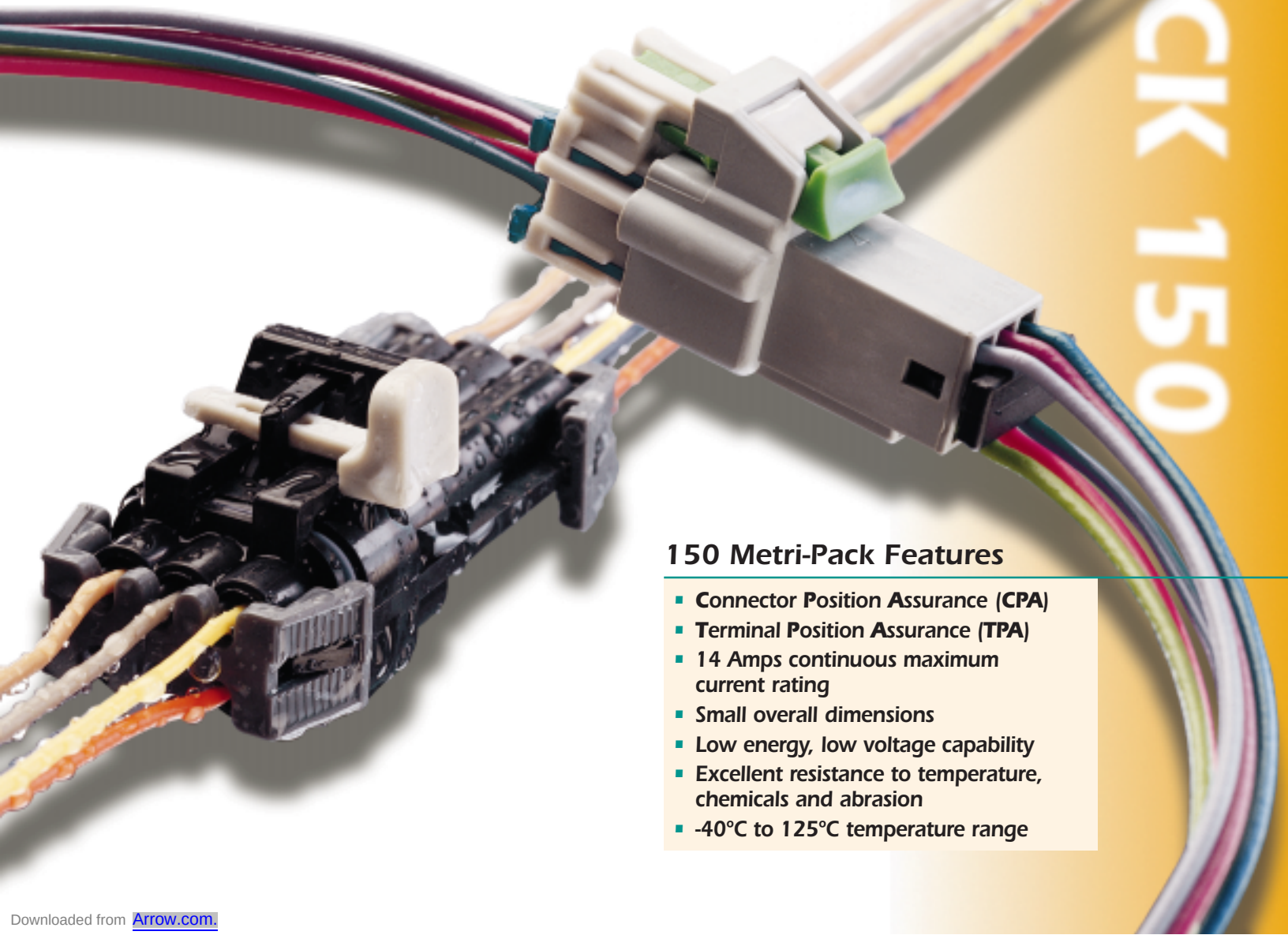
Available in device and in-line connections for vehicle applications, Metri-Pack 150 Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for limited space applications that do not require environmental protection, Metri-Pack 150 Series products are extremely versatile.

Available in device and in-line connections for underhood vehicle applications, Metri-Pack 150 Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Utilizing triple-rib peripheral silicone rubber seals, Metri-Pack 150 Series sealed systems are ideally suited for critical, low-energy electronic applications that require protection from environmental hazards.

METRI-PACK 150



150 Metri-Pack Features

- Connector Position Assurance (CPA)
- Terminal Position Assurance (TPA)
- 14 Amps continuous maximum current rating
- Small overall dimensions
- Low energy, low voltage capability
- Excellent resistance to temperature, chemicals and abrasion
- -40°C to 125°C temperature range

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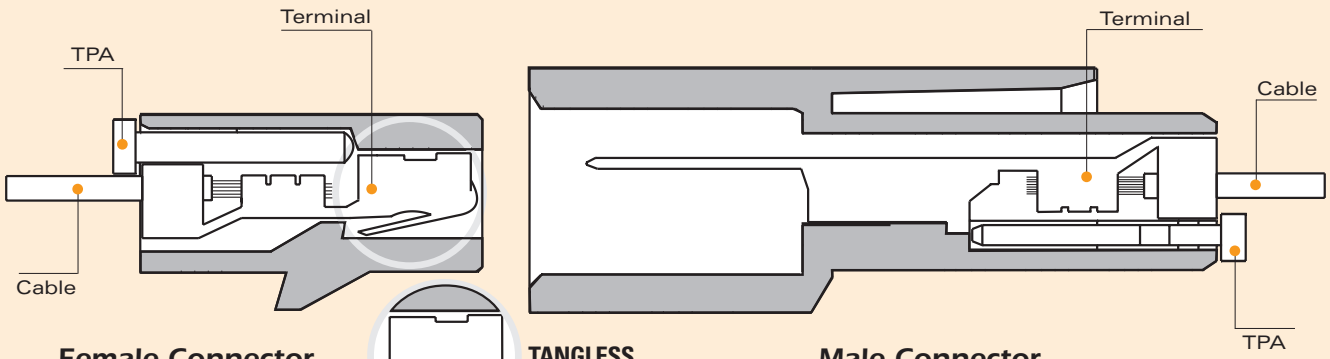
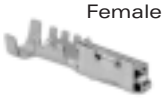
Cross Sectional View



TPA
(Terminal Position Assurance)



Female Terminal

CPA
(Connector Position Assurance)

Female Connector

150 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12047767	1.0-0.80	Silicon Bronze	Tin
12064971	0.50-0.35	Silicon Bronze	Tin

TANGLESS

150 TANGLESS FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12129484	1.0-0.80	Silicon Bronze	Tin
12129373	0.5-0.35	Silicon Bronze	Tin

150 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1	12047682	Black	PA66 HS IM	–
2	12047662	Black	PA66 HS IM	12047664
2	12052832	Black	PA66 HS IM	12047664
3	12047781	Black	PA66 HS IM	12047783
3	12064758	Black	PA66 HS IM	12047783
4	12047785	Black	PA66 HS IM	12047664
4	12064760	Black	PA66 HS IM	12047664
4	12092162	Black	PA66 HS IM	12092164
6	12064762	Gray	PBT	12064764
8	12047886	Black	PA66 HS IM	12045689
8	12064766	Blue	PBT	12064768
10	12064769	Natural	PBT	12064771

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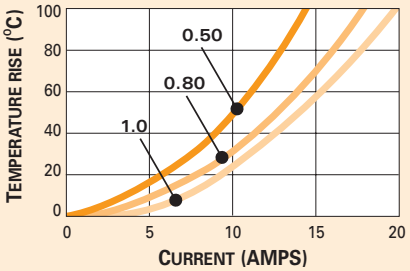
Unsealed System Application Information

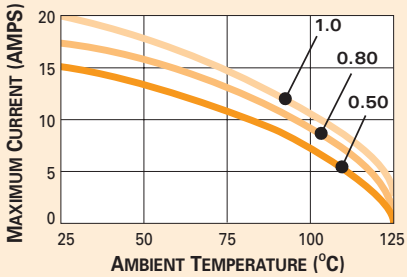
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: .... <10.0 mV/amp
CENTERLINE SPACING (mm): 3.5
BLADE WIDTH (mm): 1.5

150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector

Male Terminal

TPA
(Terminal Position Assurance)

150 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1	12047683	Black	PA66 HS IM	–
2	12047663	Black	PA66 HS IM	12047665
2	12052833	Black	PBT	12047665
3	12047782	Black	PA66 HS IM	12047784
3	12064759	Black	PBT	12047784
4	12047786	Black	PA66 HS IM	12047787
4	12064761	Black	PBT	12047787
4	12092163	Black	PA66 HS IM	12092164
6	12064763	Gray	PBT	12064765
8	12045688	Black	PA66 HS IM	12045690
8	12064767	Blue	PBT	12045690
10	12064770	Natural	PBT	12064772

150 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12047581	1.0-0.80	Tin Brass	Tin
12059894	0.50-0.35	Tin Brass	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female connections for device applications, see page 74.

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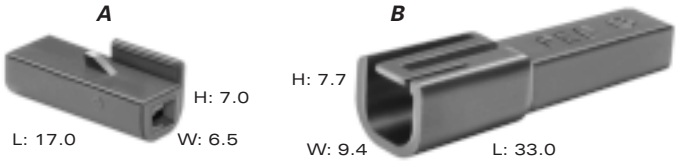
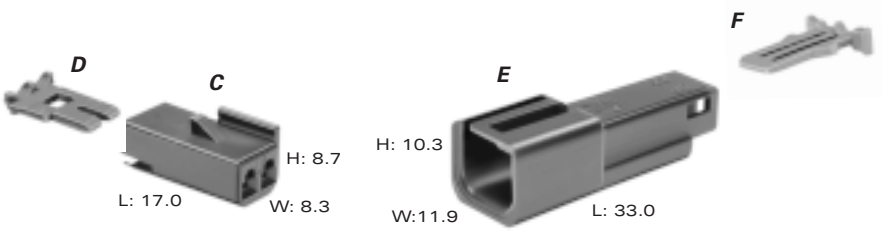


Total Mated Length: 38.1mm

A PART NO: **12047682**
DESCRIPTION: Connector 1F
SIZE: 17.0L x 7.0H x 6.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12047683**
DESCRIPTION: Connector 1M
SIZE: 33.0L x 7.7H x 9.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 57



Total Mated Length: 41.0mm

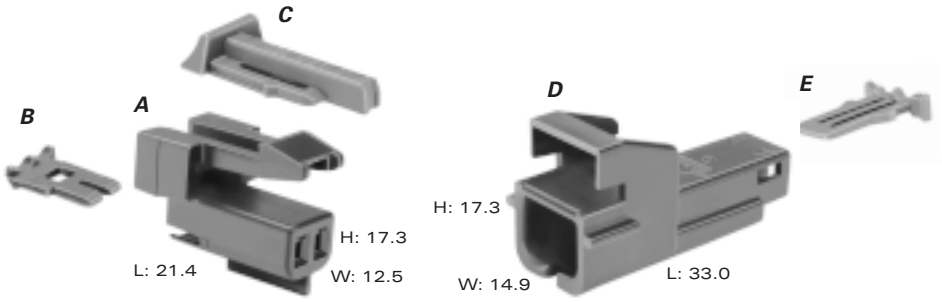
C PART NO: **12047662 (Black)**
12059249 (Natural)
DESCRIPTION: Connector 2F
SIZE: 17.0L x 8.7H x 8.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

D PART NO: **12047664**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

E PART NO: **12047663 (Black)**
12059250 (Natural)
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 33.0L x 10.3H x 11.9W
MATERIAL: PA66 HS IM
TERMINALS: See Page 57

F PART NO: **12047665**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

Downloaded from Arrow.com.



Total Mated Length: 43.1mm

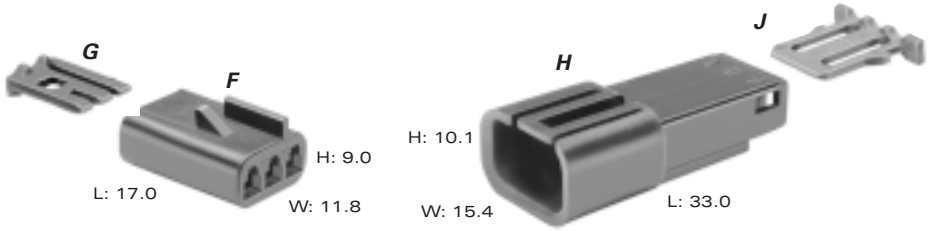
A PART NO: **12052832**
DESCRIPTION: Connector 2F
SIZE: 21.4L x 17.3H x 12.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12047664**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12052833**
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 33.0L x 17.3H x 14.9W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 57

E PART NO: **12047665**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM



Total Mated Length: 41.3mm

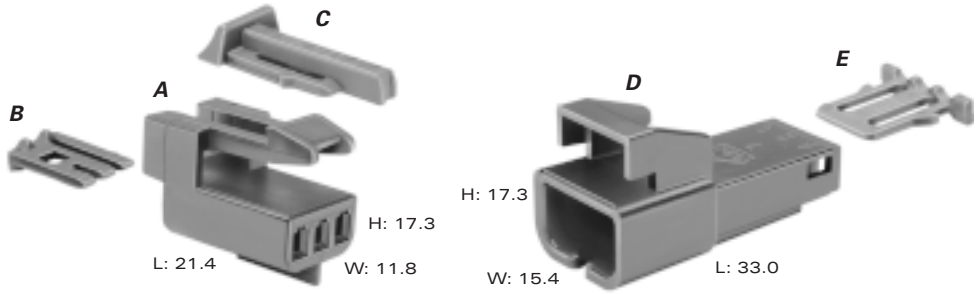
F PART NO: **12047781**
DESCRIPTION: Connector 3F
SIZE: 17.0L x 9.0H x 11.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

G PART NO: **12047783**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

H PART NO: **12047782**
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 33.0L x 10.1H x 15.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 57

J PART NO: **12047784**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PBT

Downloaded from Arrow.com.



Total Mated Length: 47.1mm

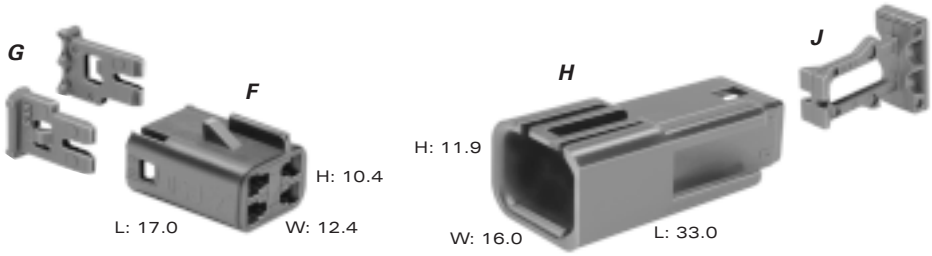
A PART NO: **12064758**
DESCRIPTION: Connector 3F
SIZE: 21.4L x 17.3H x 11.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12047783**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12064759**
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 33.0L x 17.3H x 15.4W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 57

E PART NO: **12047784**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PBT



Total Mated Length: 42.2mm

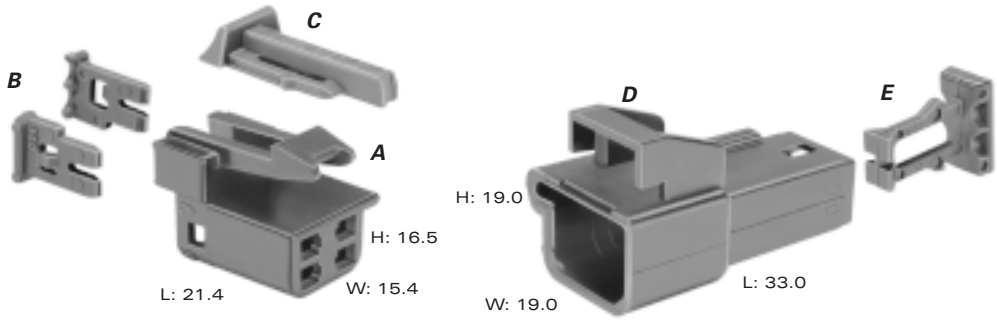
F PART NO: **12047785**
DESCRIPTION: Connector 4F
SIZE: 17.0L x 10.4H x 12.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

G PART NO: **12047664**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA66 HS IM

H PART NO: **12047786**
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 33.0L x 11.9H x 16.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 57

J PART NO: **12047787**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

Downloaded from Arrow.com.



Total Mated Length: 47.9mm

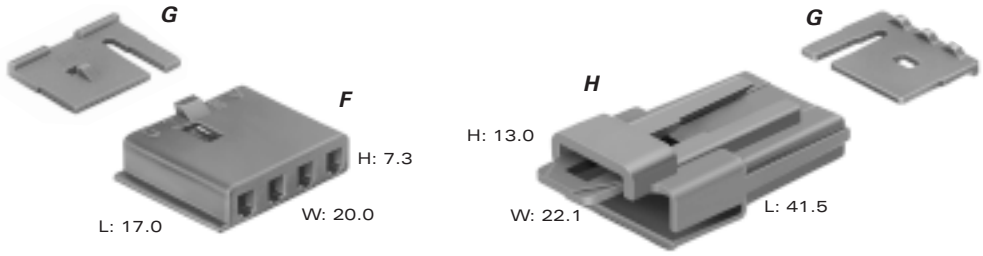
A PART NO: **12064760**
DESCRIPTION: Connector 4F
SIZE: 21.4L x 16.5H x 15.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12047664**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12064761**
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 33.0L x 19.0H x 19.0W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 57

E PART NO: **12047787**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT



Total Mated Length: 43.3mm

F PART NO: **12092162**
DESCRIPTION: Connector 4F
SIZE: 17.0L x 7.3H x 20.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

G PART NO: **12092164**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

H PART NO: **12092163**
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 41.5L x 13.0H x 22.1W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 57

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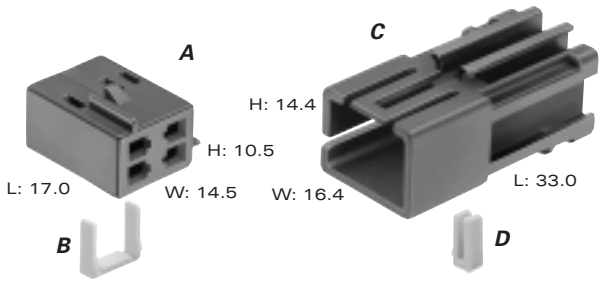


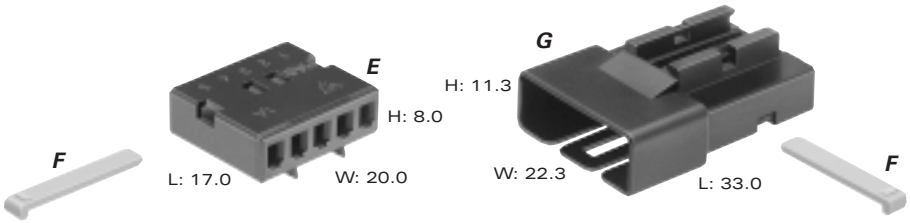
Total Mated Length: 38.3mm

A
PART NO: 12131283
DESCRIPTION: Connector 4F
SIZE: 17.0L x 10.5H x 14.5W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 56

B
PART NO: 12131361
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF

C
PART NO: 12131285
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 33.0L x 14.4H x 16.4W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 57

D
PART NO: 12131372
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF
NOTE: M Clip-on Connector also available



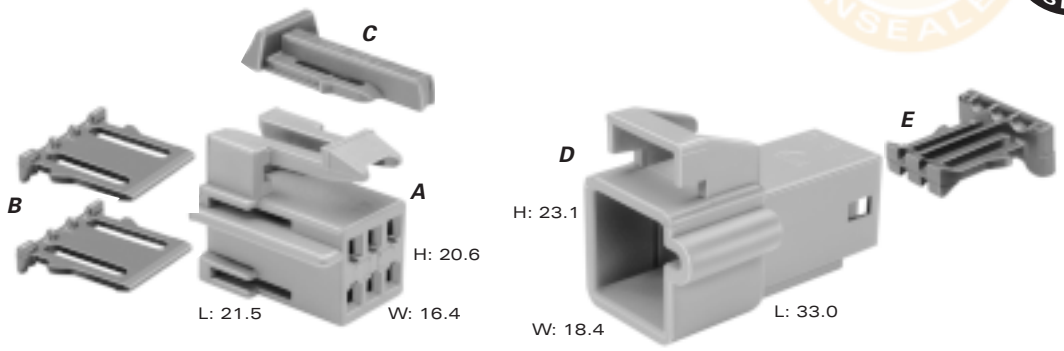
Total Mated Length: 38.3mm

E
PART NO: 12147054
DESCRIPTION: Connector 5F
SIZE: 17.0L x 8.0H x 20.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 56

F
PART NO: 12147055
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Yellow
MATERIAL: PA66 25% GF

G
PART NO: 12185636
DESCRIPTION: Connector 5M (Clip Slot)
SIZE: 33.0L x 11.3H x 22.3W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 57
NOTE: Clip Version available

Downloaded from Arrow.com.



Total Mated Length: 50.1mm

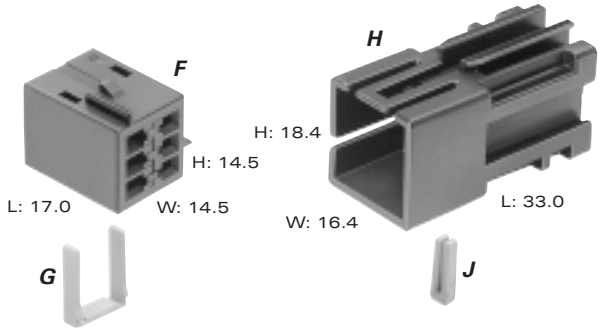
A PART NO: **12064762**
DESCRIPTION: Connector 6F
SIZE: 21.5L x 20.6H x 16.4W
COLOR: Gray
MATERIAL: PBT
TERMINALS: See Page 56

B PART NO: **12064764**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12064763**
DESCRIPTION: Connector 6M (Clip Slot)
SIZE: 33.0L x 23.1H x 18.4W
COLOR: Gray
MATERIAL: PBT
TERMINALS: See Page 57

E PART NO: **12064765**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PBT



Total Mated Length: 38.3mm

F PART NO: **15396848**
DESCRIPTION: Connector 6F
SIZE: 17.0L x 14.5H x 14.5W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 56

G PART NO: **12131358**
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF

H PART NO: **15396849**
DESCRIPTION: Connector 6M
SIZE: 33.0L x 18.4H x 16.4W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 57

J PART NO: **12131370**
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF

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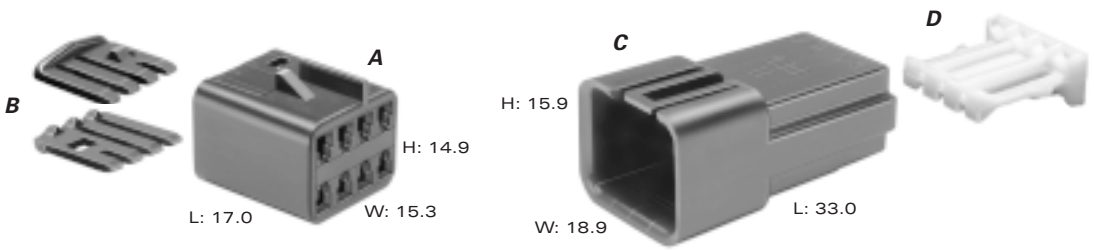


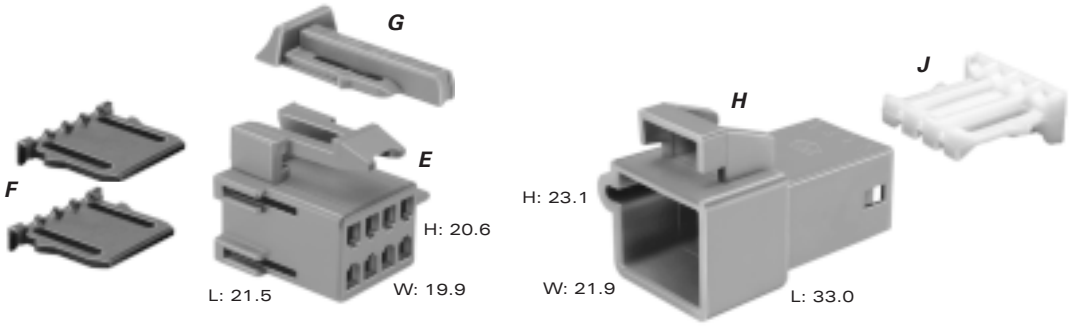
Total Mated Length: 41.2mm

A PART NO: **12047886**
DESCRIPTION: Connector 8F
SIZE: 17.0L x 14.9H x 15.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12045689**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12045688**
DESCRIPTION: Connector 8M (Clip Slot)
SIZE: 33.0L x 15.9H x 18.9W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 57

D PART NO: **12045690**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PBT



Total Mated Length: 48.3mm

E PART NO: **12064766**
DESCRIPTION: Connector 8F
SIZE: 21.5L x 20.6H x 19.9W
COLOR: Blue
MATERIAL: PBT
TERMINALS: See Page 56

F PART NO: **12064768**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PBT

G PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

H PART NO: **12064767**
DESCRIPTION: Connector 8M (Clip Slot)
SIZE: 33.0L x 23.1H x 21.9W
COLOR: Blue
MATERIAL: PBT
TERMINALS: See Page 57

J PART NO: **12045690**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PBT

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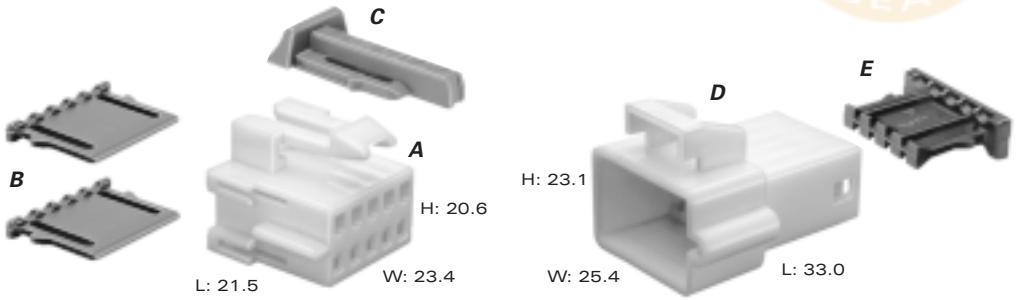


Total Mated Length: 48.3mm

A
PART NO: **12064769**
DESCRIPTION: Connector 10F
SIZE: 21.5L x 20.6H x 23.4W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 56

B
PART NO: **12064771**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA66 HS IM

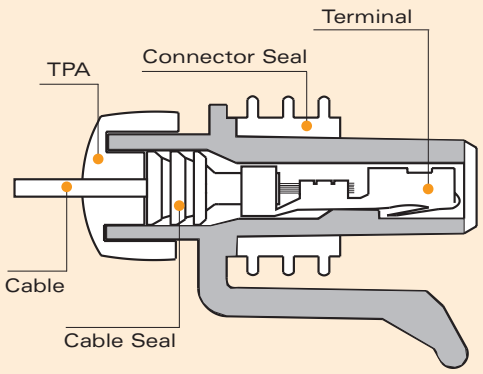
C
PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D
PART NO: **12064770**
DESCRIPTION: Connector 10M (Clip Slot)
SIZE: 33.0L x 23.1H x 25.4W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 57

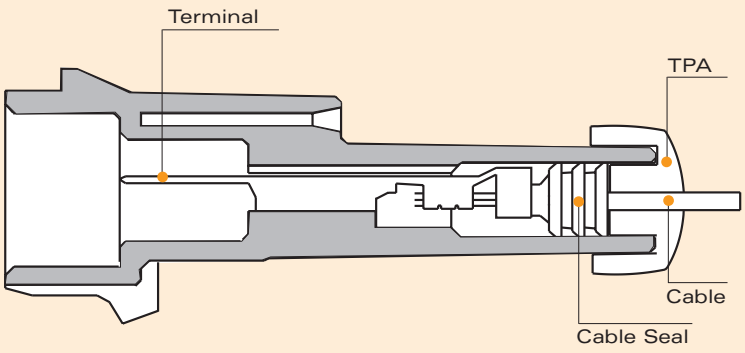
E
PART NO: **12064772**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PBT

Downloaded from Arrow.com.

Cross Sectional View



Female Connector Assembly



Male Connector

TPA (Terminal Position Assurance)

Cable Seal

Female Terminal

Female Connector Assembly

150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048074	1.0-0.80	Silicon Bronze	Tin
12084200	0.50-0.35	Silicon Bronze	Tin
12160223	1.0-0.80	Beryllium Copper	Silver/Nickel
12160222	0.50-0.35	Beryllium Copper	Silver/Nickel

150.2 PULL-TO-SEAT FEMALE TERMINALS*

Part #	Cable Range (mm²)	Material	Plating
12124075	1.0-0.80	Silicon Bronze	Tin
12124076	0.50-0.35	Silicon Bronze	Tin
12161184	1.0-0.80	Beryllium Copper	Silver/Nickel

* To be used with female connections, see page 76

150 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12052924	12048086	2.85-2.03	Silicone	Dk. Red
12089442	12089678	2.15-1.60	Silicone	White
12052925	12048087	1.70-1.29	Silicone	Blue
12124669	12084193	1.009-0.995	Silicone	Tan

150 FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
2	12052641	Black	PA66 HS IM	12052634
3	12110293	Black	PA66 HS IM	12052845
4	12162144	Black	PA66 HS IM	12047948
5	12146045	Natural	PA6	12092844
6	12052848	Black	PA6	12052850
8	12047937	Black	PA66 HS IM	12066304
10	12065425	Black	PA66 HS IM	12124264

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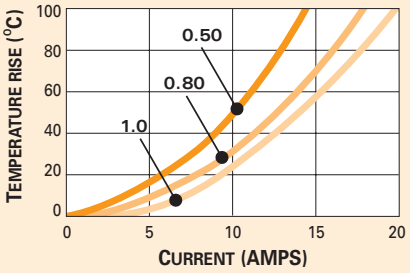
Sealed System Application Information

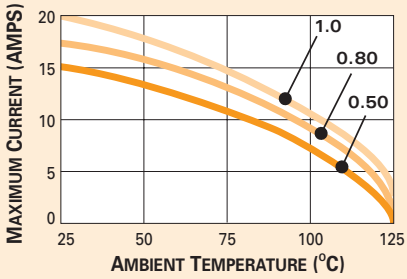
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: .... <10.0 mV/amp
CENTERLINE SPACING (mm): 6.0
BLADE WIDTH (mm): 1.5

150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

CPA (Connector Position Assurance)

Male Connector

Male Terminal

Cable Seal

TPA (Terminal Position Assurance)

150 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12045773	1.0-0.80	Tin Brass	Tin
12077628	0.50-0.35	Tin Brass	Tin

150 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059168	5.2mm	Silicone	Dk. Red

*Cavity plugs seal unused female and male cavities

150 MALE CONNECTORS SEALED

# Cavities	Connector	Color	Material	TPA
2	12162000	Black	PA66 HS IM	12052634
3	12129615	Black	PA66 HS IM	12052845
4	12162102	Black	PBT 30% GF	12047948
5	12103974	Natural	PBT 30% GF	12092844
6	12124107	Black	PA66 HS IM	12052850
8	12047931	Black	PBT 30% GF	15324525
10	12045808	Black	PBT 30% GF	12124264

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Different color and connector indexing features are also available.
- Female connections for device applications, see page 75.

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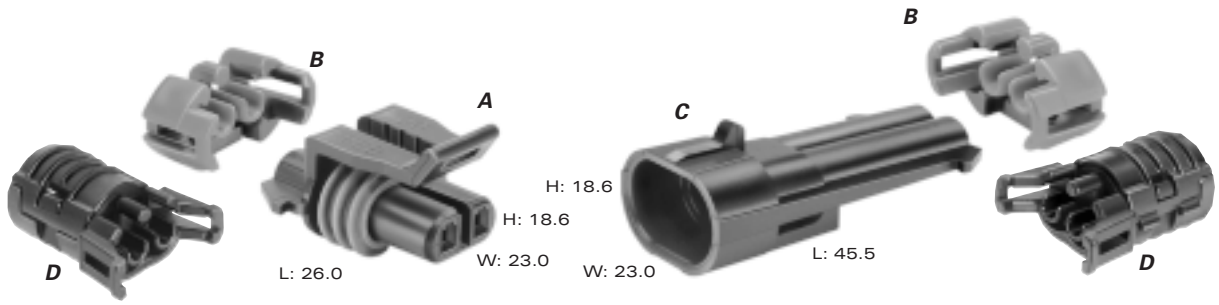


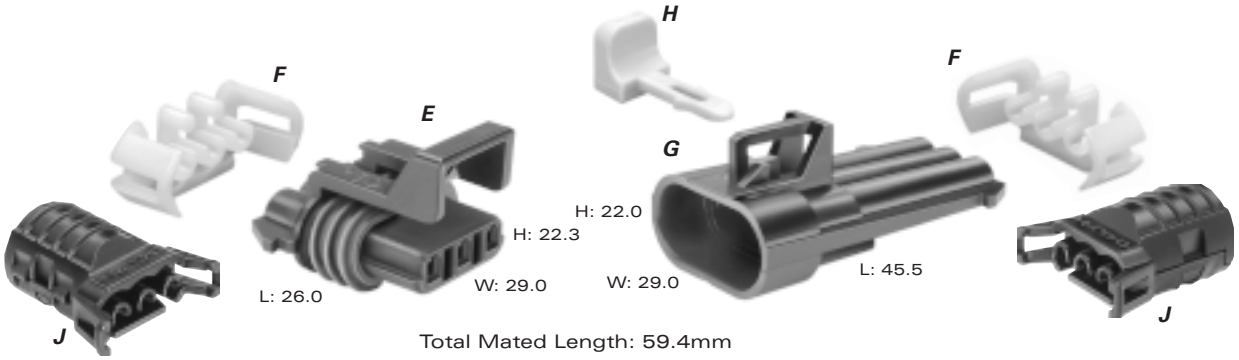
Total Mated Length: 58.5mm

A PART NO: **12052641 (Black)**
12052644 (Lt. Gray)
DESCRIPTION: Connector Assembly 2F
SIZE: 26.0L x 18.6H x 23.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

B PART NO: **12052634**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA66 HS IM

C PART NO: **12162000 (Black)**
12162343 (Lt. Gray)
DESCRIPTION: Connector 2M (Clip Slot–Self Locking)
SIZE: 45.5L x 18.6H x 23.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

D PART NO: **15327799 (Optional)**
DESCRIPTION: Conduit TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6



Total Mated Length: 59.4mm

E PART NO: **12110293**
DESCRIPTION: Connector Assembly 3F
SIZE: 26.0L x 22.3H x 29.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

F PART NO: **12052845**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PA66 HS IM

G PART NO: **12129615**
DESCRIPTION: Connector 3M (Clip Slot–Self Locking)
SIZE: 45.5L x 22.0H x 29.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

H PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

J PART NO: **10740397 (Optional)**
DESCRIPTION: Conduit TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

http://delphi.com/products/connect

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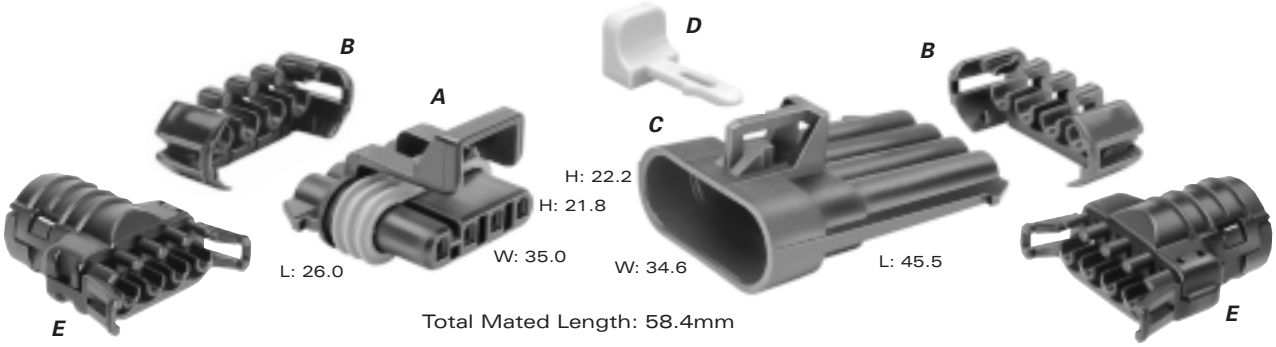


Total Mated Length: 58.4mm

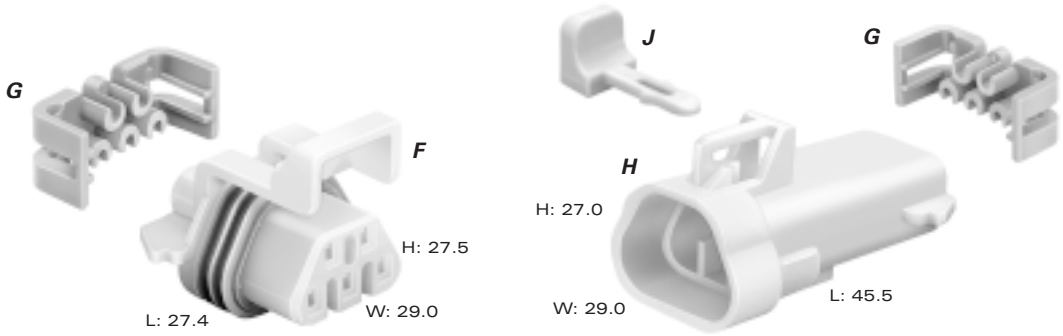
A PART NO: **12162144**
DESCRIPTION: Connector Assembly 4F
SIZE: 26.0L x 21.8H x 35.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

B PART NO: **12047948**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA66 HS IM

C PART NO: **12162102**
DESCRIPTION: Connector 4M (Clip Slot–Self Locking)
SIZE: 45.5L x 22.2H x 34.6W
COLOR: Black
MATERIAL: PBT 30% GF
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

D PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

E PART NO: **10719337 (Optional)**
DESCRIPTION: Conduit TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6



Total Mated Length: 60.5mm

F PART NO: **12146045**
DESCRIPTION: Connector Assembly 5F
SIZE: 27.4L x 27.5H x 29.0W
COLOR: Natural
MATERIAL: PA6
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

G PART NO: **12092844**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

H PART NO: **12103974**
DESCRIPTION: Connector 5M
SIZE: 45.5L x 27.0H x 29.0W
COLOR: Natural
MATERIAL: PBT 30% GF
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

J PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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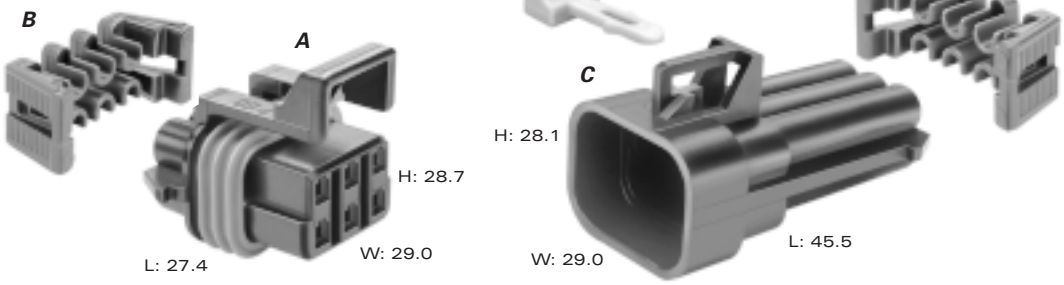


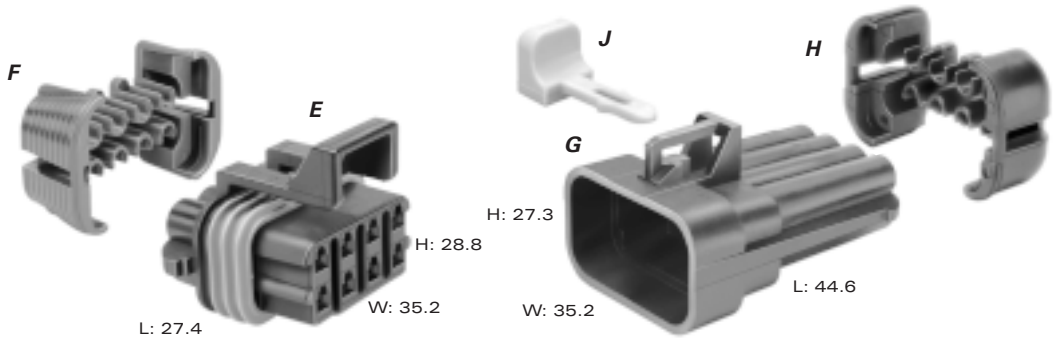
Total Mated Length: 60.5mm

A PART NO: **12052848**
DESCRIPTION: Connector Assembly 6F
SIZE: 27.4L x 28.7H x 29.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

B PART NO: **12052850**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA6

C PART NO: **12124107**
DESCRIPTION: Connector 6M (Clip Slot–Self Locking)
SIZE: 45.5L x 28.1H x 29.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

D PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



Total Mated Length: 60.4mm

E PART NO: **12047937 (Black)**
DESCRIPTION: Connector Assembly 8F
PART NO: **12047938 (Lt. Gray)**
DESCRIPTION: Connector Assembly 7F
PART NO: **12052600 (Md. Gray)**
DESCRIPTION: Connector Assembly 5F
SIZE: 27.4L x 28.8H x 35.2W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

F PART NO: **12066304**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

G PART NO: **12047931 (Black)**
DESCRIPTION: Connector 8M (Clip Slot)
PART NO: **12047933 (Lt. Gray)**
DESCRIPTION: Connector 7M (Clip Slot)
PART NO: **12052480 (Dk. Gray)**
DESCRIPTION: Connector 5M (Clip Slot)
SIZE: 44.6L x 27.3H x 35.2W
MATERIAL: PBT 30% GF
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

H PART NO: **15324525**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PBT

J PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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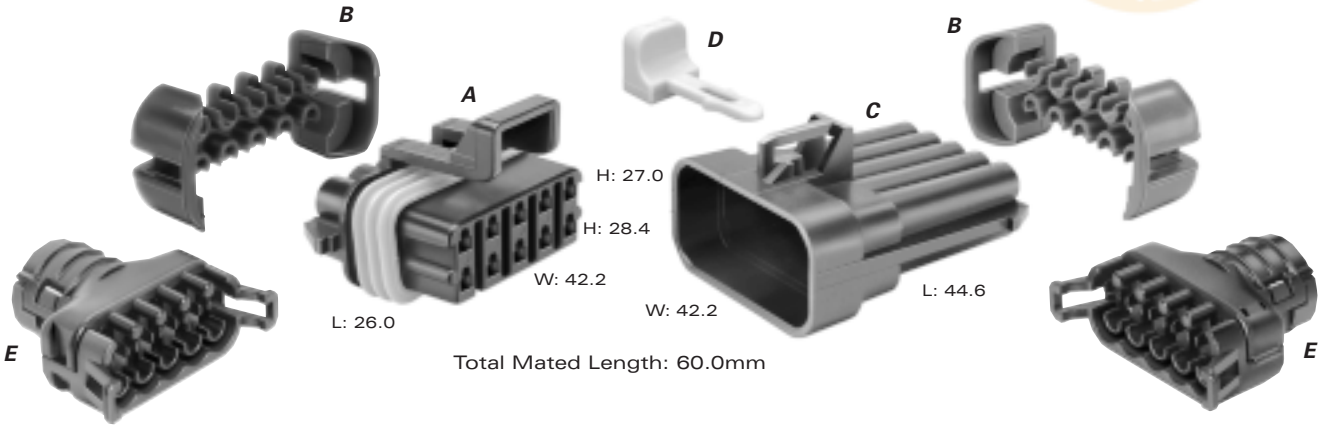

A PART NO: **12065425 (Black)**
12065426 (Md. Gray)
DESCRIPTION: Connector Assembly 10F
SIZE: 26.0L x 28.4H x 42.2W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67

B PART NO: **12124264**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA6

C PART NO: **12045808 (Black)**
12052189 (Lt. Gray)
DESCRIPTION: Connector 10M (Clip Slot)
SIZE: 44.6L x 27.0H x 42.2W
MATERIAL: PBT 30% GF
TERMINALS: See Page 67
SEALS/PLUGS: See Page 66, 67

D PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

E PART NO: **10719339 (Optional)**
DESCRIPTION: Conduit TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

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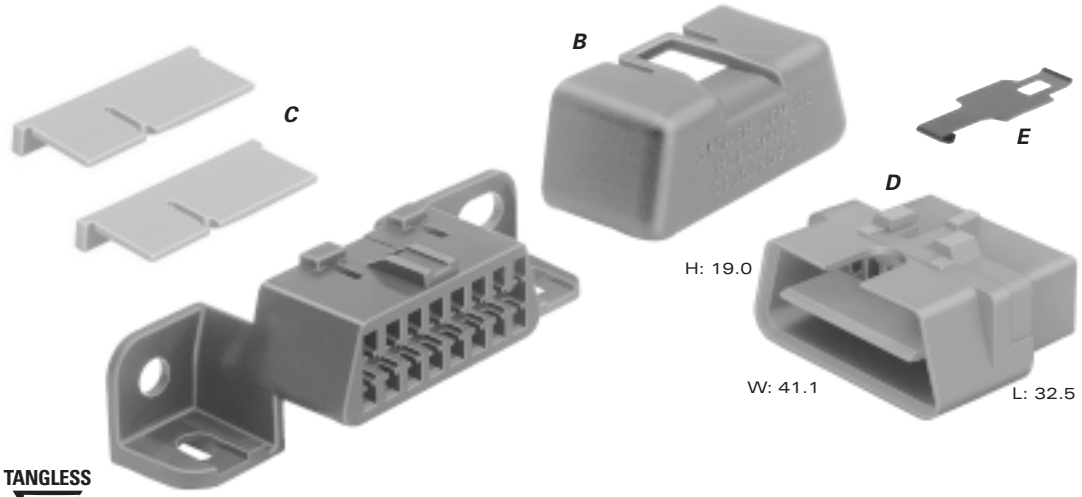
Metri-Pack OBD II — On-Board Diagnostic Connection System

The On-Board Diagnostic Connection System is designed to meet SAE J1962 specifications using ISO standard male terminals. The **16 Terminal Male Test Equipment Connector** includes a nylon insulator with ISO standard copper alloy male terminals. The **Female Vehicle Connector** is designed for under dash application, and accepts 150 Series Metri-Pack tangless female terminals available in silicon bronze.



TANGLESS

A PART NO: **12110250**
DESCRIPTION: Connector 16F (Fastener Mounting)
SIZE: 27.0L x 23.2H x 69.1W
PART NO: **15317575**
DESCRIPTION: Connector 16F (Snap Mounting)
SIZE: 17.0L x 23.2H x 52.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 56

B PART NO: **12146933**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: PP

C PART NO: **12160437**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

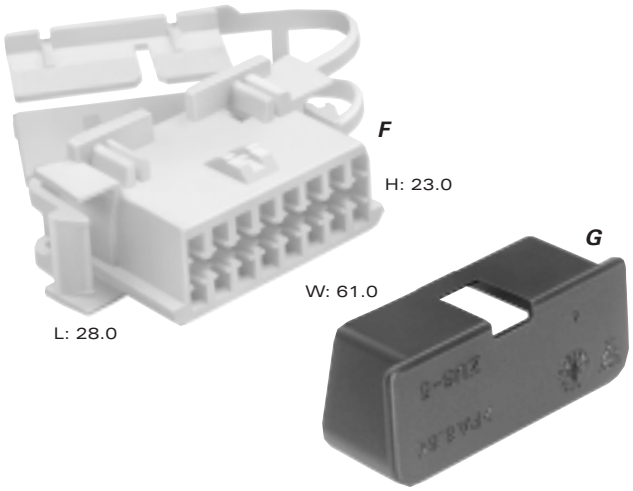
D PART NO: **12110252**
DESCRIPTION: Connector 16M
SIZE: 32.5L x 19.0H x 41.1W
COLOR: Red
MATERIAL: PBT 30% GF
TERMINALS: See Page 57
NOTE: For molding details refer to drawing 12110256

E PART NO: **12110254**
DESCRIPTION: Clip
MATERIAL: Stainless Steel

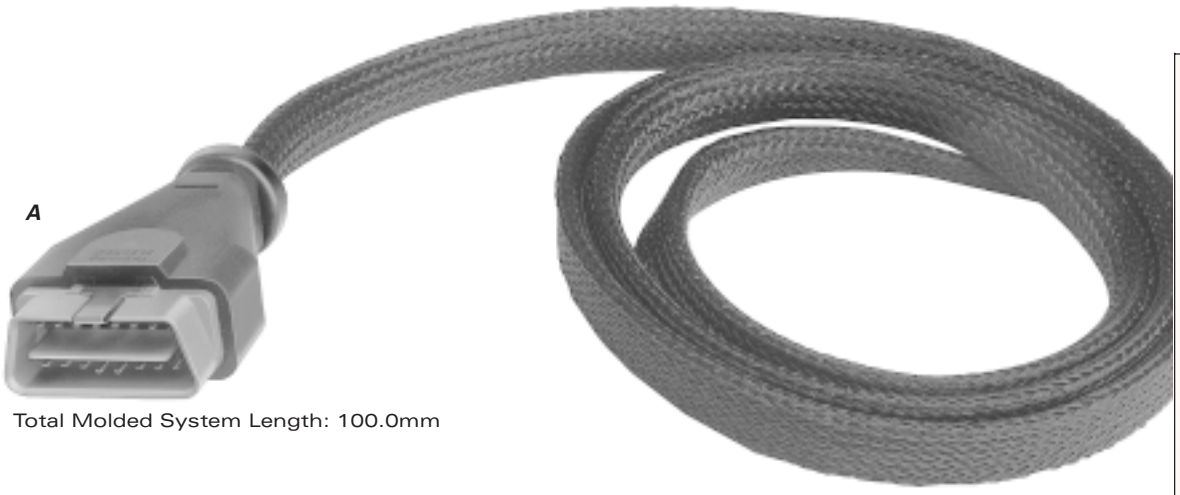
TANGLESS

F PART NO: **12185280**
DESCRIPTION: Connector 16F
SIZE: 28.0L x 23.0H x 61.0W
COLOR: White
MATERIAL: PA66
TERMINALS: See Page 56

G PART NO: **12185279**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: PA66



Downloaded from Arrow.com.

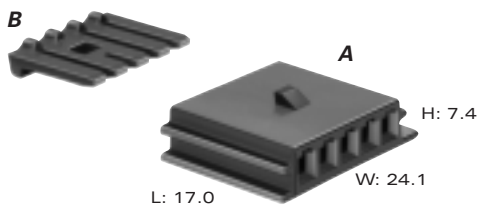


Total Molded System Length: 100.0mm

A DESCRIPTION: Connector Assembly 16M OBD II

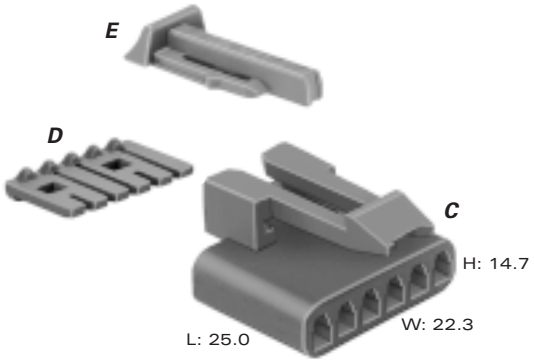
PART NO:	**12143692**
LENGTH:	3 Feet (915mm)
PART NO:	**12143693**
LENGTH:	8 Feet (2440mm)
PART NO:	**12143694**
LENGTH:	12 Feet (3660mm)

Downloaded from Arrow.com.



A PART NO: **12059800**
DESCRIPTION: Connector 5F
SIZE: 17.0L x 7.4H x 24.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 56
TYPICAL APP: Motor

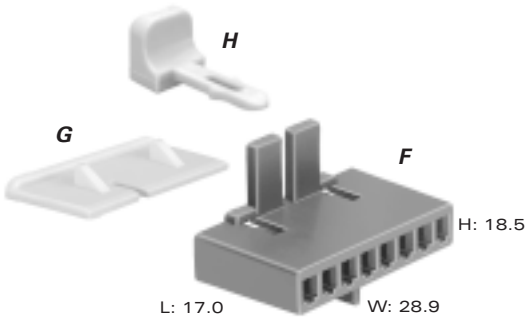
B PART NO: **12059801**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM



C PART NO: **12064860**
DESCRIPTION: Connector 6F
SIZE: 25.0L x 14.7H x 22.3W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 56
TYPICAL APP: Switch

D PART NO: **12064861**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

E PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



F PART NO: **12064862**
DESCRIPTION: Connector 8F
SIZE: 17.0L x 18.5H x 28.9W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 56
TYPICAL APP: Mirror Switch

G PART NO: **12064863**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

H PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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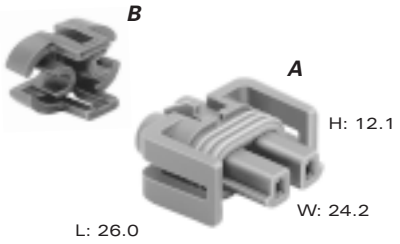
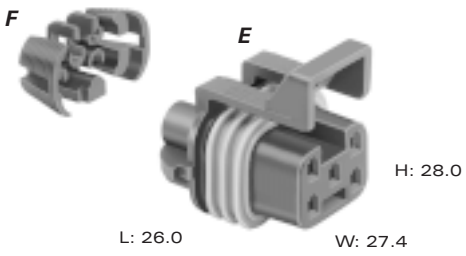


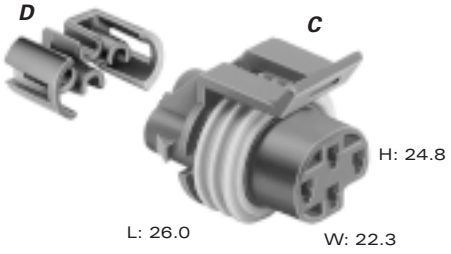
A PART NO: **12162017**
DESCRIPTION: Connector Assembly 2F
SIZE: 26.0L x 12.1H x 24.2W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67
TYPICAL APP: Compressor

B PART NO: **12124824**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA66 HS IM



E PART NO: **12077591**
DESCRIPTION: Connector Assembly 5F
SIZE: 26.0L x 28.0H x 27.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67
TYPICAL APP: EGR Valve

F PART NO: **12052898**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA66 HS IM

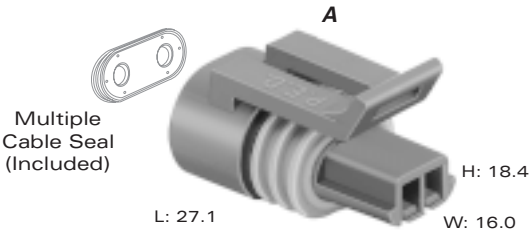


C PART NO: **12065298**
DESCRIPTION: Connector Assembly 4F
SIZE: 26.0L x 24.8H x 22.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
SEALS/PLUGS: See Page 66, 67
TYPICAL APP: Switch

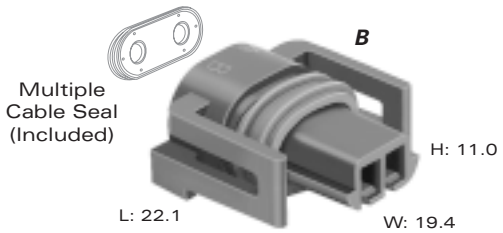
D PART NO: **12066176**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA66 HS IM

Downloaded from Arrow.com.

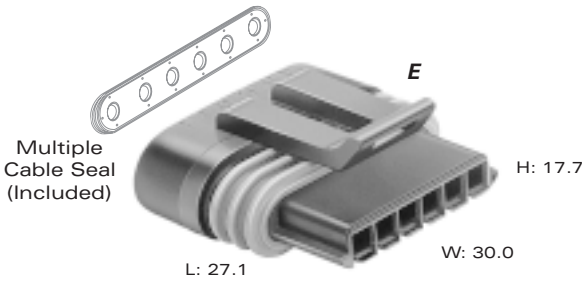
150.2 Pull-to-Seat



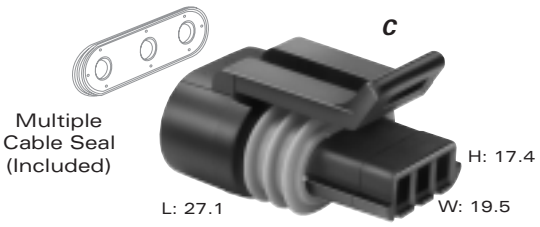
A
PART NO: **12162193 (Black/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162197 (Gray/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162194 (Black/Tan Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162198 (Gray/Tan Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162195 (Black/Orange Seal)**
1.85 -1.47 Cable O.D.
PART NO: **12162199 (Gray/Orange Seal)**
1.85 -1.47 Cable O.D.
DESCRIPTION: Connector Assembly 2F
SIZE: 27.1L x 18.4H x 16.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
TYPICAL APP: Temperature Sensors



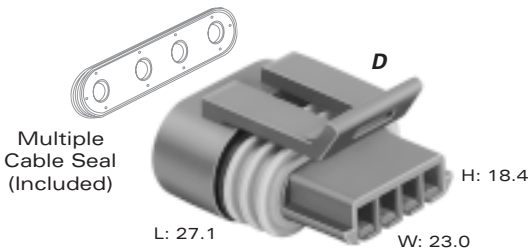
B
PART NO: **12162215 (Black/Brown Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162216 (Black/Lt. Gray Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162217 (Black/Gray Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162218 (Gray/Yellow Seal)**
2.15 -1.65 Cable O.D.
DESCRIPTION: Connector Assembly 2F
SIZE: 22.1L x 11.0H x 19.4W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
TYPICAL APP: Throttle Body Injector



E
PART NO: **12162210 (Black/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162260 (Black/Tan Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162261(Black/Lt. Gray Seal)**
1.85 -1.47 Cable O.D.
DESCRIPTION: Connector Assembly 6F
SIZE: 27.1L x 17.7H x 30.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
TYPICAL APP: Various



C
PART NO: **12162182 (Black/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162280 (Gray/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162185 (Black/Lt.Gray Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162279 (Gray/Lt.Gray Seal)**
2.15 -1.65 Cable O.D.
DESCRIPTION: Connector Assembly 3F
SIZE: 27.1L x 17.4H x 19.5W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
TYPICAL APP: Crankshaft Sensor



D
PART NO: **12162188 (Black/Green Seal)**
2.66 -2.00 Cable O.D.
PART NO: **12162191(Black/Blue Seal)**
2.45 -2.00 Cable O.D.
PART NO: **12162189 (Black/Tan Seal)**
2.15 -1.65 Cable O.D.
PART NO: **12162190 (Black/Orange Seal)**
1.85-1.47 Cable O.D.
DESCRIPTION: Connector Assembly 4F
SIZE: 27.1L x 18.4H x 23.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 66
TYPICAL APP: Distributor Module

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Metri-Pack Series 280

METRI-PACK SERIES 280

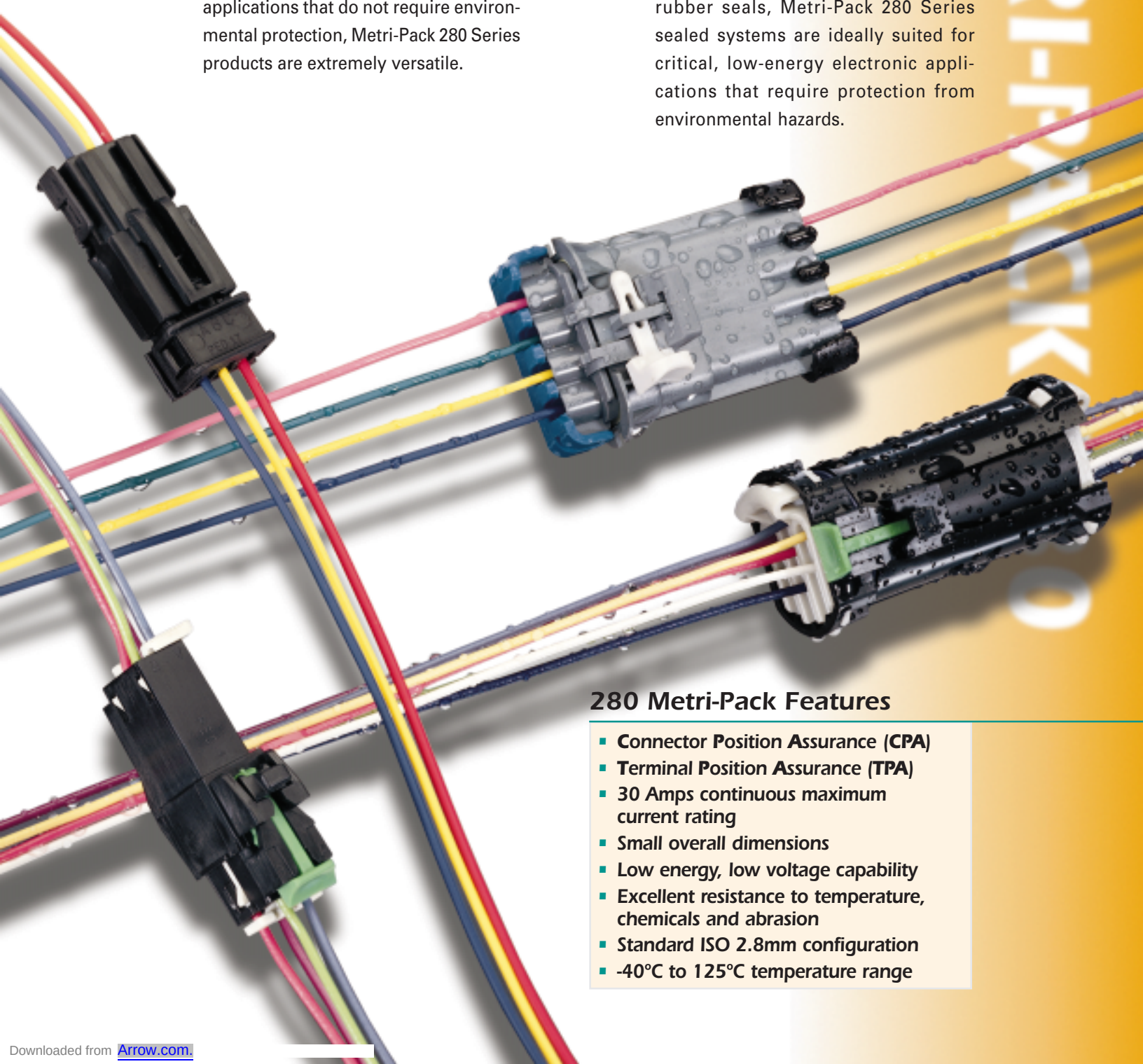
Available in device and in-line connections for vehicle applications, Metri-Pack 280 Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for limited space applications that do not require environmental protection, Metri-Pack 280 Series products are extremely versatile.

Available in device and in-line connections for underhood vehicle applications, Metri-Pack 280 Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Utilizing triple-rib peripheral silicone rubber seals, Metri-Pack 280 Series sealed systems are ideally suited for critical, low-energy electronic applications that require protection from environmental hazards.

METRI-PACK 280

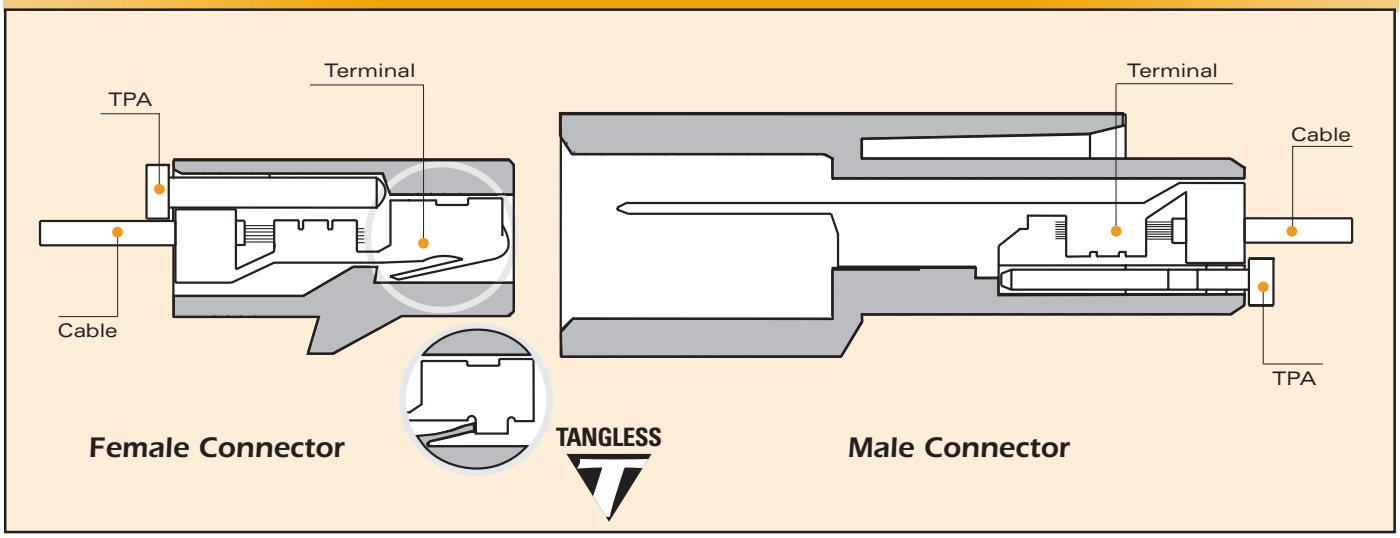


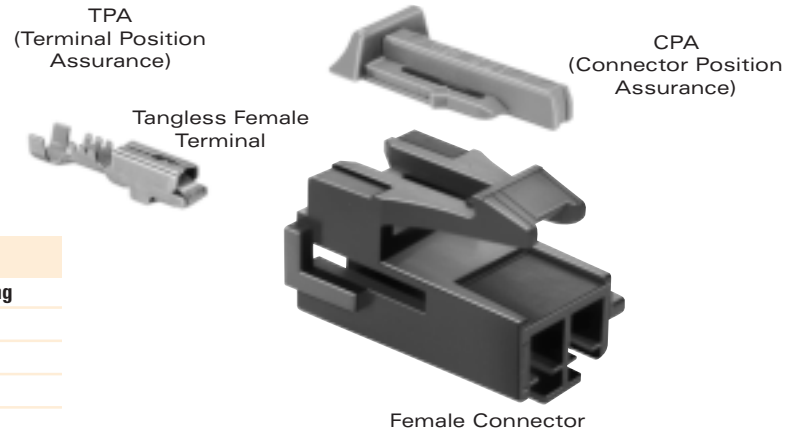
280 Metri-Pack Features

- **Connector Position Assurance (CPA)**
- **Terminal Position Assurance (TPA)**
- **30 Amps continuous maximum current rating**
- **Small overall dimensions**
- **Low energy, low voltage capability**
- **Excellent resistance to temperature, chemicals and abrasion**
- **Standard ISO 2.8mm configuration**
- **-40°C to 125°C temperature range**

Downloaded from Arrow.com.

Cross Sectional View





TANGLESS

280 TANGLESS FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12129425	5.0	Tin Brass	Tin
12129663	3.0	Tin Brass	Tin
12129424	2.0-1.0	Tin Brass	Tin
12110842*	3.0-2.0	Tin Brass	Tin
12110844*	1.0-0.80	Tin Brass	Tin
12110843*	0.50-0.35	Tin Brass	Tin
12129061*	0.35 (2 Req'd.)	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions apply, contact your regional support representative at the number listed below.

280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12015858	5.0	Tin Brass	Tin
12129494	3.0-2.0	Tin Brass	Tin
12066214	2.0-1.0	Tin Brass	Tin
12034046	1.0-0.80	Tin Brass	Tin
12052217	0.50-0.35	Tin Brass	Tin
12162597*	3.0-2.0	Tin Brass	Tin
12162595*	1.0-0.80	Tin Brass	Tin
12162596*	0.50-0.35	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions apply, contact your regional support representative at the number listed below.

TANGLESS

280 FLEXLOCK FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
2	12129081	Black	PA66 HS IM	12129083
3	12129489	Black	PA66 HS IM	12129491
4	12129136	Black	PA66 HS IM	12129138

280 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
6	12064752	Black	PA66 HS IM	12064753
8	12064998	Black	PBT	12064999

http://delphi.com/products/connect

North American Region 1-800-PACKARD
European Region 49-202-291-2000
Asia Pacific Region 65-730-9900
South American Region 55-12-378-2002

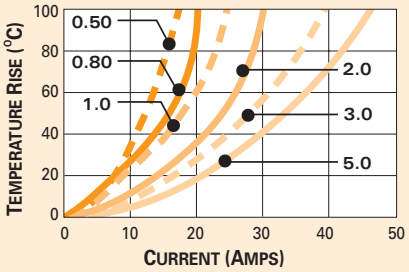
Downloaded from Arrow.com.

Unsealed System Application Information

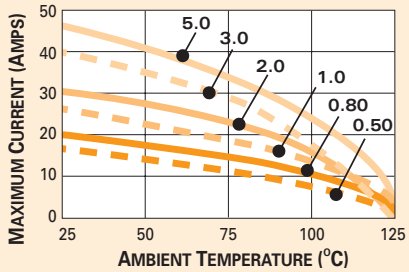
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 5.0
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector

Male Terminal

TPA
(Terminal Position Assurance)

280 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084586	5.0	Tin Brass	Tin
12129498	3.0-2.0	Tin Brass	Tin
12020116	2.0-1.0	Tin Brass	Tin
12034047	1.0-0.80	Tin Brass	Tin
12066271	0.50-0.35	Tin Brass	Tin
12020782	0.35 (2 Req'd.)	Tin Brass	Tin

280 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
2	12129155	Black	PA66 HS IM	12129157
3	12129490	Black	PA66 HS IM	12129492
4	12129135	Black	PA66 HS IM	12129137
6	12064754	Black	PA6	12064755
8	12066195	Black	PBT	12065141

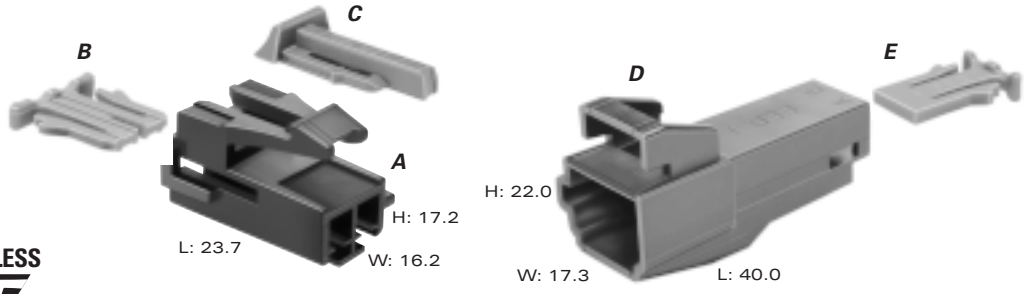
SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Different color and connector indexing features are also available.
- Female connections for device applications, see page 91.

Downloaded from Arrow.com.

UNSEALED



TANGLESS

Total Mated Length: 54.3mm

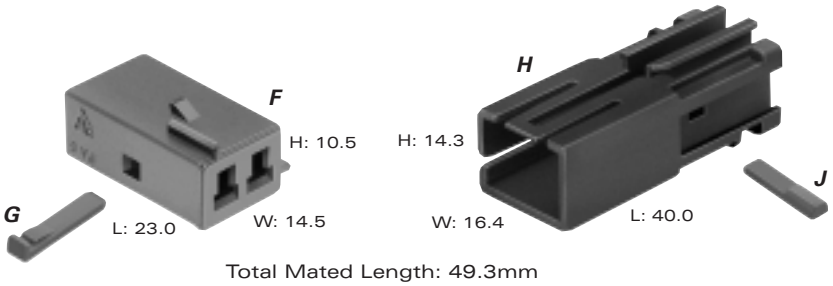
A PART NO: **12129081 (Black)**
12129082 (Md. Gray)
DESCRIPTION: Connector 2F
SIZE: 23.7L x 17.2H x 16.2W
MATERIAL: PA66 HS IM
TERMINALS: See Page 78

B PART NO: **12129083**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12129155 (Black)**
12129156 (Md. Gray)
DESCRIPTION: Connector 2M (Clip Slot–Self Locking)
SIZE: 40.0L x 22.0H x 17.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 79

E PART NO: **12129157**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM



Total Mated Length: 49.3mm

F PART NO: **12147503 (Black)**
12111456 (Green)
DESCRIPTION: Connector 2F
SIZE: 23.0L x 10.5H x 14.5W
MATERIAL: PA6
TERMINALS: See Page 78

G PART NO: **12147502**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PA6 % GF

H PART NO: **12147517 (Black)**
10717650 (Green)
DESCRIPTION: Connector 2M
SIZE: 40.0L x 14.3H x 16.4W
MATERIAL: PA6
TERMINALS: See Page 79

J PART NO: **12147771**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PA6 % GF

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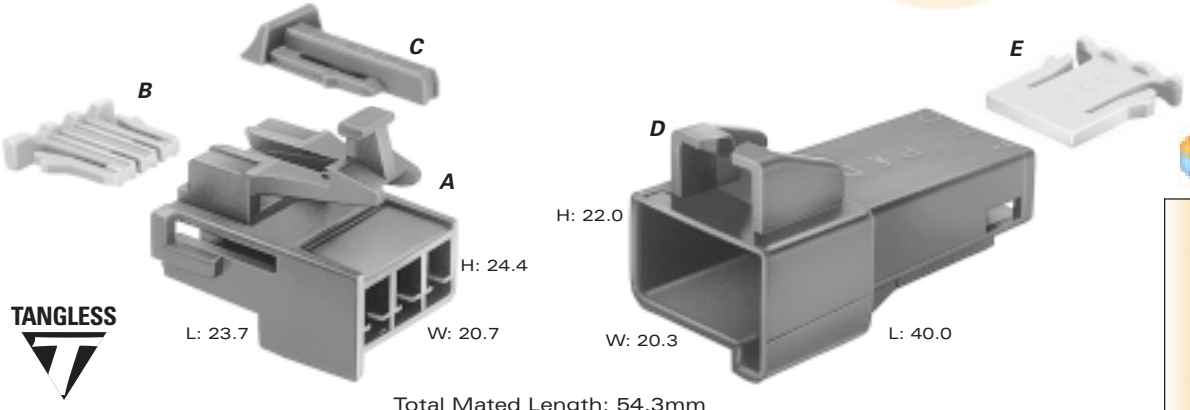


Total Mated Length: 54.3mm

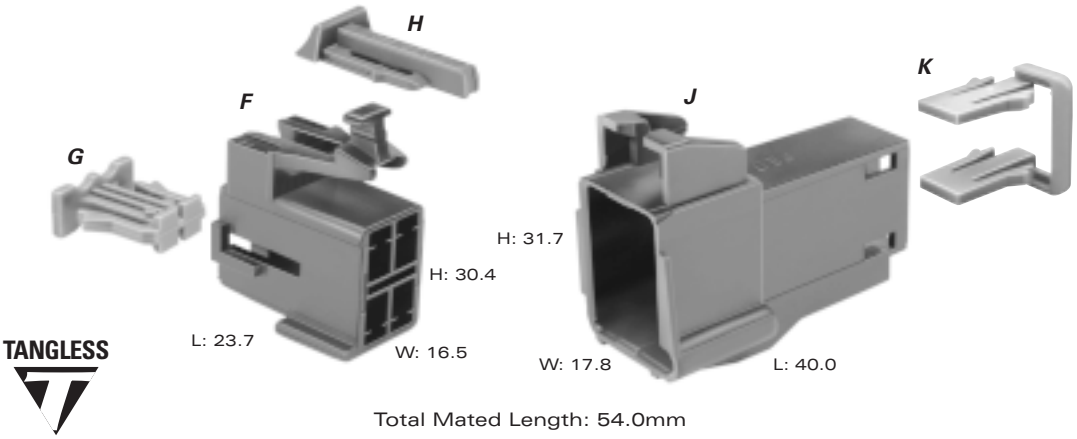
A PART NO: **12129489**
DESCRIPTION: Connector 3F
SIZE: 23.7L x 24.4H x 20.7W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78

B PART NO: **12129491**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12129490**
DESCRIPTION: Connector 3M
SIZE: 40.0L x 22.0H x 20.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 79

E PART NO: **12129492**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM



Total Mated Length: 54.0mm

F PART NO: **12129136**
DESCRIPTION: Connector 4F
SIZE: 23.7L x 30.4H x 16.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78

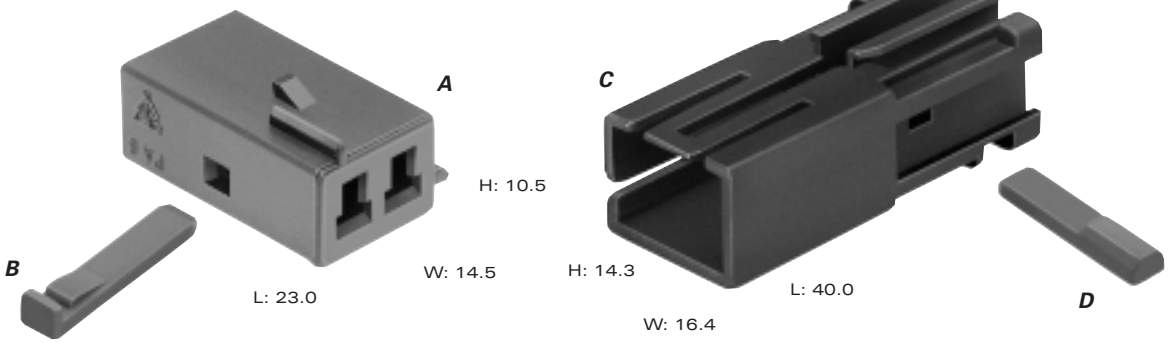
G PART NO: **12129138**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM

H PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

J PART NO: **12129135**
DESCRIPTION: Connector 4M (Clip Slot–Self Locking)
SIZE: 40.0L x 31.7H x 17.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 79

K PART NO: **12129137**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA66 HS IM

Downloaded from Arrow.com.



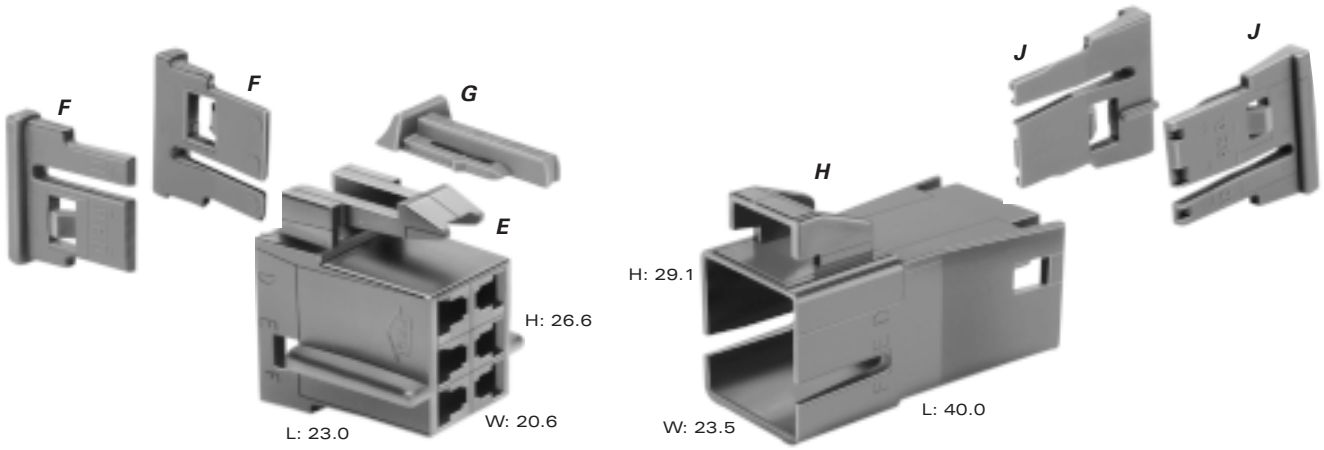
Total Mated Length: 50.0mm

A PART NO: **15318080**
DESCRIPTION: Connector 2F
SIZE: 23.0L x 10.5H x 14.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 78

B PART NO: **12147502**
DESCRIPTION: Secondary Lock
SIZE.: 2.6L x 2.3H x 12.6W
COLOR: Gray
MATERIAL: PA6%GF

C PART NO: **12147517**
DESCRIPTION: Connector 2M
SIZE: 40.0L x 14.3H x 16.4W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 79

D PART NO: **12147771**
DESCRIPTION: Secondary Lock
SIZE.: 2.7L x 2.2H x 11.8W
COLOR: Gray
MATERIAL: PA6%GF



Total Mated Length: 57.0mm

E PART NO: **12064752**
DESCRIPTION: Connector 6F
SIZE: 23.0L x 26.6H x 20.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78

F PART NO: **12064753**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Md. Gray
MATERIAL: PA66 HS IM

G PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

H PART NO: **12064754**
DESCRIPTION: Connector 6M (Clip Slot–Self Locking)
SIZE: 40.0L x 29.1H x 23.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 79

J PART NO: **12064755**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Blue
MATERIAL: PA66 HS IM

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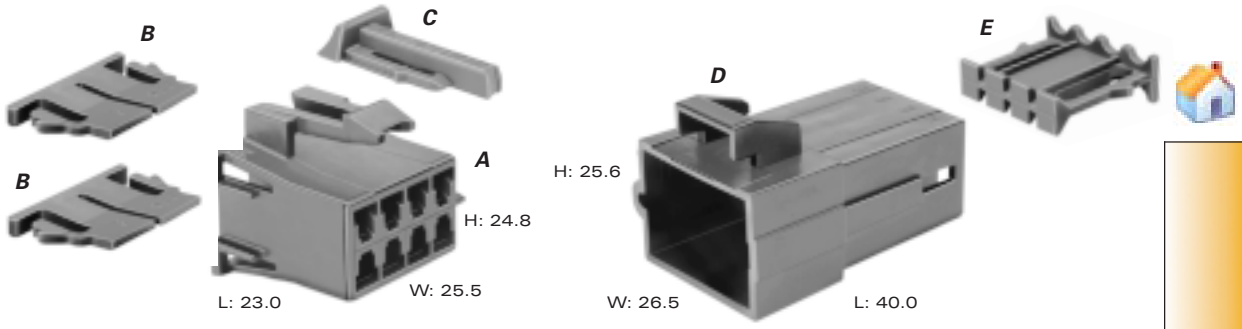

Total Mated Length: 54.0mm

A PART NO: **12064998**
DESCRIPTION: Connector 8F
SIZE: 23.0L x 24.8H x 25.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78

B PART NO: **12064999**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Blue
MATERIAL: PBT

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12066195**
DESCRIPTION: Connector 8M (Clip Slot)
SIZE: 40.0L x 25.6H x 26.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 79

E PART NO: **12065141**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

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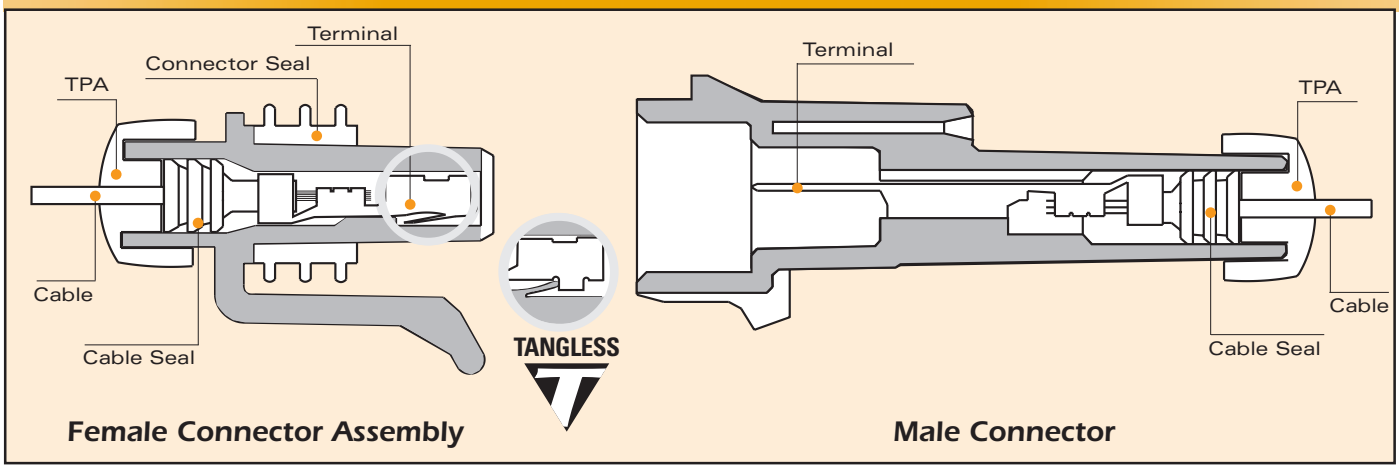
Cross Sectional View

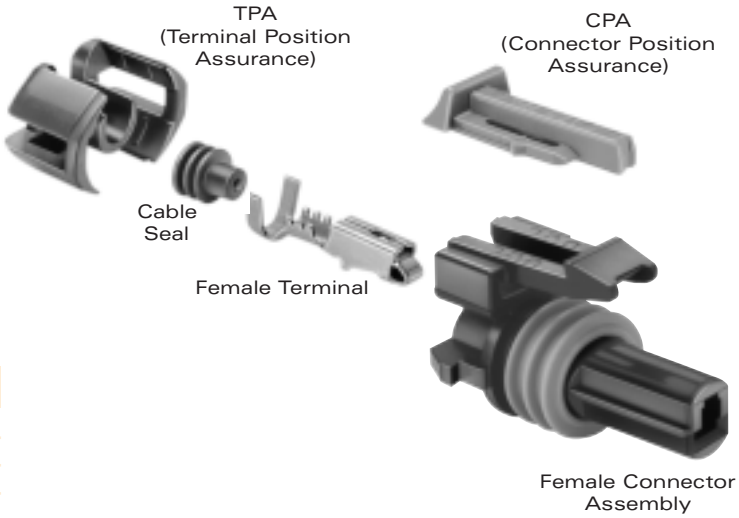


TANGLESS

280 TANGLESS FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12110853	5.0-3.0	Tin Brass	Tin
12129409	2.0-1.0	Tin Brass	Tin
12110845*	3.0-2.0	Tin Brass	Tin
12110847*	1.0-0.80	Tin Brass	Tin
12110846*	0.50-0.35	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions apply, contact your regional support representative at the number listed below.



TANGLESS

280 FLEXLOCK FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
7	12110751	Black	PA66 HS IM	12110754
15	12161186	Black	PA66 HS IM	12176865

280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12077413	5.0	Tin Brass	Tin
12129493	3.0-2.0	Tin Brass	Tin
12077411	1.0-0.80	Tin Brass	Tin
12084201	0.50-0.35	Tin Brass	Tin
12176387	5.0	Beryllium Copper	Silver/Nickel
12176388	3.0-2.0	Beryllium Copper	Silver/Nickel
12176389	1.0-0.80	Beryllium Copper	Silver/Nickel

280.1 FEMALE PULL-TO-SEAT TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12077939	1.0-0.80	Silicon Bronze	Tin
12103360	0.50-0.35	Silicon Bronze	Tin

280 FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
1	12065172	Black	PA66 HS IM	12065249
2	15300027	Black	PA66 HS IM	15300014
2	12124819	Black	PBT	12020807
3	12040977	Black	PA66 HS IM	12034145
4	12129565	Md. Gray	PA66 HS IM	15300016
5	12084891	Md. Gray	PA66 HS IM	15300017

280 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

http://delphi.com/products/connect

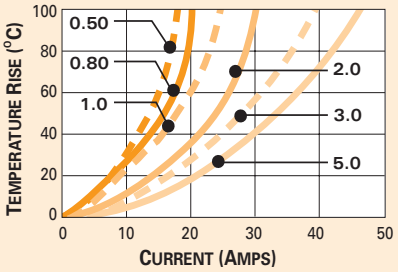
Downloaded from Arrow.com.

Sealed System Application Information

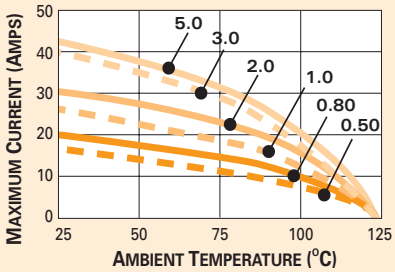
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 7.7
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

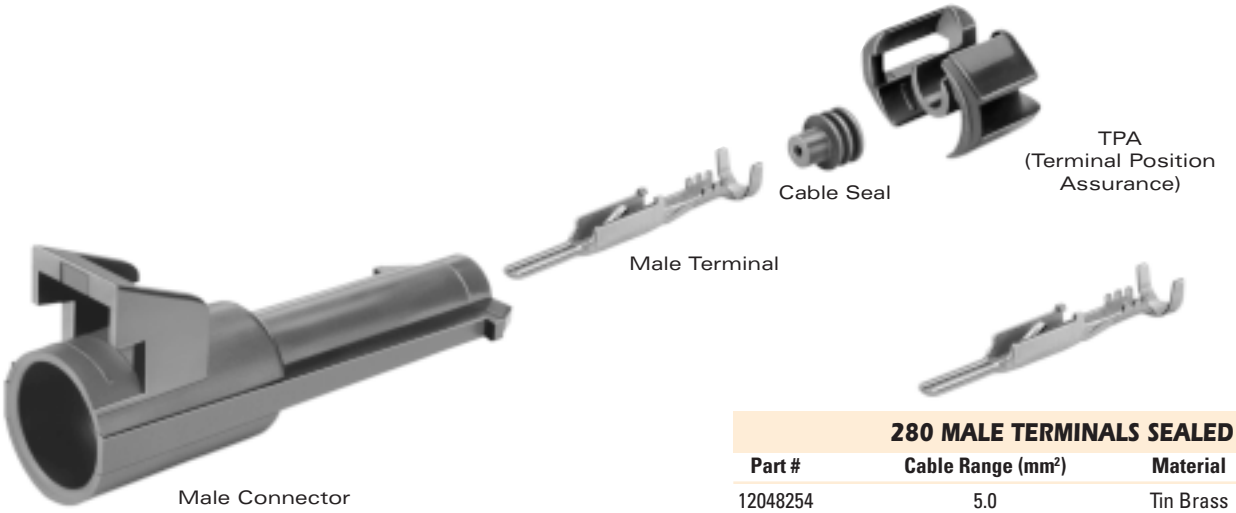
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



280 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048254	5.0	Tin Brass	Tin
12129497	3.0-2.0	Tin Brass	Tin
12048159	1.0-0.80	Tin Brass	Tin
12124977	0.50-0.35	Tin Brass	Tin

280 MALE CONNECTORS SEALED

# Cavities	Connector	Color	Material	TPA
1	12065171	Black	PA66 HS IM	12065249
2	15300002	Black	PA66 HS IM	15300014
2	12059450	Black	PA66 HS IM	12065279
3	15300003	Black	PA66 HS IM	15300015
4	12129600	Dk. Gray	PBT 30% GF	12092733
5	12186400	Gray	PBT 30% GF	12084673
7	12110753	Black	PA66 HS IM	12110754
15	12161187	Black	PA66 HS IM	12110782

280 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female Connections for device applications, see page 92.

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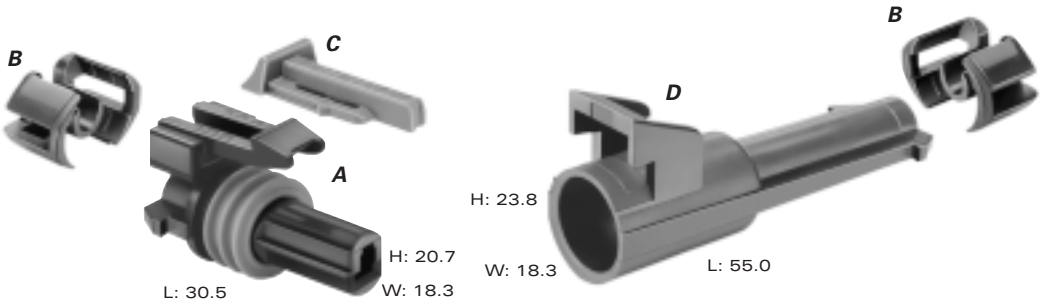


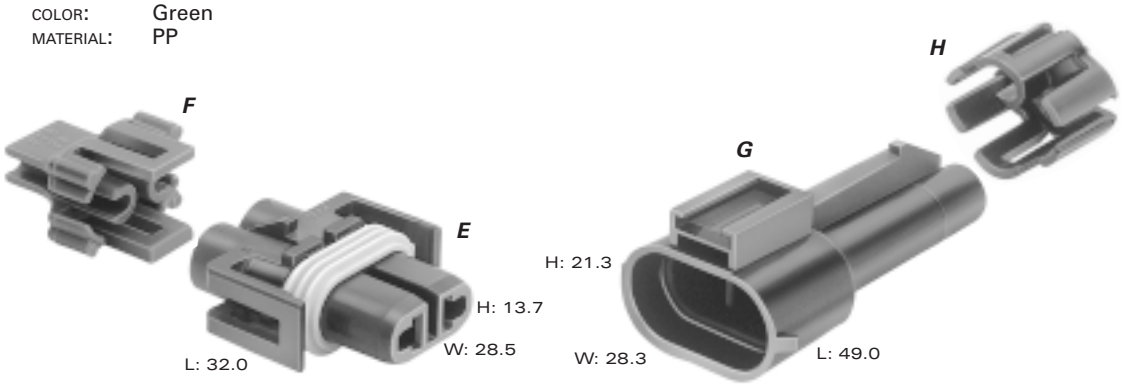
Total Mated Length: 70.3mm

A PART NO: **12065172**
DESCRIPTION: Connector Assembly 1F
SIZE: 30.5L x 20.7H x 18.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

B PART NO: **12065249**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Black
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12065171**
DESCRIPTION: Connector 1M
SIZE: 55.0L x 23.8H x 18.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85



Total Mated Length: 81.9mm

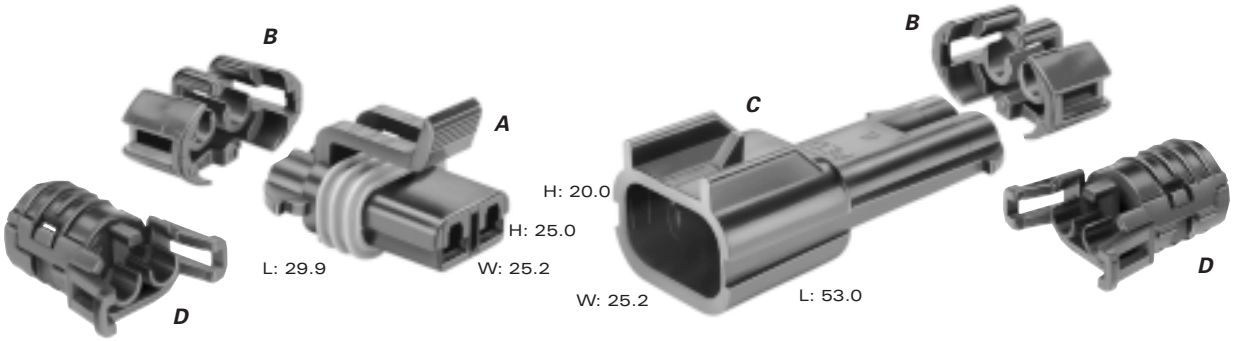
E PART NO: **12124819**
DESCRIPTION: Connector Assembly 2F
SIZE: 32.0L x 13.7H x 28.5W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

F PART NO: **12020807**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

G PART NO: **12059450**
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 49.0L x 21.3H x 28.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

H PART NO: **12065279**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

Downloaded from Arrow.com.



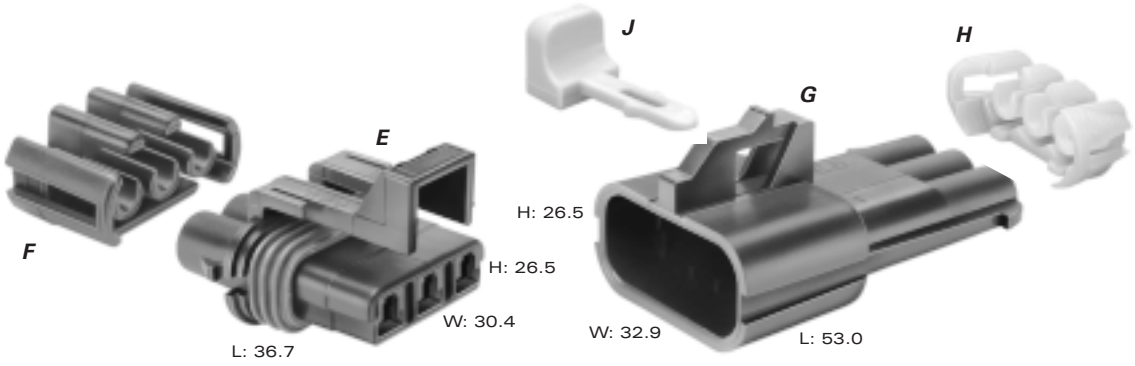
Total Mated Length: 66.8mm

A PART NO: **15300027**
DESCRIPTION: Connector Assembly 2F
SIZE: 29.9L x 25.0H x 25.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

B PART NO: **15300014**
DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Blue
MATERIAL: PA6

C PART NO: **15300002**
DESCRIPTION: Connector 2M
SIZE: 53.0L x 20.0H x 25.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

D PART NO: **15327747 (Optional)**
DESCRIPTION: Conduit TPA
NUMBER REQ.: 2
COLOR: Black
MATERIAL: PA6



Total Mated Length: 76.1mm

E PART NO: **12040977**
DESCRIPTION: Connector Assembly 3F
SIZE: 36.7L x 26.5H x 30.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

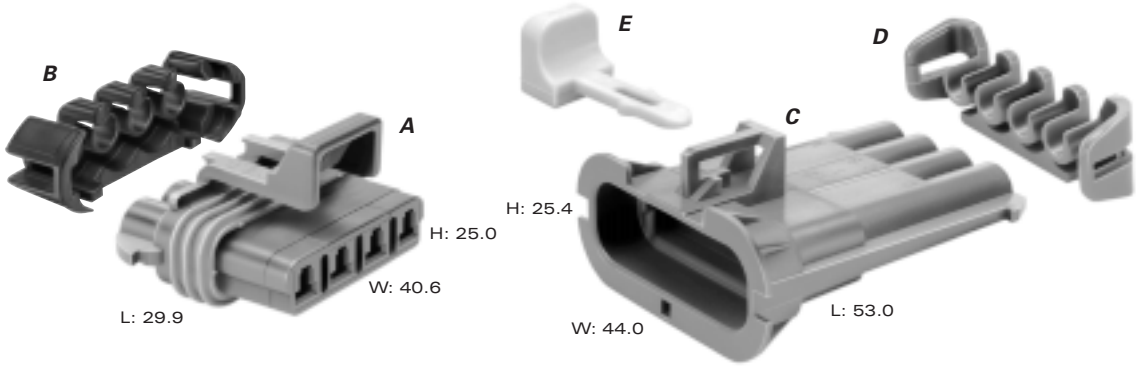
F PART NO: **12034145**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

G PART NO: **15300003**
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 53.0L x 26.5H x 32.9W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

H PART NO: **15300015**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA6

J PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

Downloaded from Arrow.com.



Total Mated Length: 66.7mm

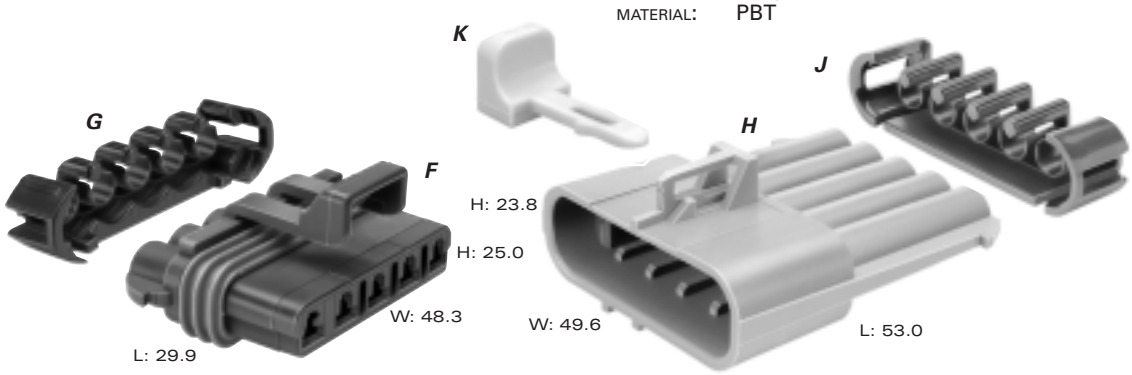
A PART NO: **12129565**
DESCRIPTION: Connector Assembly 4F
SIZE: 29.9L x 25.0H x 40.6W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

B PART NO: **15300016**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

C PART NO: **12129600**
DESCRIPTION: Connector 4M (Clip Slot–Self Locking)
SIZE: 53.0L x 25.4H x 44.0W
COLOR: Dk. Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

D PART NO: **15324063**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

E PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



Total Mated Length: 67.3mm

F PART NO: **12084891**
DESCRIPTION: Connector Assembly 5F
SIZE: 29.9L x 25.0H x 48.3W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

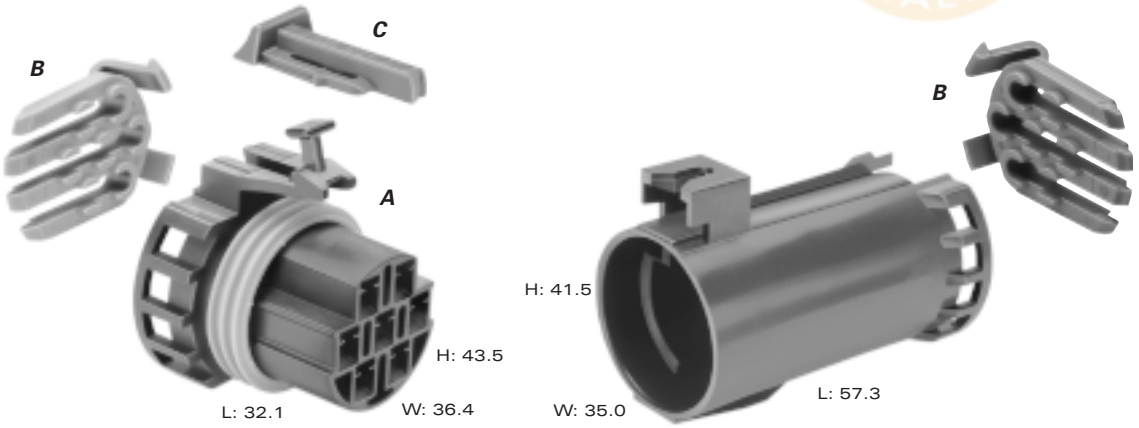
G PART NO: **15324857**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

H PART NO: **12186400**
DESCRIPTION: Connector 5M (Clip Slot–Self Locking)
SIZE: 53.0L x 23.8H x 49.6W
COLOR: Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

J PART NO: **12084673**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

K PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

Downloaded from Arrow.com.



Total Mated Length: 77.3mm

TANGLESS

A PART NO: **12110751 (Black)**
12129613 (Md. Gray)
12146841 (Natural)

DESCRIPTION: Connector Assembly 7F
SIZE: 32.1L x 43.5H x 36.4W
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

B PART NO: **12110754**

DESCRIPTION: TPA
NUMBER REQ.: 2
COLOR: Lt. Gray
MATERIAL: PA6

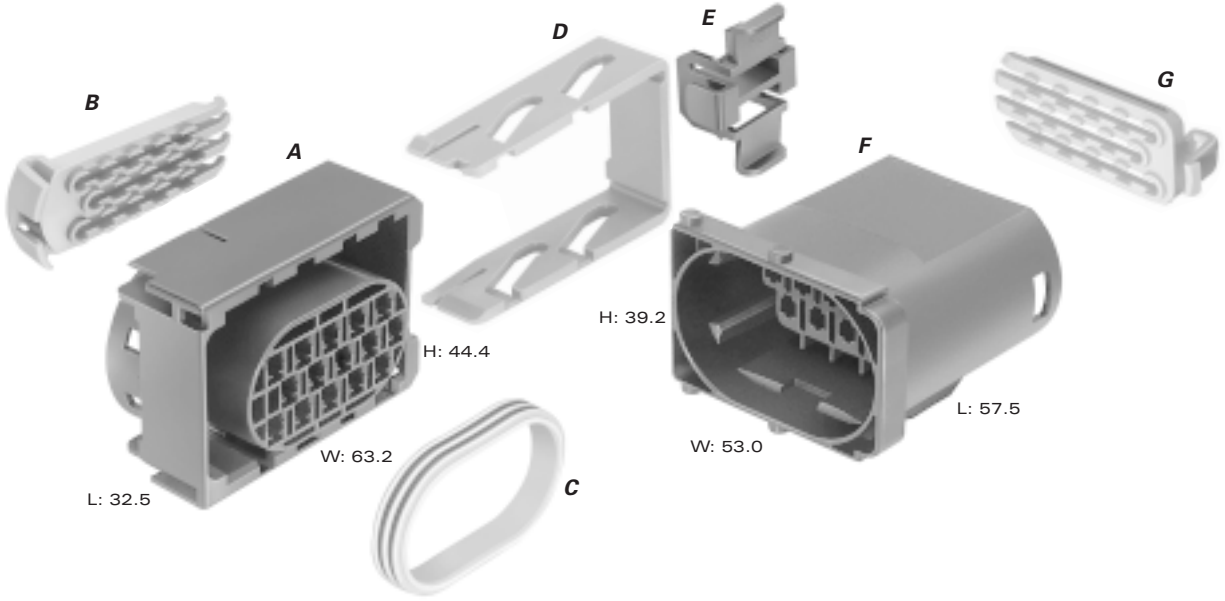
C PART NO: **12052834**

DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12110753 (Black)**
12129614 (Md. Gray)
12146840 (Natural)

DESCRIPTION: Connector 7M (Clip Slot–Self Locking)
SIZE: 57.3L x 41.5H x 35.0W
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

Downloaded from Arrow.com.



TANGLESS

Total Mated Length: 76.6mm

A PART NO: **12161186**
DESCRIPTION: Connector 15F
SIZE: 32.5L x 44.4H x 63.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85

B PART NO: **12110782**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

C PART NO: **12110822**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

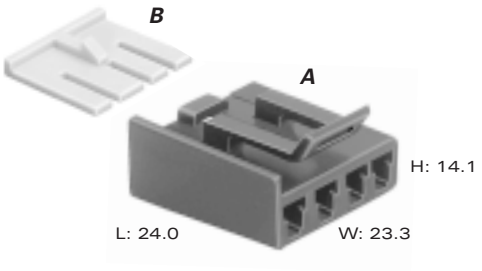
D PART NO: **12161185**
DESCRIPTION: CPA Slide Lock Assist
COLOR: Dk. Gray
MATERIAL: PA66 HS IM 14% GF

E PART NO: **12176640**
DESCRIPTION: Spacer Lock
COLOR: Black
MATERIAL: PP

F PART NO: **12161187**
DESCRIPTION: Connector 15M (Clip Slot–Self Locking)
SIZE: 57.5L x 39.2H x 53.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 85
SEALS/PLUGS: See Page 84, 85

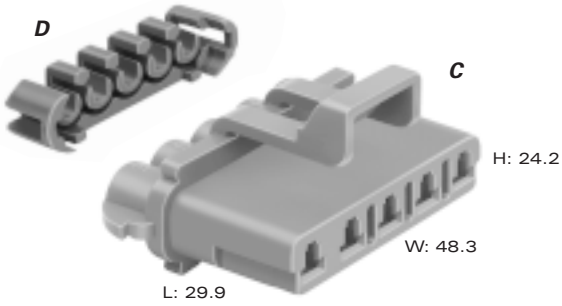
G PART NO: **12176865**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

Downloaded from Arrow.com.



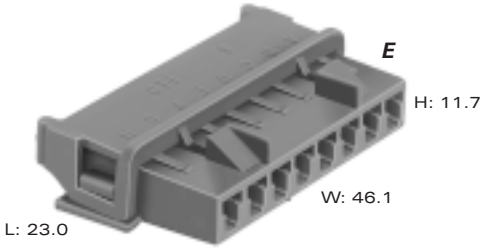
A PART NO: **12052856**
DESCRIPTION: Connector 4F
SIZE: 24.0L x 14.1H x 23.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78
TYPICAL APP: Dimmer Switch

B PART NO: **15324456**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

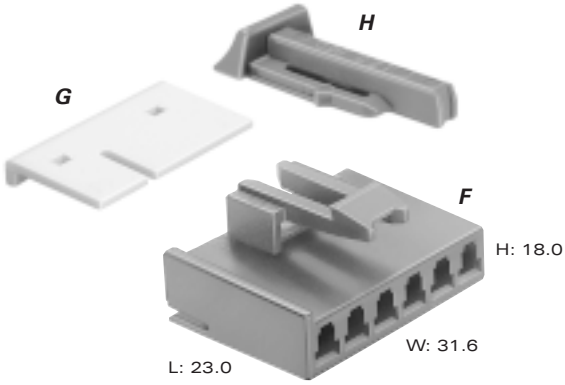


C PART NO: **12084890**
DESCRIPTION: Connector 5F
SIZE: 29.9L x 24.2H x 48.3W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 78
TYPICAL APP: Tail Lamp Module

D PART NO: **15324857**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6



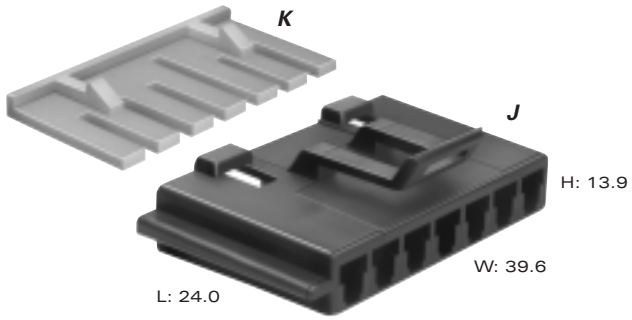
E PART NO: **12041301***
DESCRIPTION: Connector 8F
SIZE: 23.0L x 11.7H x 46.1W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 78
TYPICAL APP: Various
*HINGED SECONDARY LOCK.



F PART NO: **12092254**
DESCRIPTION: Connector 6F
SIZE: 23.0L x 18.0H x 31.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78
TYPICAL APP: Wiper Switch

G PART NO: **12162298**
DESCRIPTION: TPA
COLOR: Cream
MATERIAL: PA6

H PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



J PART NO: **12052854**
DESCRIPTION: Connector 7F
SIZE: 24.0L x 13.9H x 39.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 78
TYPICAL APP: Wiper Switch

K PART NO: **12124811**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA6

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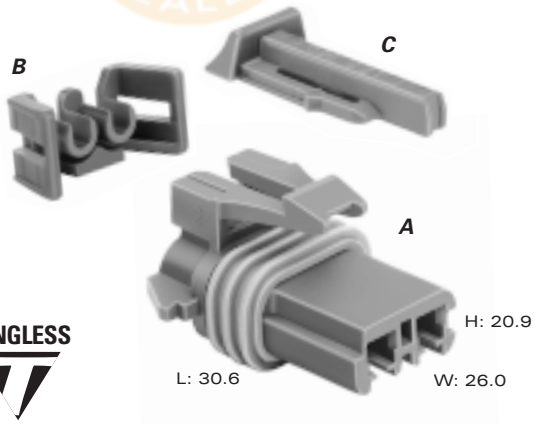
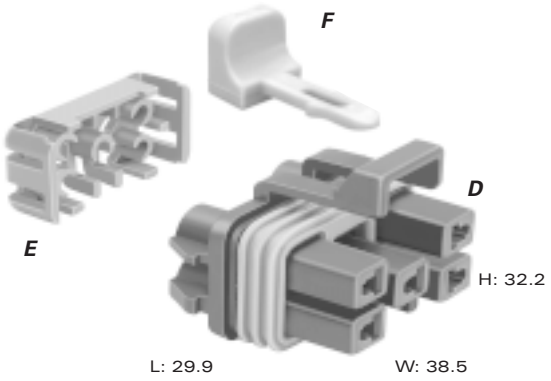


TANGLESS

A PART NO: **12129487**
DESCRIPTION: Connector Assembly 2F
SIZE: 30.6L x 20.9H x 26.0W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85
TYPICAL APP: Window Lift Motor

B PART NO: **12077904**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

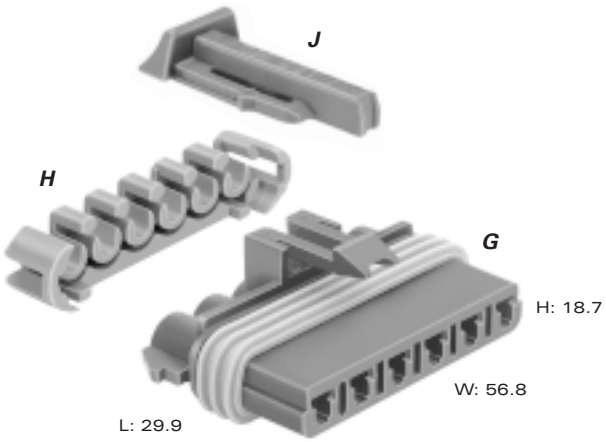
C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



D PART NO: **12124634**
DESCRIPTION: Connector Assembly 5F
SIZE: 29.9L x 32.2H x 38.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85
TYPICAL APP: Wiper Switch

E PART NO: **12052816**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

F PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



G PART NO: **12059573**
DESCRIPTION: Connector Assembly 6F
SIZE: 29.9L x 18.7H x 56.8W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 84
SEALS/PLUGS: See Page 84, 85
TYPICAL APP: Various

H PART NO: **12059195**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

J PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

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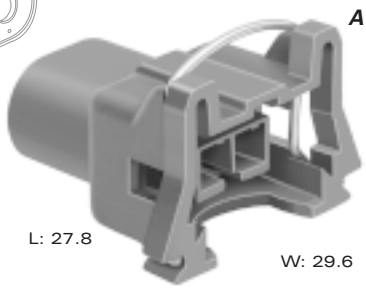
Multiple Cable Seal
(Included)



A PART NO: **12129142 (Black/Gray Seal)**
2.66 - 2.0 Cable O.D.
PART NO: **12129140 (Black/Purple Seal)**
2.15 - 1.65 Cable O.D.
PART NO: **12110179 (Black/Red Seal)**
1.85 - 1.47 Cable O.D.
DESCRIPTION: Connector Assembly 2F
SIZE: 27.8L x 20.0H x 29.6W
MATERIAL: PA66 HS 33% GF
TERMINALS: See Page 84
TYPICAL APP: Fuel Injector

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Downloaded from Arrow.com.

Metri-Pack Series 480

METRI-PACK SERIES 480

Available in device and in-line connections for vehicle applications, Metri-Pack 480 Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for high current applications that do not require environmental protection, Metri-Pack 480 Series products are extremely rugged and versatile.

Available in device and in-line connections for underhood vehicle applications, Metri-Pack 480 Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Utilizing triple-rib peripheral silicone rubber seals, Metri-Pack 480 Series sealed systems are ideally suited for high current applications that require protection from environmental hazards.

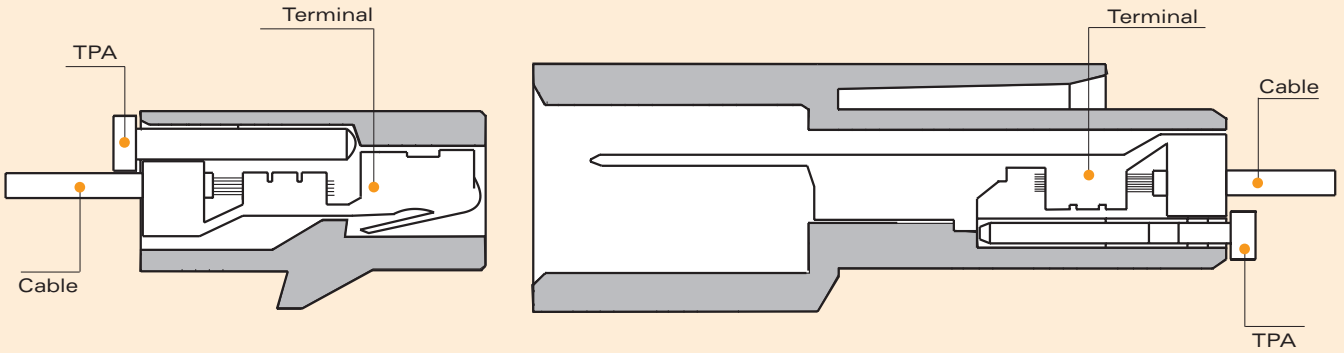
METRI-PACK 480

480 Metri-Pack Features

- **Connector Position Assurance (CPA)**
- **Terminal Position Assurance (TPA)**
- **42 Amps continuous maximum current rating**
- **Low energy, low voltage capability**
- **Excellent resistance to temperature, chemicals and abrasion**
- **-40°C to 125°C temperature range**

Downloaded from Arrow.com.

Cross Sectional View

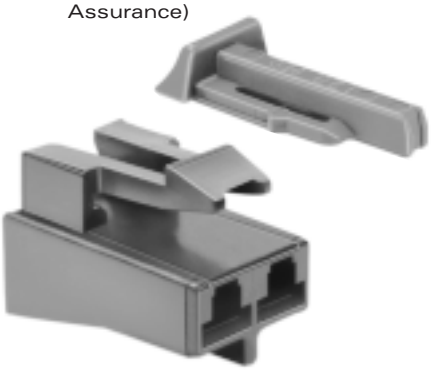


Female Connector

Male Connector

TPA
(Terminal Position Assurance)

Female Terminal



Female Connector

480 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084595	5.0	Tin Brass	Tin
12052221	3.0	Tin Brass	Tin
12124304	2.0-1.0	Tin Brass	Tin
12015860	0.80	Tin Brass	Tin
12052219	0.50-0.35	Tin Brass	Tin
12020366	1.0-0.50 (1 Req'd.)	Tin Brass	Tin
	0.80-0.50 (1 Req'd.)		

480 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1	12015952	Md. Gray	PA66 HS IM	–
2	12064749	Black	PA66 HS IM	12059860

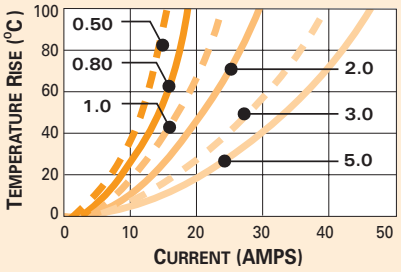
Downloaded from Arrow.com.

Unsealed System Application Information

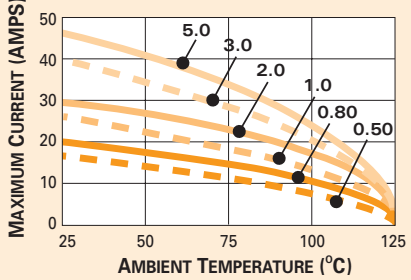
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 6.9
BLADE WIDTH (mm): 4.8

480 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector

Male Terminal

TPA
(Terminal Position Assurance)

480 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1	12015987	Md. Gray	PA66 HS IM	–
2	12064750	Black	PA6	12064751

480 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12033820	5.0	Tin Brass	Tin over Copper
12052827	3.0	Tin Brass	Tin over Copper
12020120	2.0-1.0	Tin Brass	Tin over Copper
12020119	1.0-0.80	Tin Brass	Tin over Copper
12066269	0.50-0.35	Tin Brass	Tin over Copper
12020784	0.35 (2 Req'd.)	Tin Brass	Tin over Copper

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female connections for device applications, see page 103.

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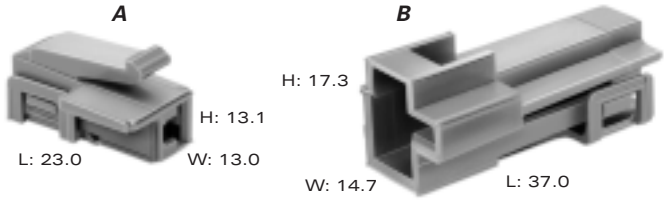
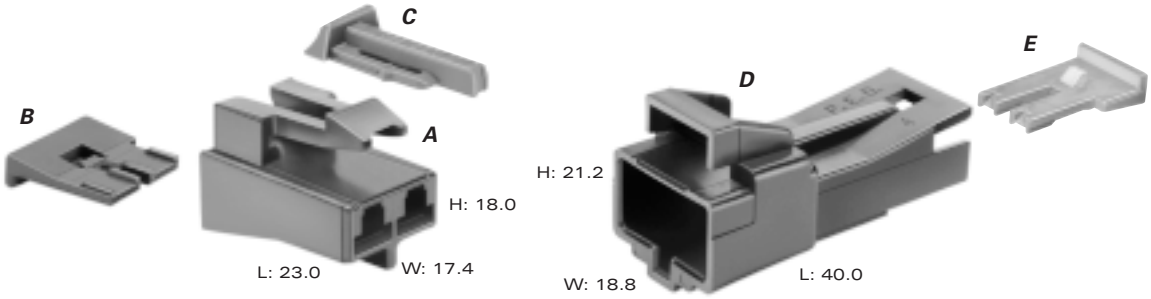


Total Mated Length: 49.6mm

A PART NO: **12015952***
DESCRIPTION: Connector 1F
SIZE: 23.0L x 13.1H x 13.0W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 96
*HINGED SECONDARY LOCK

B PART NO: **12015987***
DESCRIPTION: Connector 1M
SIZE: 37.0L x 17.3H x 14.7W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 97
*HINGED SECONDARY LOCK

Downloaded from Arrow.com.



Total Mated Length: 53.9mm

A PART NO: **12064749**
DESCRIPTION: Connector 2F
SIZE: 23.0L x 18.0H x 17.4W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 96

B PART NO: **12059860**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

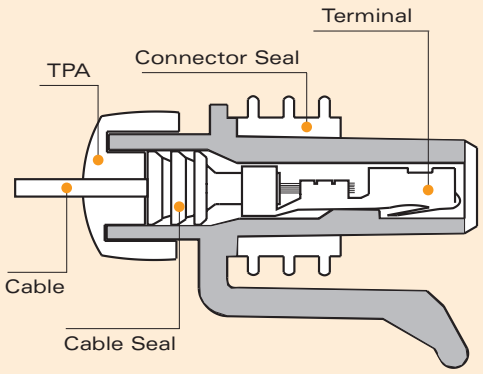
C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12064750**
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 40.0L x 21.2H x 18.8W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 97

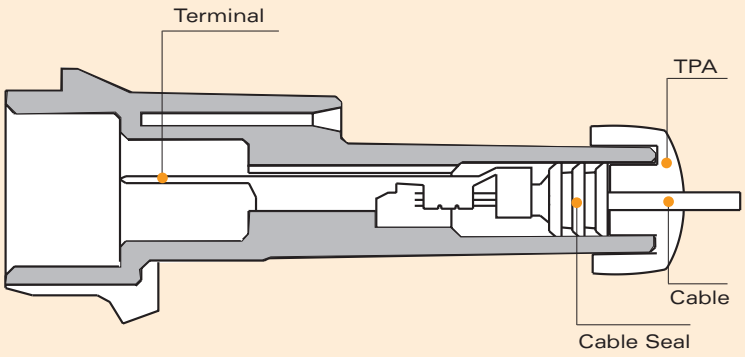
E PART NO: **12064751**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA66 HS IM

Downloaded from Arrow.com.

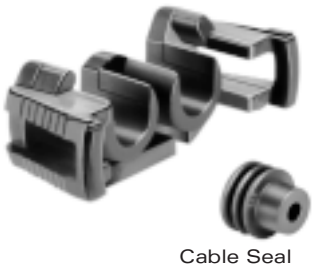
Cross Sectional View



Female Connector Assembly



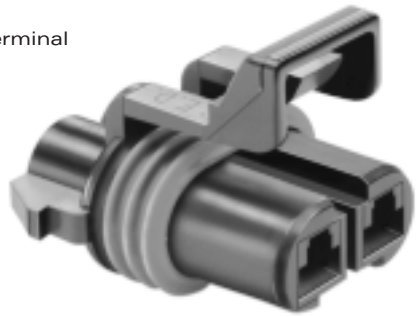
Male Connector



TPA
(Terminal Position Assurance)

Cable Seal

Female Terminal



Female Connector Assembly

480 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052139	5.0-3.0	Tin Brass	Tin
12048451	2.0-1.0	Tin Brass	Tin
12048450	0.80-0.50	Tin Brass	Tin

480 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12065703	12034170	5.16-4.40	Silicone	Orange
12052453	12048443	4.50-3.61	Silicone	Purple
12052452	12048442	3.75-2.81	Silicone	Red
12048433	12048441	2.85-2.01	Silicone	White
12052931	12052930	2.15-1.60	Silicone	Yellow
12162068	12162067	1.70-1.29	Silicone	Pink

480 FEMALE CONNECTOR ASSEMBLY SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
2	12052613	Black	PA66 HS IM	12059897

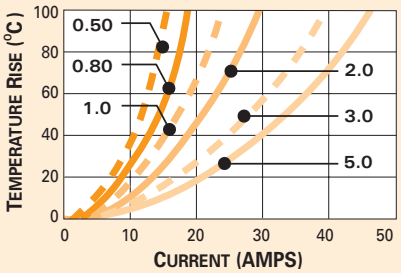
Downloaded from Arrow.com.

Sealed System Application Information

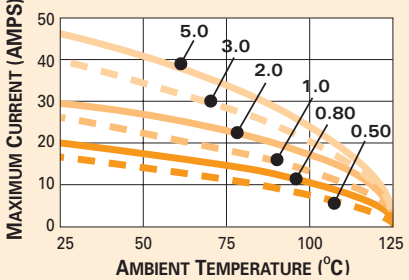
CABLE RANGE (mm²): 0.50-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 9.5
BLADE WIDTH (mm): 4.8

480 SERIES TERMINALS–Tin Plated

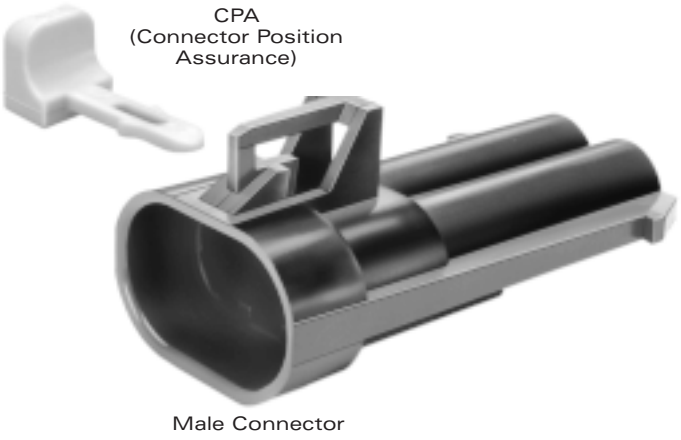
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*

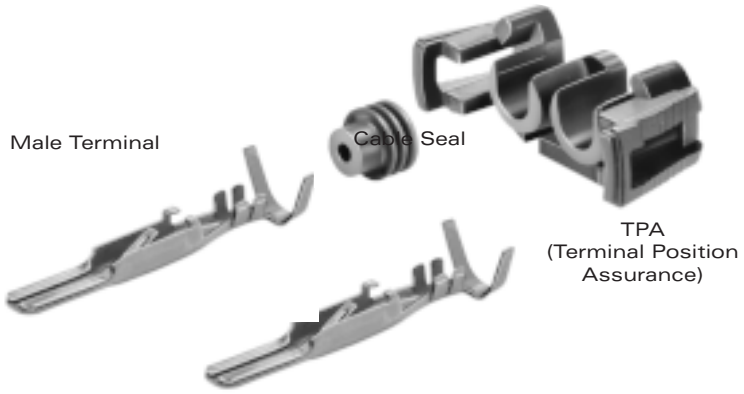


TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.





480 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052172	5.0	Tin Brass	Tin
12065197	3.0	Tin Brass	Tin
12065196	2.0-1.0	Tin Brass	Tin

480 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12066082	8.5mm	Silicone	Lt. Green

*Cavity plugs seal unused female and male cavities

480 MALE CONNECTOR SEALED

# Cavities	Connector	Color	Material	TPA
2	12065863	Black	PA66 HS IM	12059897

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female connections for device applications, see page 104.

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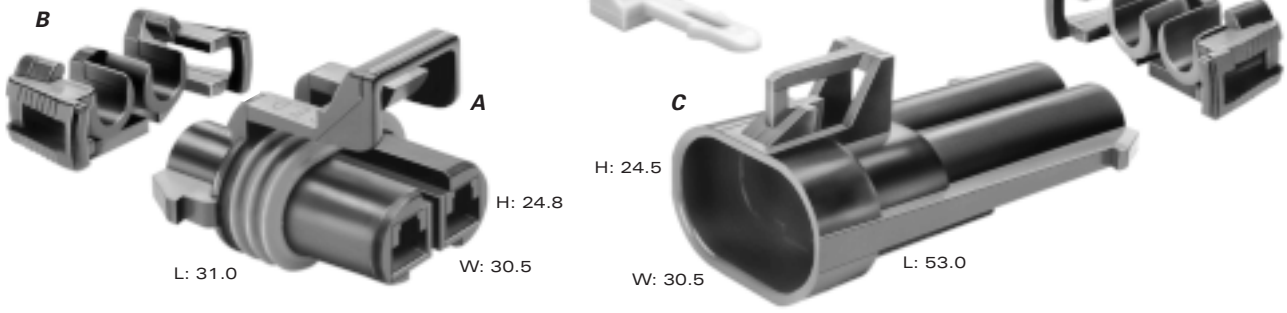


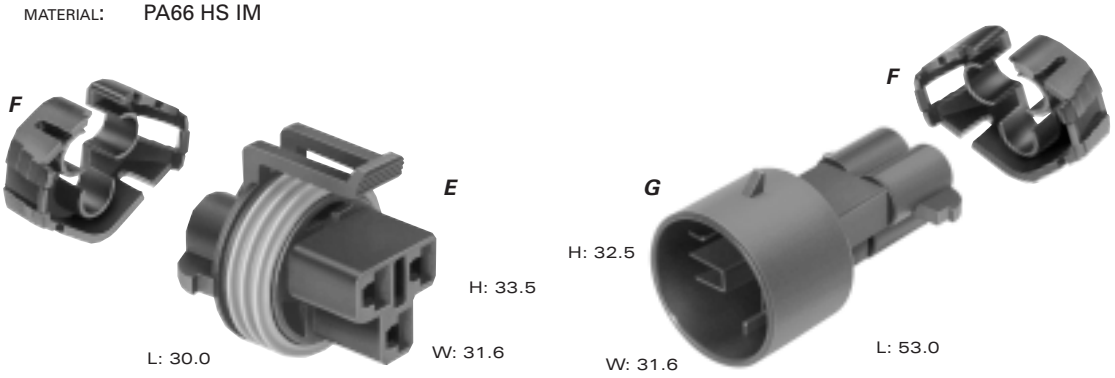
Total Mated Length: 69.2mm

A PART NO: **12052613**
DESCRIPTION: Connector Assembly 2F
SIZE: 31.0L x 24.8H x 30.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 100
SEALS/PLUGS: See Page 100, 101

B PART NO: **12059897**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA66 HS IM

C PART NO: **12065863**
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 53.0L x 24.5H x 30.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 101
SEALS/PLUGS: See Page 100, 101

D PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



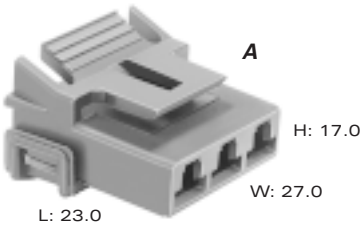
Total Mated Length: 66.5mm

E PART NO: **12131592**
DESCRIPTION: Connector Assembly 3F
SIZE: 30.0L x 33.5H x 31.6W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 100
SEALS/PLUGS: See Page 100, 101

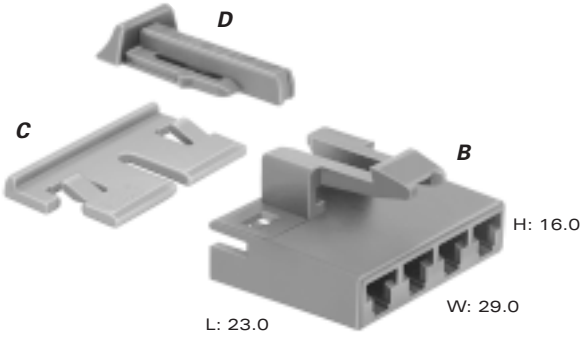
F PART NO: **12131543**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA66

G PART NO: **15344628**
DESCRIPTION: Connector 3M
SIZE: 53.0L x 32.5H x 31.6W
COLOR: Black
MATERIAL: PA66 25% GF
TERMINALS: See Page 101
SEALS/PLUGS: See Page 100, 101

Downloaded from Arrow.com.



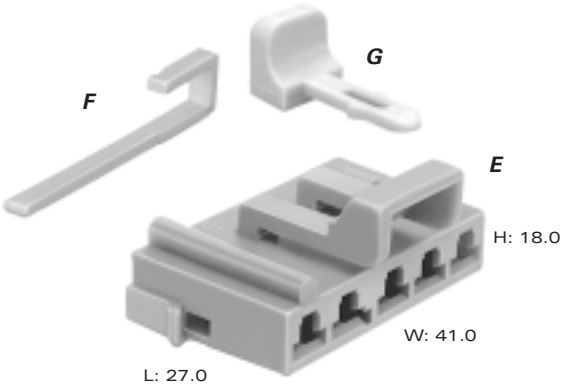
A PART NO: **12162512***
DESCRIPTION: Connector 3F
SIZE: 23.0L x 17.0H x 27.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 96
TYPICAL APP: Switch
*HINGED SECONDARY LOCK



B PART NO: **12066571**
DESCRIPTION: Connector 4F
SIZE: 23.0L x 16.0H x 29.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 96
TYPICAL APP: Various

C PART NO: **12066572**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

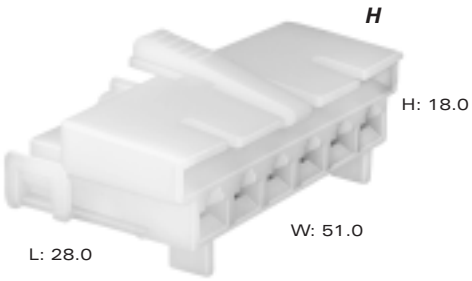
D PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



E PART NO: **12059296**
DESCRIPTION: Connector 5F
SIZE: 27.0L x 18.0H x 41.0W
COLOR: Red
MATERIAL: PA6
TERMINALS: See Page 96
TYPICAL APP: Switch

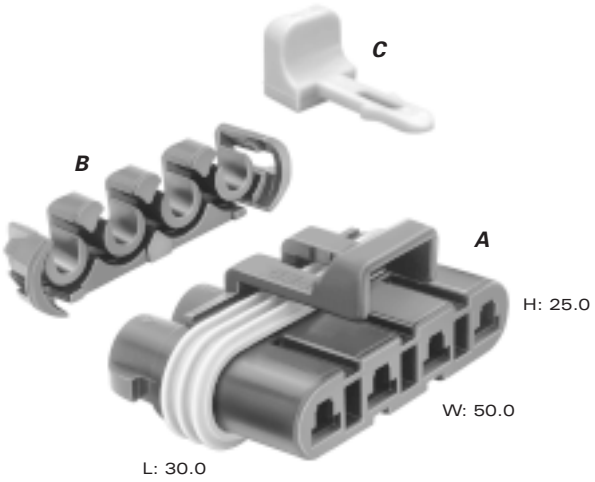
F PART NO: **12059297**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PBT

G PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



H PART NO: **12034061***
DESCRIPTION: Connector 6F
SIZE: 28.0L x 18.0H x 51.0W
COLOR: Natural
MATERIAL: PA66 HS IM
TERMINALS: See Page 96
TYPICAL APP: Switch
*HINGED SECONDARY LOCK

Downloaded from Arrow.com.



A PART NO: **12048412**
DESCRIPTION: Connector Assembly 4F
SIZE: 30.0L x 25.0H x 50.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 100
SEALS/PLUGS: See Page 100, 101
TYPICAL APP: Resistor Pack

B PART NO: **12048413**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

C PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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Metri-Pack Series 630

METRI-PACK SERIES 630

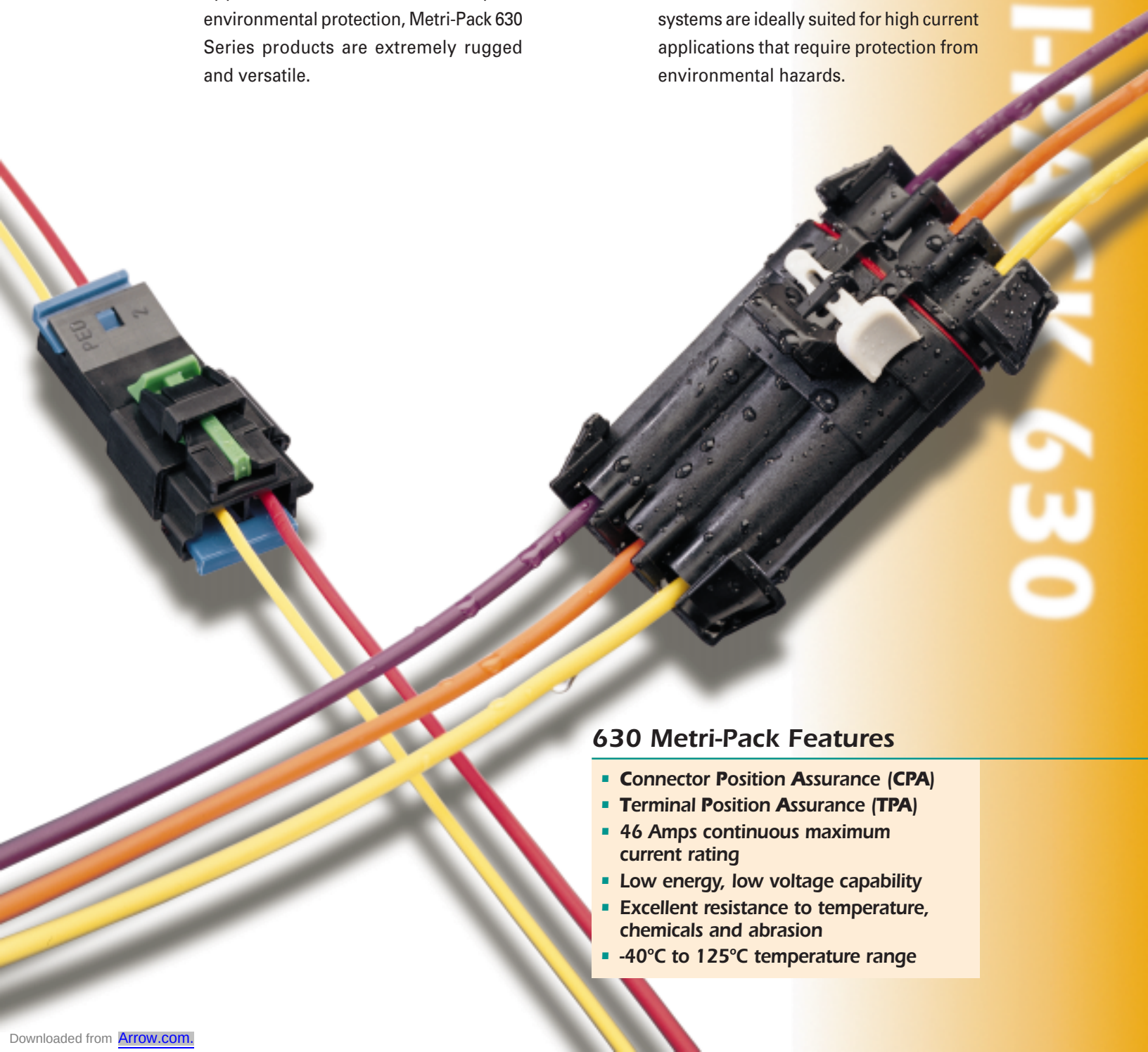
Available in device and in-line connections for vehicle applications, Metri-Pack 630 Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for high current applications that do not require environmental protection, Metri-Pack 630 Series products are extremely rugged and versatile.

Available in device and in-line connections for underhood vehicle applications, Metri-Pack 630 Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Utilizing triple-rib peripheral silicone rubber seals, Metri-Pack 630 Series sealed systems are ideally suited for high current applications that require protection from environmental hazards.

METRI-PACK 630

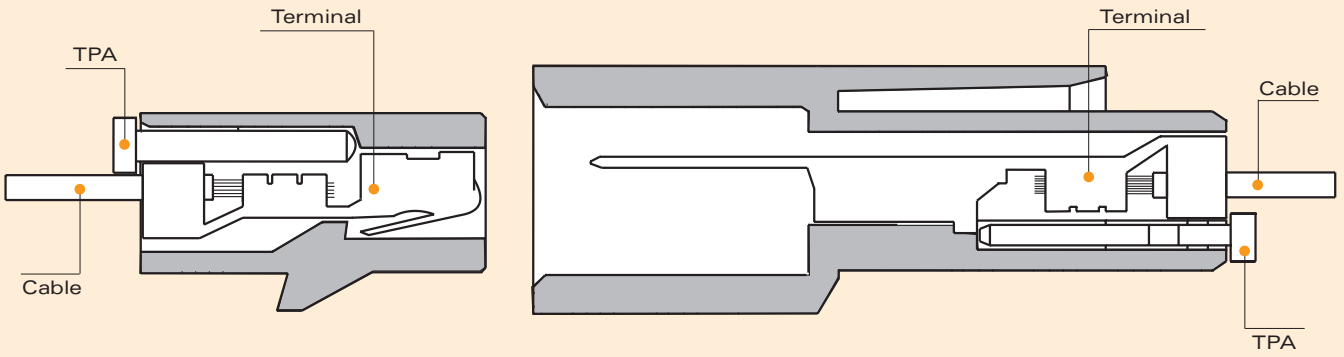


630 Metri-Pack Features

- **Connector Position Assurance (CPA)**
- **Terminal Position Assurance (TPA)**
- **46 Amps continuous maximum current rating**
- **Low energy, low voltage capability**
- **Excellent resistance to temperature, chemicals and abrasion**
- **-40°C to 125°C temperature range**

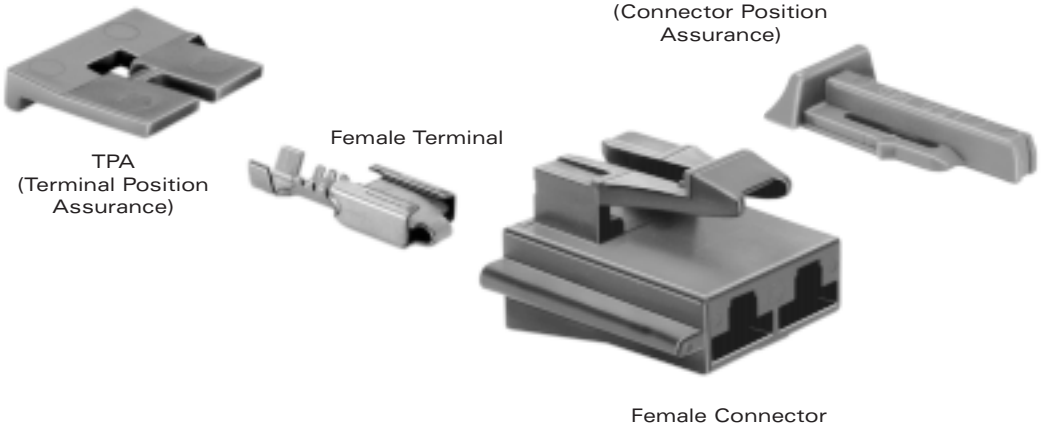
Downloaded from Arrow.com.

Cross Sectional View



Female Connector

Male Connector



630 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084590	5.0	Tin Brass	Tin
12052224	3.0	Tin Brass	Tin
12084596	3.0 (2 Req'd.)	Tin Brass	Tin
12015870	2.0-1.0	Tin Brass	Tin
12015869	1.0-0.80	Tin Brass	Tin
12020035	0.80-0.50 (2 Req'd.)	Tin Brass	Tin
12052222	0.50-0.35	Tin Brass	Tin

630 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
2	12129939	Black	PA66 HS IM	12129940
4	12015664	Black	PA6	–

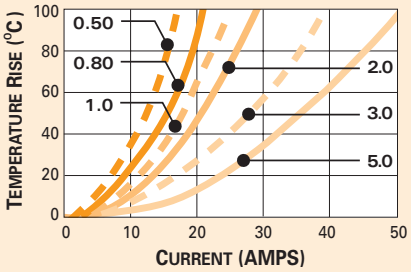
Downloaded from Arrow.com.

Unsealed System Application Information

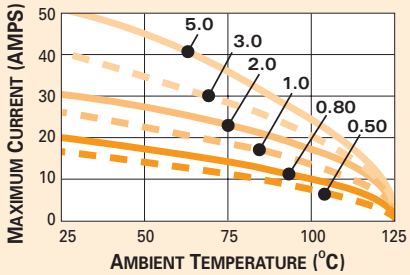
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 8.5
BLADE WIDTH (mm): 6.3

630 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*

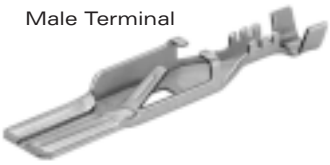


TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector



Male Terminal

TPA
(Terminal Position Assurance)

630 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
2	12129938	Black	PA66 HS IM	12129940
4	12052623	Black	PA6	–

630 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12066493	5.0	Tin Brass	Tin over Copper
12052826	3.0	Tin Brass	Tin over Copper
12020365	3.0 (2 Req'd.)	Tin Brass	Tin over Copper
12020126	2.0-1.0	Tin Brass	Tin over Copper
12020125	1.0-0.80	Tin Brass	Tin over Copper
12033972	0.80-0.50 (2 Req'd.)	Tin Brass	Tin over Copper
12066454	0.50-0.35	Tin Brass	Tin over Copper

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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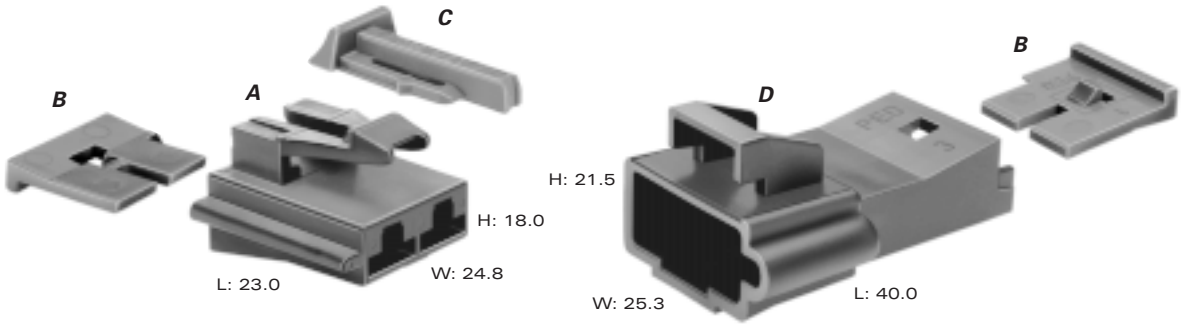


Total Mated Length: 53.0mm

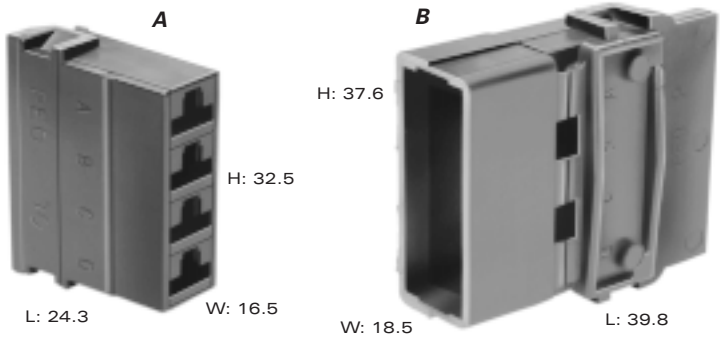
A PART NO: **12129939**
DESCRIPTION: Connector 2F
SIZE: 23.0L x 18.0H x 24.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 106

B PART NO: **12129940**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12129938**
DESCRIPTION: Connector 2M (Clip Slot–Self Locking)
SIZE: 40.0L x 21.5H x 25.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 107

Downloaded from Arrow.com.



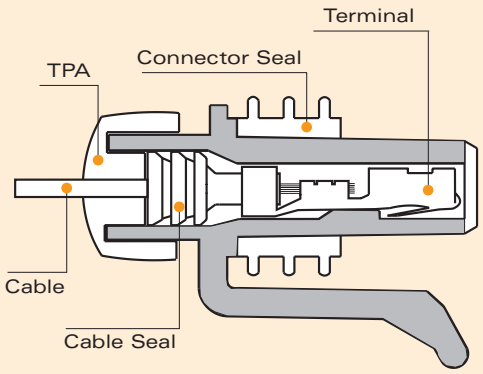
Total Mated Length: 53.1mm

A PART NO: **12015664***
DESCRIPTION: Connector 4F
SIZE: 24.3L x 32.5H x 16.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 106
*HINGED SECONDARY LOCK.

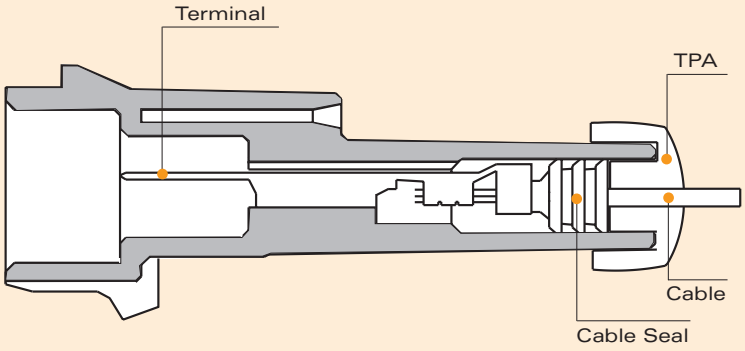
B PART NO: **12052623***
DESCRIPTION: Connector 4M
SIZE: 39.8L x 37.6H x 18.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 107
*HINGED SECONDARY LOCK.

Downloaded from Arrow.com.

Cross Sectional View



Female Connector Assembly



Male Connector

TPA
(Terminal Position
Assurance)

Female Connector Assembly

630 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052456	5.0-3.0	Tin Brass	Tin
12052455	2.0-1.0	Tin Brass	Tin
12052457	0.80-0.50	Tin Brass	Tin

630 FEMALE PULL-TO-SEAT TERMINALS

Part #	Cable Range (mm²)	Material	Plating
12033997	5.0-3.0	Tin Brass	Tin
12066614	2.0-1.0	Tin Brass	Tin
12020156	0.80-0.50	Tin Brass	Tin

630 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12059257	12052386	5.15-4.40	Silicone	Green
12059260	12052668	4.50-3.61	Silicone	Blue
12059258	12052387	3.75-2.81	Silicone	Lt. Gray
12059259	12052388	2.85-2.01	Silicone	Dk. Red
12077760	12077759	2.15-1.65	Silicone	Tan

630 FEMALE CONNECTOR ASSEMBLY SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
3	12124685	Black	PA6	12045699

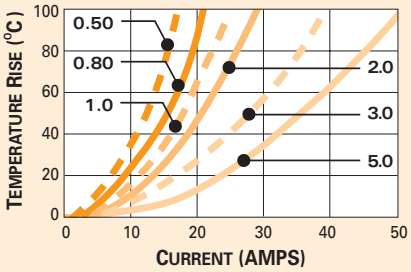
Downloaded from Arrow.com.

Sealed System Application Information

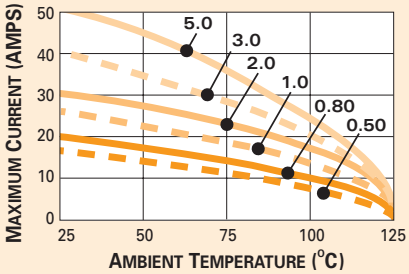
CABLE RANGE (mm²): 0.50-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 10.8
BLADE WIDTH (mm): 6.3

630 SERIES TERMINALS–Tin Plated

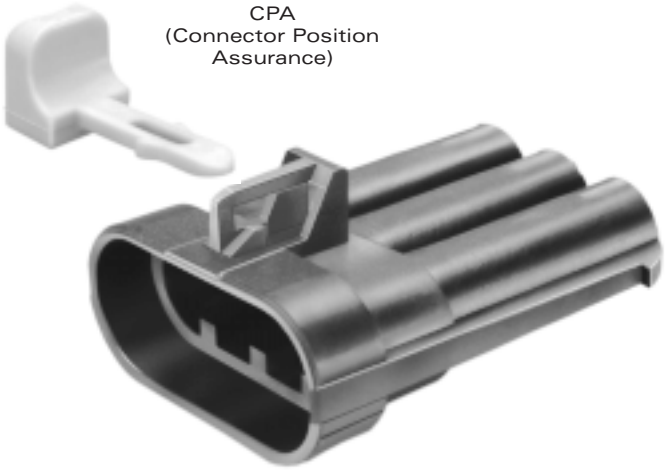
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



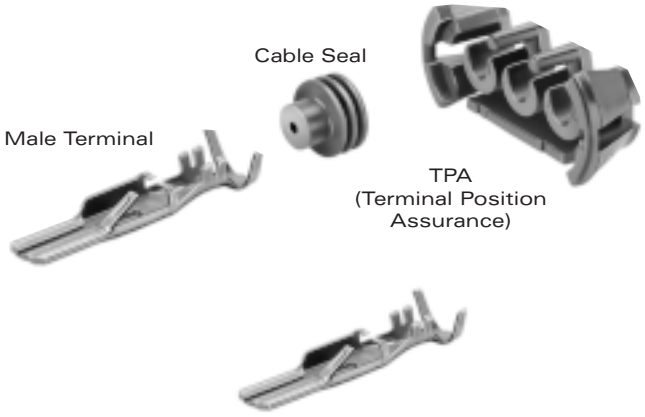
TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



Male Connector



630 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12064736	5.0	Tin Brass	Tin
12064737	3.0	Tin Brass	Tin
12064735	2.0-1.0	Tin Brass	Tin
12064734	0.80-0.50	Tin Brass	Tin

630 MALE CONNECTOR SEALED

# Cavities	Connector	Color	Material	TPA
3	12124686	Black	PBT 30% GF	12045699

630 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059255	9.8mm	Silicone	Lt. Green

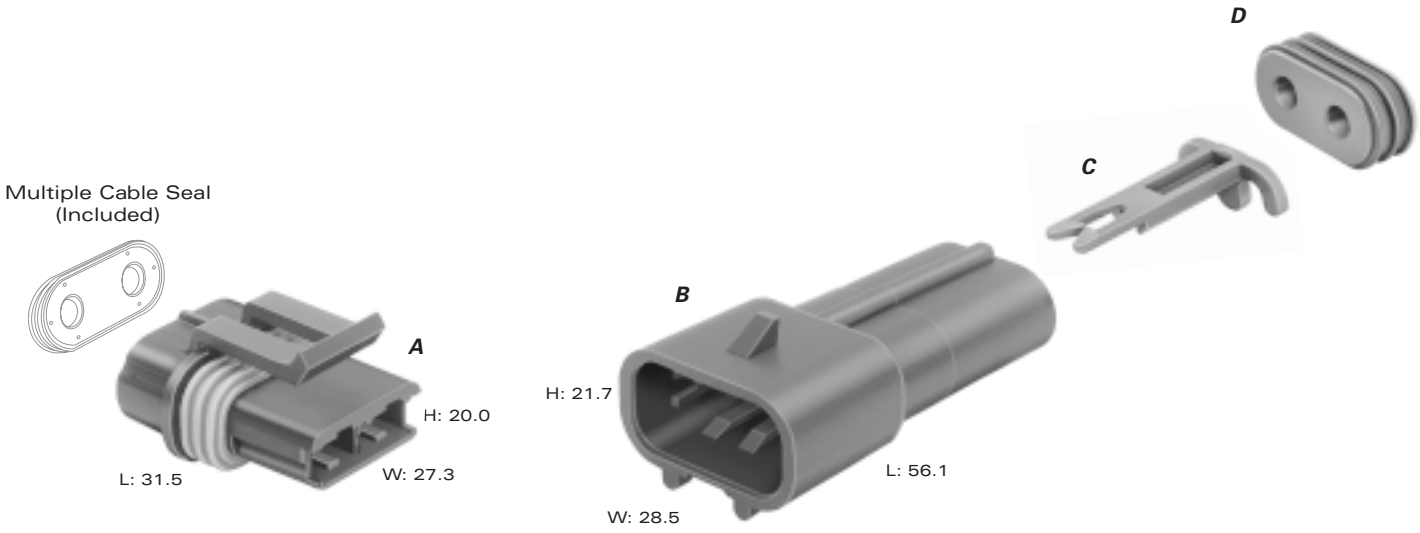
*Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

Downloaded from Arrow.com.



Total Mated Length: 67.5mm

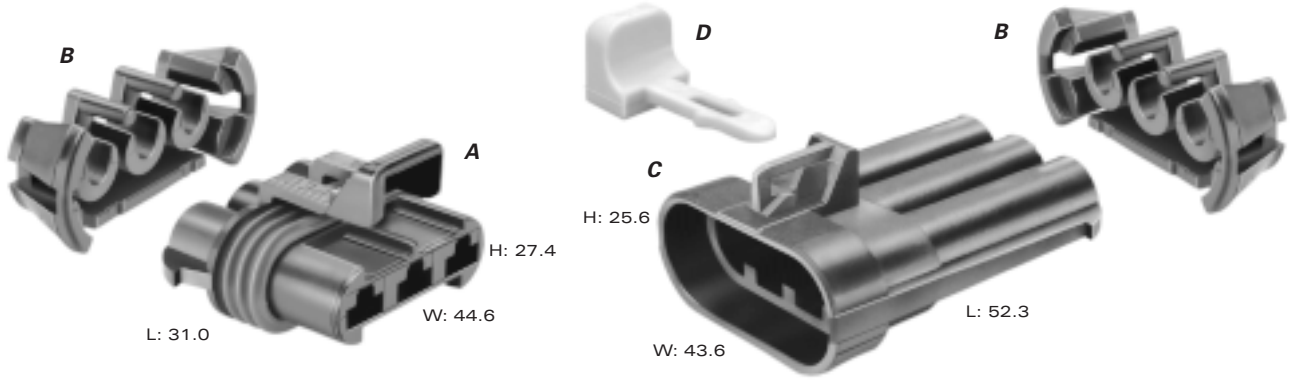
A PART NO: **12033769**
DESCRIPTION: Connector Assembly 2F
SIZE: 31.5L x 20.0H x 27.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 110, Pull-To-Seat Terminals

B PART NO: **12034269**
DESCRIPTION: Connector 2M
SIZE: 56.1L x 21.7H x 28.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 111

C PART NO: **12034363**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

D PART NO: **12034364**
DESCRIPTION: Seal
COLOR: Gray
MATERIAL: Silicone

Downloaded from Arrow.com.



Total Mated Length: 69.5mm

A PART NO: **12124685**
DESCRIPTION: Connector Assembly 3F
SIZE: 31.0L x 27.4H x 44.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 110
SEALS/PLUGS: See Page 110, 111

B PART NO: **12045699**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

C PART NO: **12124686**
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 52.3L x 25.6H x 43.6W
COLOR: Black
MATERIAL: PBT 30% GF
TERMINALS: See Page 111
SEALS/PLUGS: See Page 110, 111

D PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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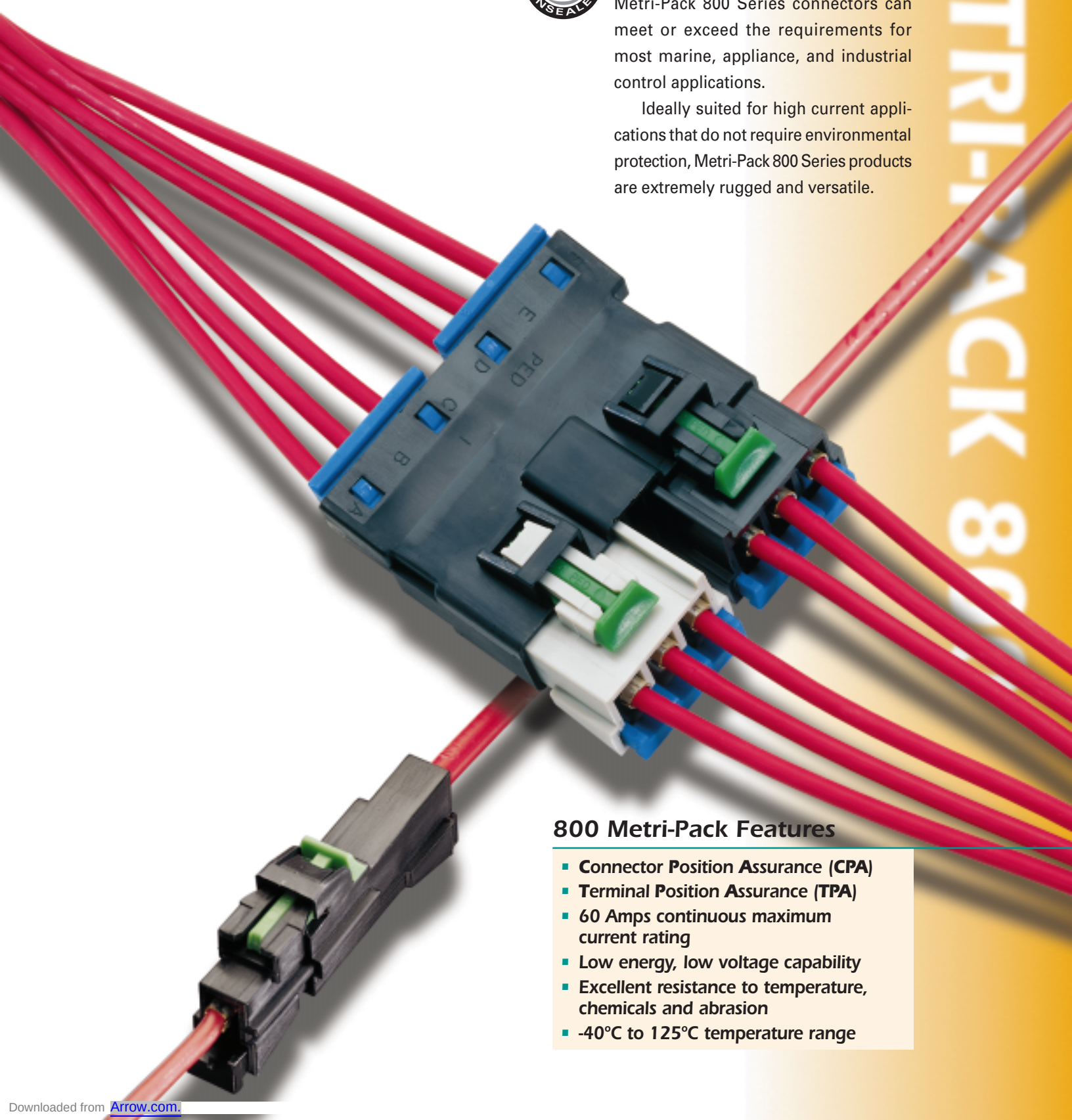
Metri-Pack Series 800

METRI-PACK SERIES 800

Available in device and in-line connections for vehicle applications, Metri-Pack 800 Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for high current applications that do not require environmental protection, Metri-Pack 800 Series products are extremely rugged and versatile.



800 Metri-Pack Features

- Connector Position Assurance (CPA)
- Terminal Position Assurance (TPA)
- 60 Amps continuous maximum current rating
- Low energy, low voltage capability
- Excellent resistance to temperature, chemicals and abrasion
- -40°C to 125°C temperature range

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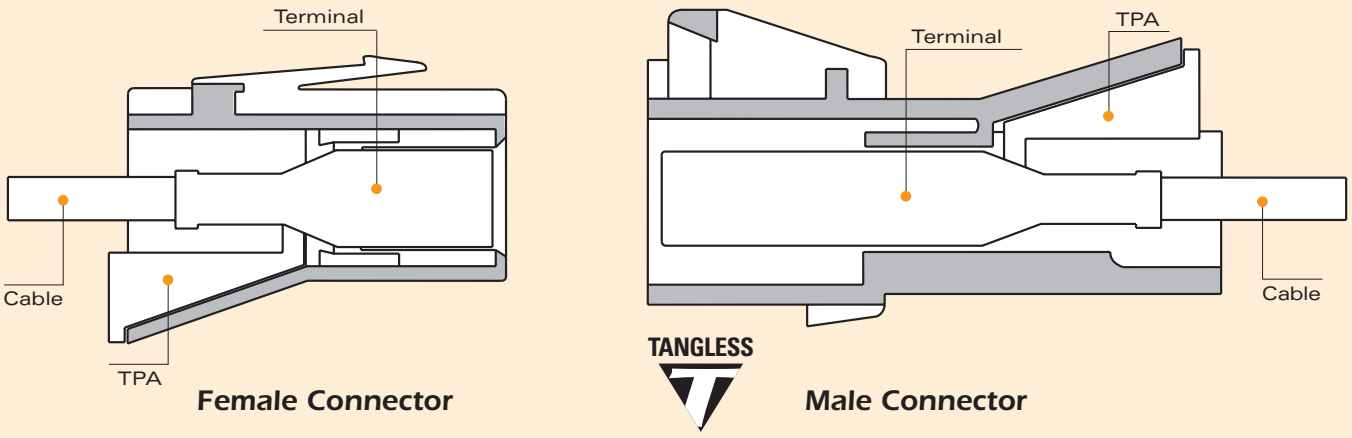
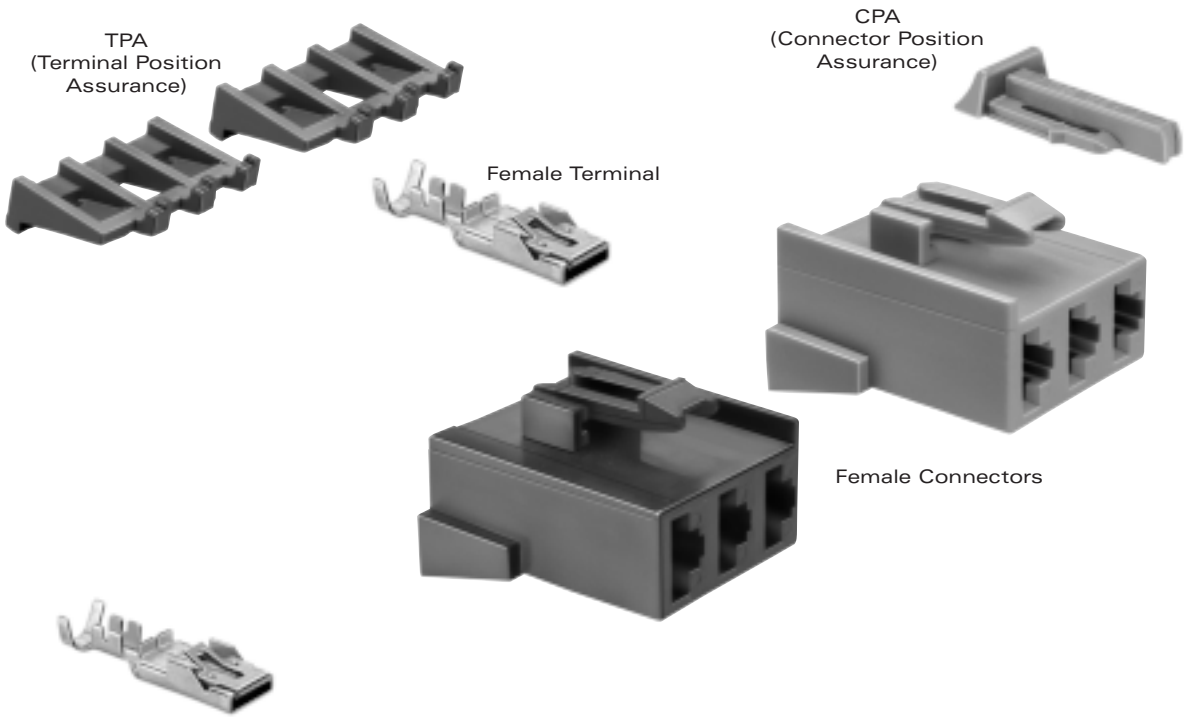
• 800 MAXI-FUSE

Cross Sectional View





800 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12110127	5.0	Tin Brass	Silver/Nickel
12092445	5.0 (2 Req'd.)	Tin Brass	Silver/Nickel
12092444	3.0 (2 Req'd.)	Tin Brass	Silver/Nickel
12065916	3.0-2.0	Tin Brass	Silver/Nickel

800 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1way: 1	12160893	Black	PA6	12160895
6way: 3	12092399	Lt. Gray	PA66 HS IM	12092401
: 3	12092400	Black	PA66 HS IM	12092401

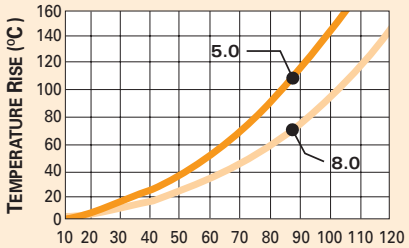
Downloaded from Arrow.com.

Unsealed System Application Information

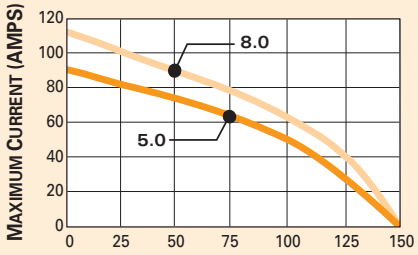
CABLE RANGE (mm²): 2.0-5.0
CURRENT RANGE (AMPS): 0-60
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 10.3
BLADE WIDTH (mm): 8.0

800 SERIES TERMINALS – Tin Plated

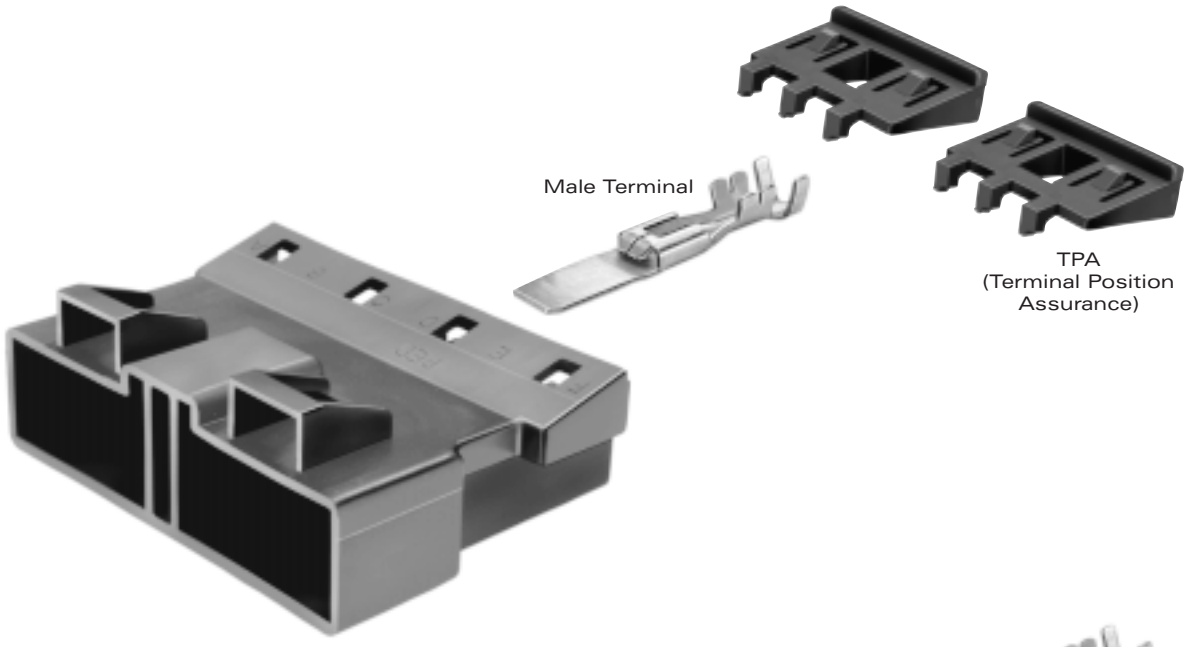
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



Male Connector

TANGLESS

TANGLESS

800 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
1	12160894	Black	PA6	12160895
6	12110698	Black	PA66 HS IM	12092401

800 MALE TANGLESS TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12110700	5.0	Tin Brass	Silver/Nickel

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

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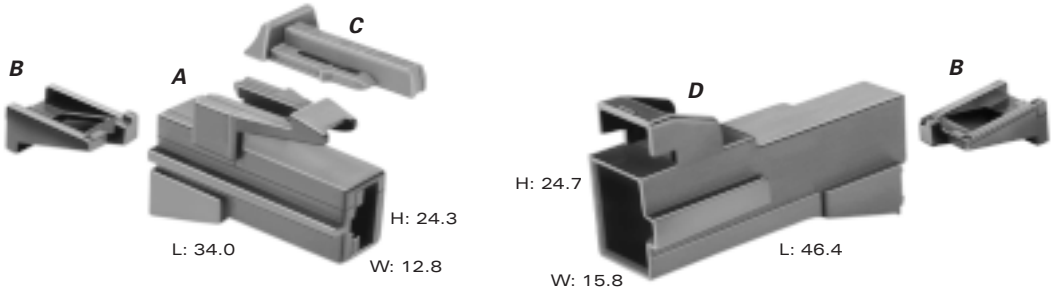


TANGLESS

Total Mated Length: 65.7mm

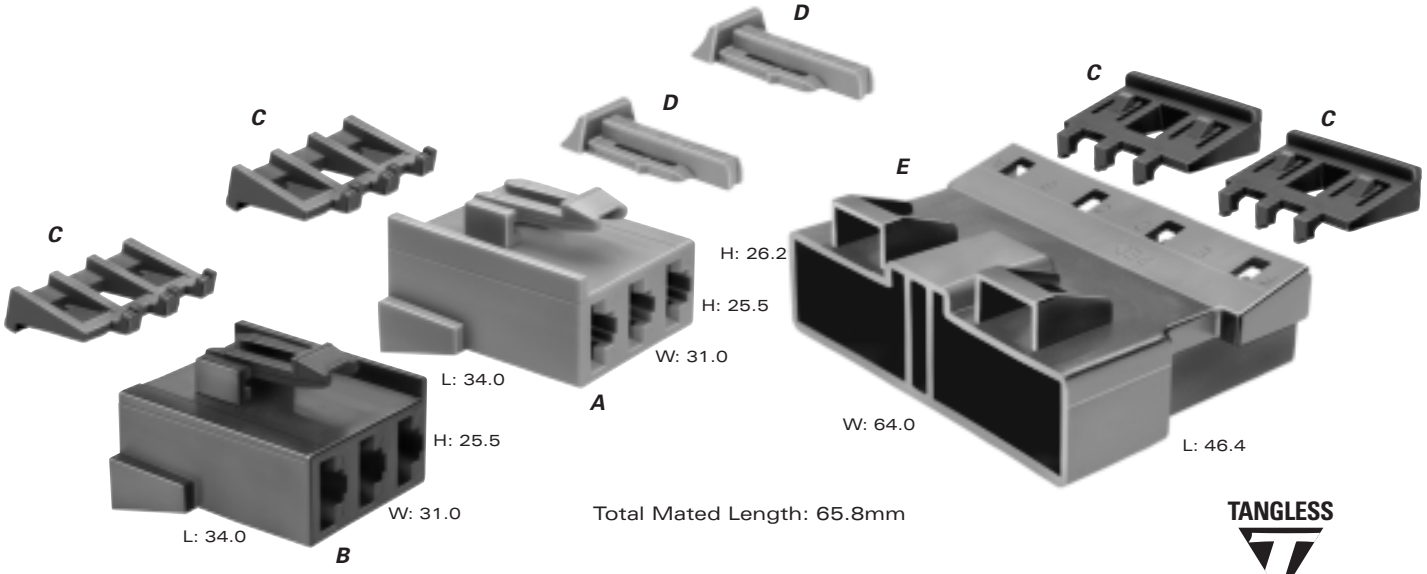
A PART NO: **12160893**
DESCRIPTION: Connector 1F
SIZE: 34.0L x 24.3H x 12.8W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 116

B PART NO: **12160895**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Md. Gray
MATERIAL: PA6

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

D PART NO: **12160894**
DESCRIPTION: Connector 1M (Clip Slot–Self Locking)
SIZE: 46.4L x 24.7H x 15.8W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 117

Downloaded from Arrow.com.



Total Mated Length: 65.8mm

TANGLESS

A PART NO: **12092399**
DESCRIPTION: Connector 3F
SIZE: 34.0L x 25.5H x 31.0W
COLOR: Lt. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 116

B PART NO: **12092400**
DESCRIPTION: Connector 3F
SIZE: 34.0L x 25.5H x 31.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 116

C PART NO: **12092401**
DESCRIPTION: TPA
NUMBER REQ: 4
COLOR: Blue
MATERIAL: PA66 HS IM

D PART NO: **12052834**
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Green
MATERIAL: PP

E PART NO: **12110698**
DESCRIPTION: Connector 6M (Clip Slot–Self Locking)
SIZE: 46.4L x 26.2H x 64.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 117

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Metri-Pack Series

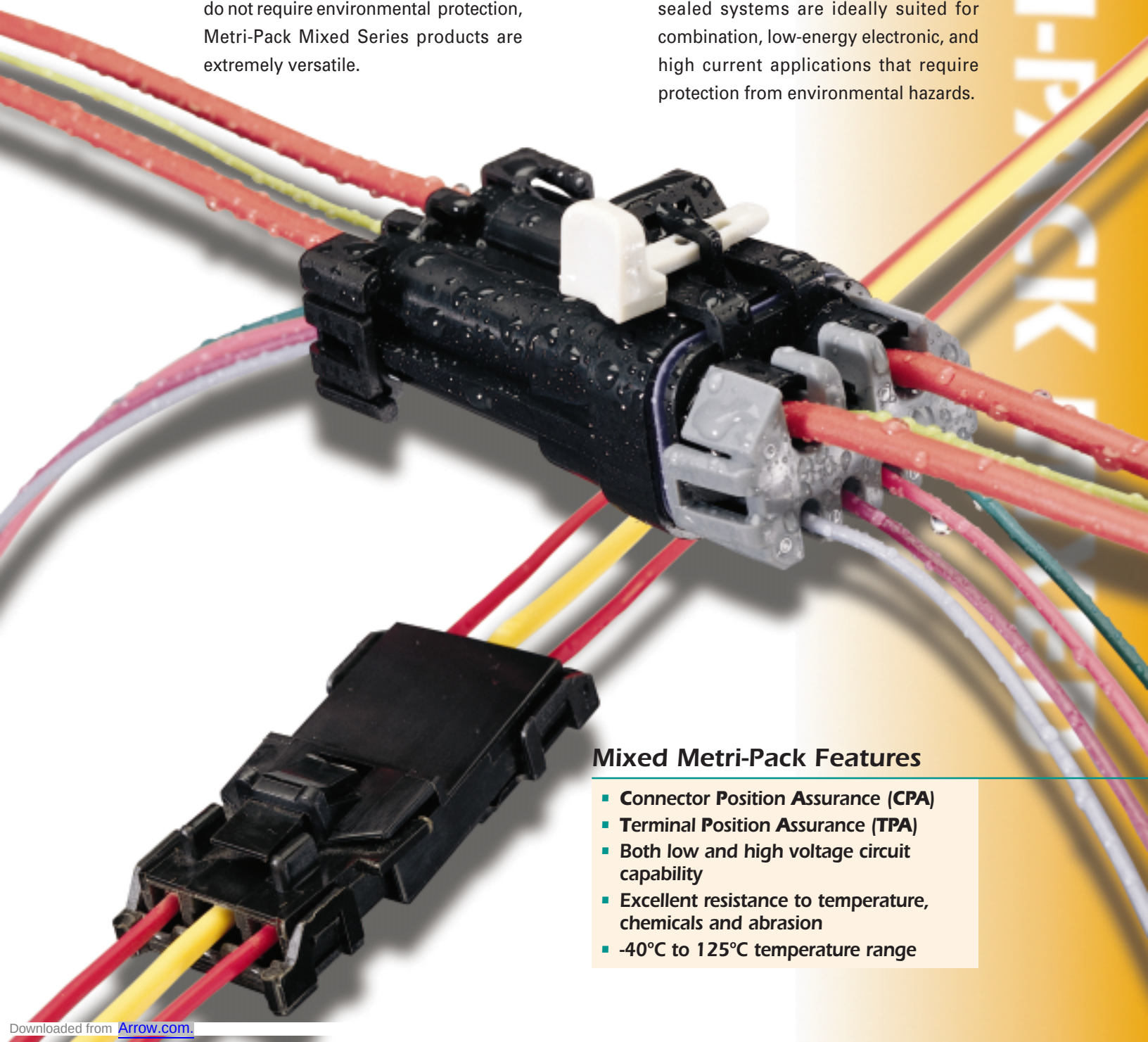
Mixed

Available in device and in-line connections for vehicle applications, Metri-Pack Mixed Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for combination low energy and high current applications that do not require environmental protection, Metri-Pack Mixed Series products are extremely versatile.

Available in device and in-line connections for underhood vehicle applications, Metri-Pack Mixed Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Utilizing triple-rib peripheral silicone rubber seals, Metri-Pack Mixed Series sealed systems are ideally suited for combination, low-energy electronic, and high current applications that require protection from environmental hazards.

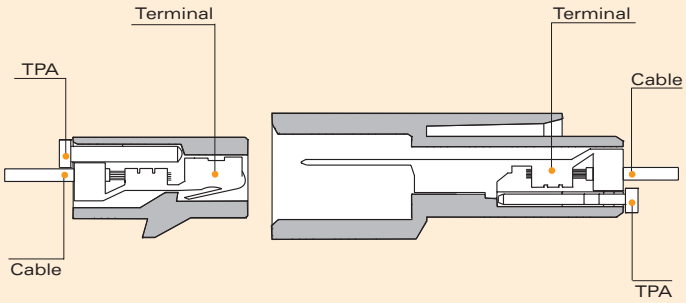


Mixed Metri-Pack Features

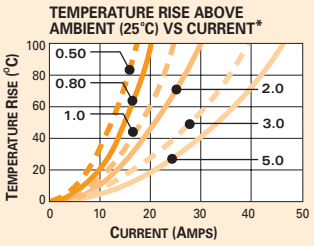
- **Connector Position Assurance (CPA)**
- **Terminal Position Assurance (TPA)**
- **Both low and high voltage circuit capability**
- **Excellent resistance to temperature, chemicals and abrasion**
- **-40°C to 125°C temperature range**

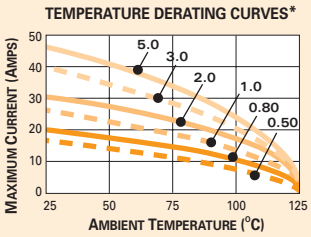
Downloaded from Arrow.com.

Unsealed System Application Information



280 SERIES TERMINALS – Tin Plated





CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Female Terminals

280

480

630

Female Connector

280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12015858	5.0	Tin Brass	Tin
12129494	3.0-2.0	Tin Brass	Tin
12066214	2.0-1.0	Tin Brass	Tin
12034046	1.0-0.80	Tin Brass	Tin
12052217	0.50-0.35	Tin Brass	Tin
12162597*	3.0-2.0	Tin Brass	Tin
12162595*	1.0-0.80	Tin Brass	Tin
12162596*	0.50-0.35	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions may apply, contact your regional support representative at the number listed below.

480 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084595	5.0	Tin Brass	Tin
12052221	3.0	Tin Brass	Tin
12124304	2.0-1.0	Tin Brass	Tin
12015860	0.80	Tin Brass	Tin
12052219	0.50-0.35	Tin Brass	Tin
12020366	1.0-0.50 (1 Req'd.)	Tin Brass	Tin
	0.80-0.50 (1 Req'd.)		

MIXED METRI-PACK FEMALE CONNECTOR UNSEALED

# Cavities	Connector	Color	Material
3	12020014	Black	PA6

630 FEMALE TERMINALS UNSEALED

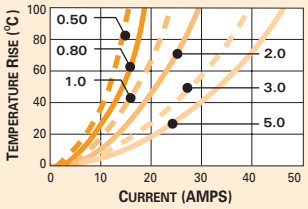
Part #	Cable Range (mm²)	Material	Plating
12084590	5.0	Tin Brass	Tin
12052224	3.0	Tin Brass	Tin
12084596	3.0 (2 Req'd.)	Tin Brass	Tin
12015870	2.0-1.0	Tin Brass	Tin
12015869	1.0-0.80	Tin Brass	Tin
12020035	0.80-0.50 (2 Req'd.)	Tin Brass	Tin
12052222	0.50-0.35	Tin Brass	Tin

Downloaded from Arrow.com.

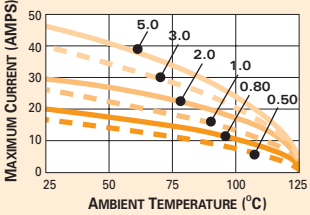
Unsealed System Application Information

480 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



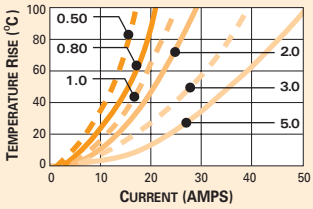
TEMPERATURE DERATING CURVES*



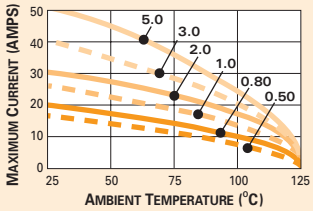
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 4.8

630 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



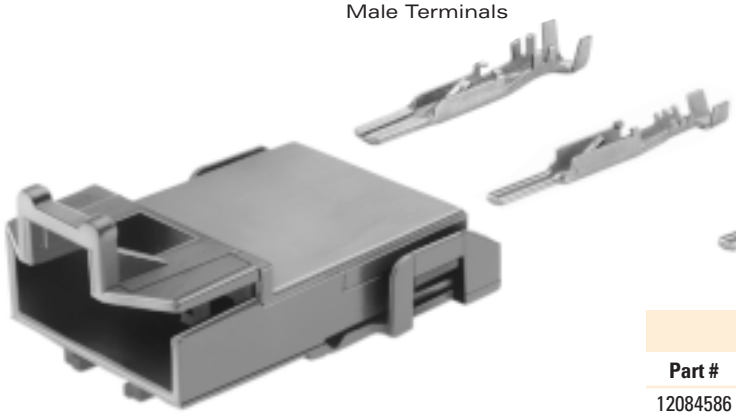
TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 6.3

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Terminals



Male Connector

280

480

280 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084586	5.0	Tin Brass	Tin
12129498	3.0-2.0	Tin Brass	Tin
12020116	2.0-1.0	Tin Brass	Tin
12034047	1.0-0.80	Tin Brass	Tin
12066271	0.50-0.35	Tin Brass	Tin
12020782	0.35 (2 Req'd.)	Tin Brass	Tin

480 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12033820	5.0	Tin Brass	Tin over Copper
12052827	3.0	Tin Brass	Tin over Copper
12020120	2.0-1.0	Tin Brass	Tin over Copper
12020119	1.0-0.80	Tin Brass	Tin over Copper
12066269	0.50-0.35	Tin Brass	Tin over Copper
12020784	0.35 (2 Req'd.)	Tin Brass	Tin over Copper

MIXED METRI-PACK MALE CONNECTOR UNSEALED

# Cavities	Connector	Color	Material
3	12045681	Black	PA6

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female connections for device applications, see page 130.

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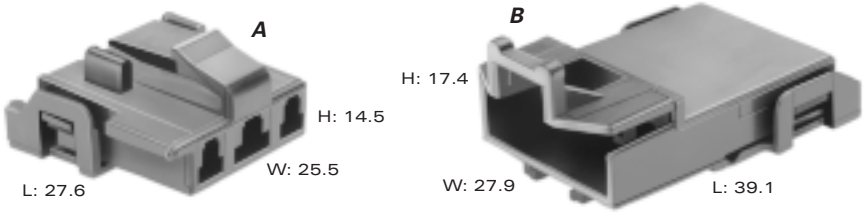

Total Mated Length: 55.6mm

A PART NO: **12020014***
DESCRIPTION: Connector 3F
SIZE: 27.6L x 14.5H x 25.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 122
*HINGED SECONDARY LOCK.

B PART NO: **12045681***
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 39.1L x 17.4H x 27.9W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 123
*HINGED SECONDARY LOCK.

KEY:
■ 280 SERIES
● 480 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

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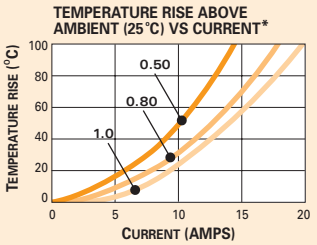
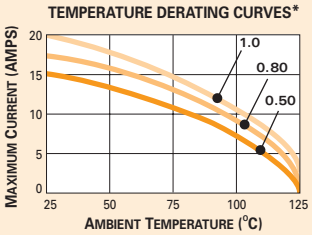
Sealed System Application Information

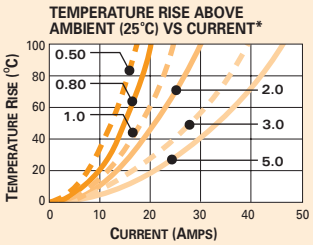
150 SERIES TERMINALS–Tin Plated

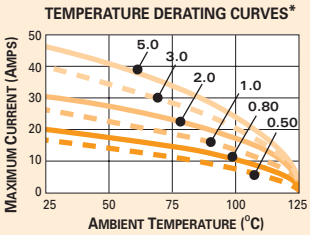




CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

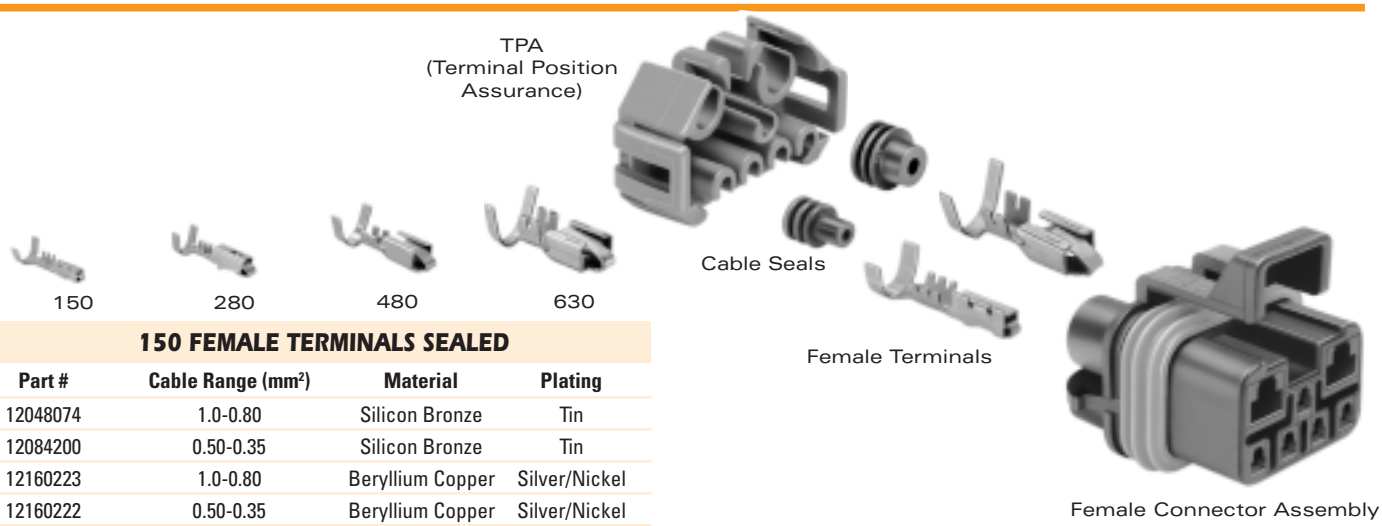
280 SERIES TERMINALS – Tin Plated





CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048074	1.0-0.80	Silicon Bronze	Tin
12084200	0.50-0.35	Silicon Bronze	Tin
12160223	1.0-0.80	Beryllium Copper	Silver/Nickel
12160222	0.50-0.35	Beryllium Copper	Silver/Nickel

280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12077413	5.0	Tin Brass	Tin
12129493	3.0-2.0	Tin Brass	Tin
12077411	1.0-0.80	Tin Brass	Tin
12084201	0.50-0.35	Tin Brass	Tin

480 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052139	5.0-3.0	Tin Brass	Tin
12048451	2.0-1.0	Tin Brass	Tin
12048450	0.80-0.50	Tin Brass	Tin

630 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052456	5.0-3.0	Tin Brass	Tin
12052455	2.0-1.0	Tin Brass	Tin
12052457	0.80-0.50	Tin Brass	Tin

MIXED METRI-PACK FEMALE CONNECTOR ASSEMBLY SEALED

# Cavities	Conn. Asm.	Color	Material	TPA
7	12059472	Black	PA66 HS IM	12052486

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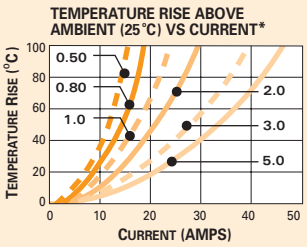
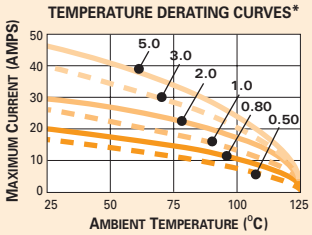
Sealed System Application Information

480 SERIES TERMINALS–Tin Plated

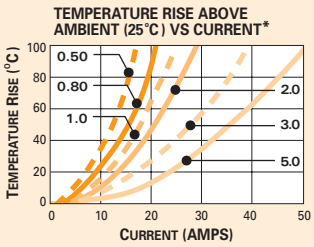


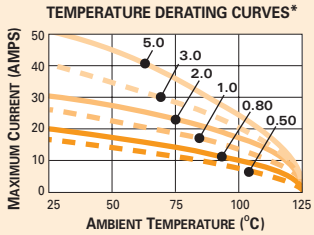


CABLE RANGE (mm^2): 0.35-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 4.8

630 SERIES TERMINALS–Tin Plated

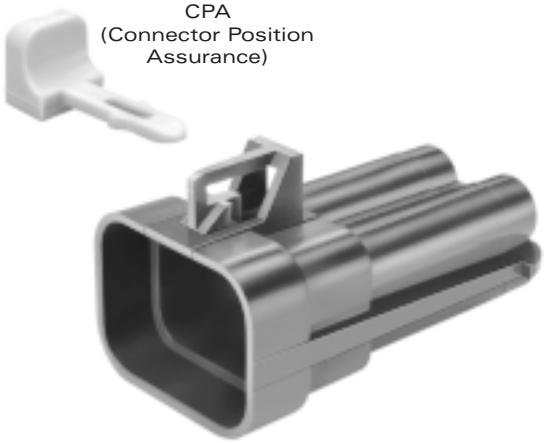


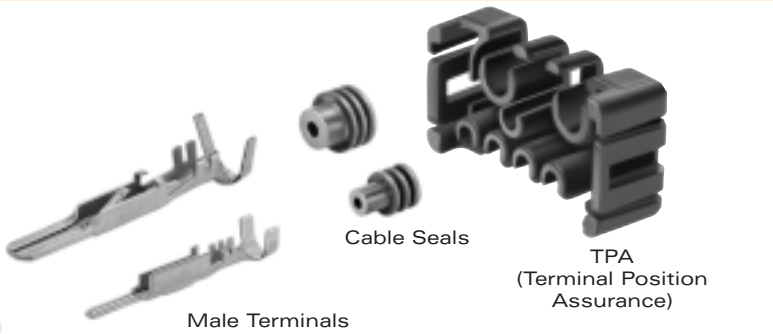


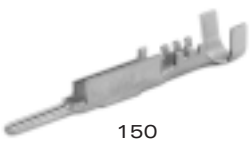
CABLE RANGE (mm^2): 0.35-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 6.3

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.






150

480

MIXED METRI-PACK MALE CONNECTOR SEALED

# Cavities	Connector	Color	Material	TPA
7	12052200	Black	PA66 HS IM	12052199

150 MALE TERMINALS SEALED

Part #	Cable Range (mm^2)	Material	Plating
12045773	1.0-0.80	Tin Brass	Tin
12077628	0.50-0.35	Tin Brass	Tin

480 MALE TERMINALS SEALED

Part #	Cable Range (mm^2)	Material	Plating
12052172	5.0	Tin Brass	Tin
12065197	3.0	Tin Brass	Tin
12065196	2.0-1.0	Tin Brass	Tin

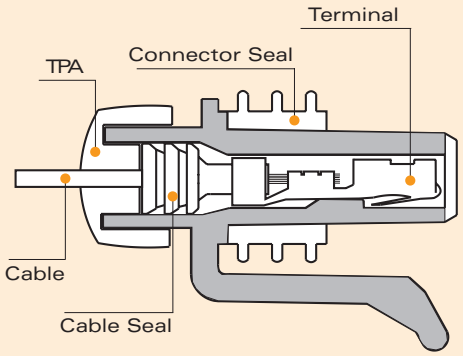
SECTION NOTES:

Contact your regional support representative at the number listed below.

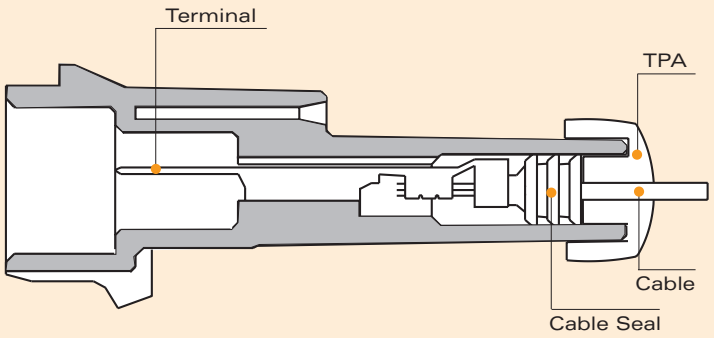
- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Female connections for device applications, see pages 131 and 132.

Downloaded from Arrow.com.

Cross Sectional View



Female Connector Assembly



Male Connector

150 METRI-PACK CABLE SEALS

Reel Part#	Loose Part#	Cable Diameter	Material	Color
12052924	12048086	2.85-2.03	Silicone	Dk. Red
12089442	12089678	2.15-1.60	Silicone	White
12052925	12048087	1.70-1.29	Silicone	Blue
12124669	12084193	1.009-0.995	Silicone	Tan

280 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

480 METRI-PACK CABLE SEALS

Reel Part#	Loose Part#	Cable Diameter	Material	Color
12065703	12034170	5.16-4.40	Silicone	Orange
12052453	12048443	4.50-3.61	Silicone	Purple
12052452	12048442	3.75-2.81	Silicone	Red
12048433	12048441	2.85-2.01	Silicone	White
12052931	12052930	2.15-1.60	Silicone	Yellow
12162068	12162067	1.70-1.29	Silicone	Pink

630 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12059257	12052386	5.15-4.40	Silicone	Green
12059260	12052668	4.50-3.61	Silicone	Blue
12059258	12052387	3.75-2.81	Silicone	Lt. Gray
12059259	12052388	2.85-2.01	Silicone	Dk. Red
12077760	12077759	2.15-1.65	Silicone	Tan

150 METRI-PACK CAVITY PLUG*

Part#	Cavity Inside Diameter	Material	Color
12059168	5.2mm	Silicone	Dk. Red

*Cavity plugs seal unused female and male cavities.

280 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

480 METRI-PACK CAVITY PLUG*

Part#	Cavity Inside Diameter	Material	Color
12066082	8.5mm	Silicone	Lt. Green

*Cavity plugs seal unused female and male cavities.

630 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059255	9.8mm	Silicone	Lt. Green

*Cavity plugs seal unused female and male cavities.

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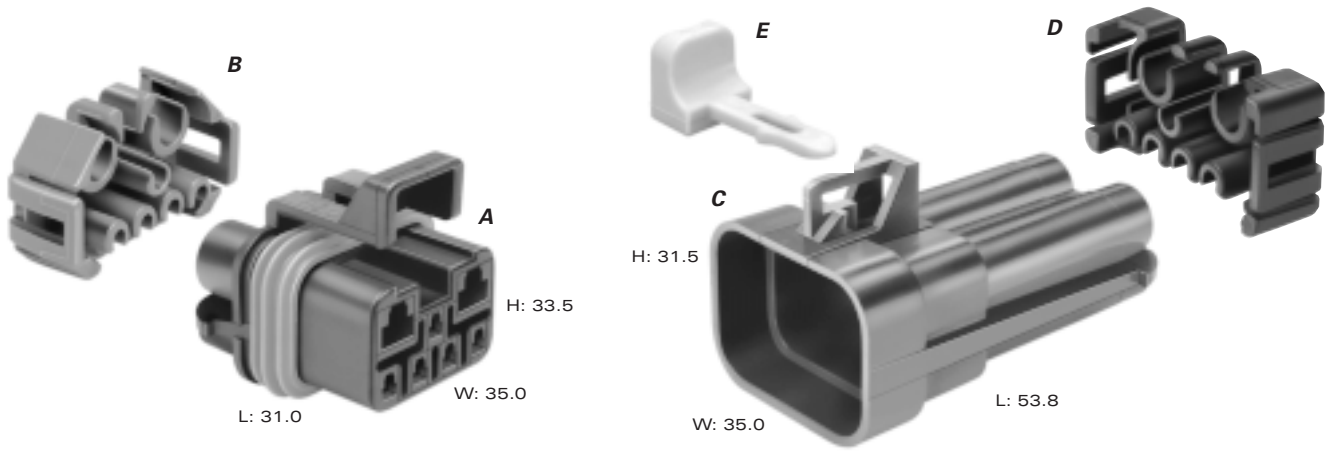


Total Mated Length: 69.3mm

A PART NO: **12059472**
DESCRIPTION: Connector Assembly 7F
SIZE: 31.0L x 33.5H x 35.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 126
SEALS/PLUGS: See Page 128

B PART NO: **12052486**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

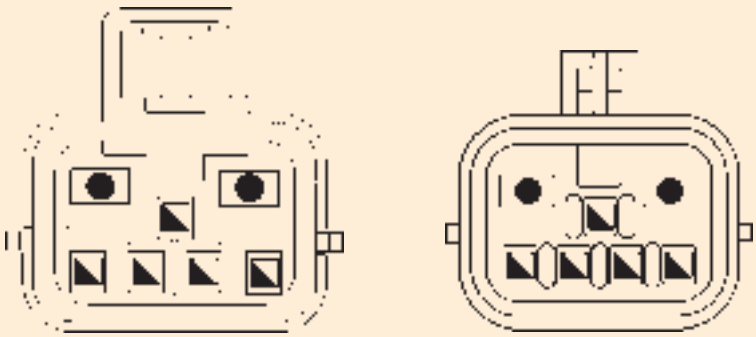
C PART NO: **12052200**
DESCRIPTION: Connector 7M (Clip Slot)
SIZE: 53.8L x 31.5H x 35.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 127
SEALS/PLUGS: See Page 128

D PART NO: **12052199**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

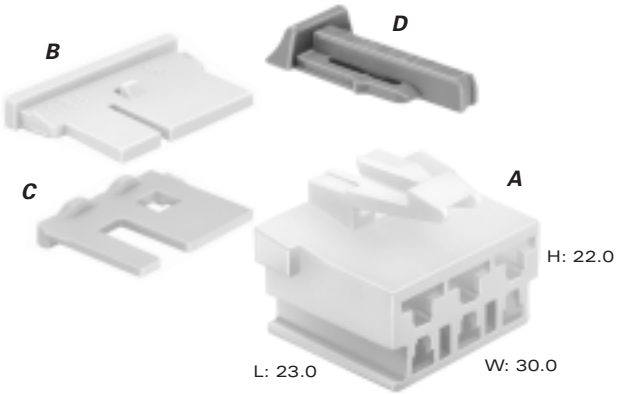
E PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

KEY:
◪ 150 SERIES
● 480 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.

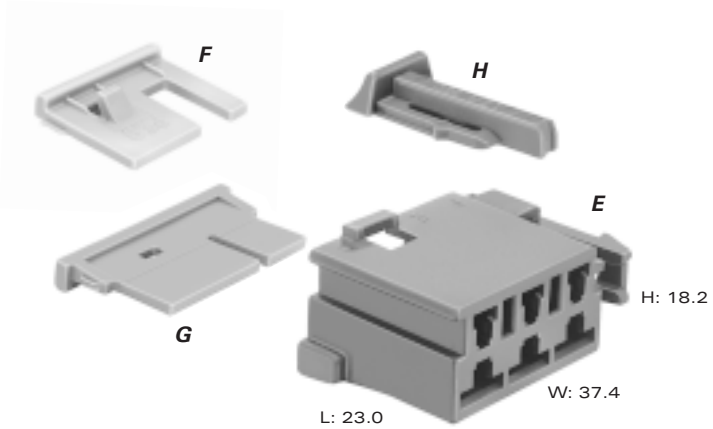


A PART NO: **12129842**
DESCRIPTION: Connector 6F
SIZE: 23.0L x 22.0H x 30.0W
COLOR: Natural
MATERIAL: PA66 HS IM
TERMINALS: See Page 122
TYPICAL APP: Switch

B PART NO: **12162301**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

C PART NO: **12162300**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



E PART NO: **12162229 (Black)**
12110075 (Natural)*
DESCRIPTION: Connector 6F
SIZE: 23.0L x 18.2H x 37.4W
MATERIAL: PA66 HS IM
TERMINALS: See Page 122
TYPICAL APP: Switch
*REVERSED LOCKING FEATURE.

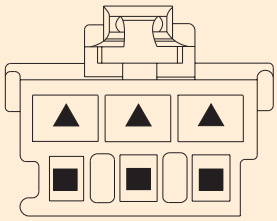
F PART NO: **12162300**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

G PART NO: **12162299**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

H PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

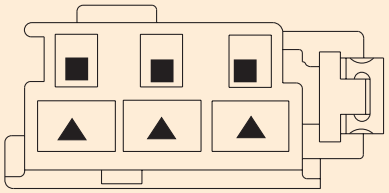
KEY:
■ 280 SERIES
▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

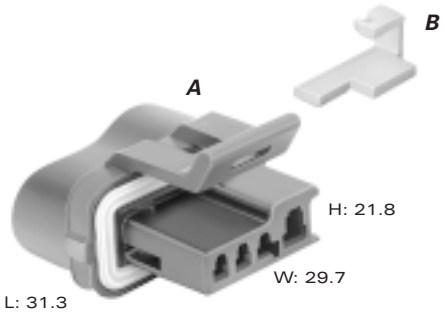


KEY:
■ 280 SERIES
▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

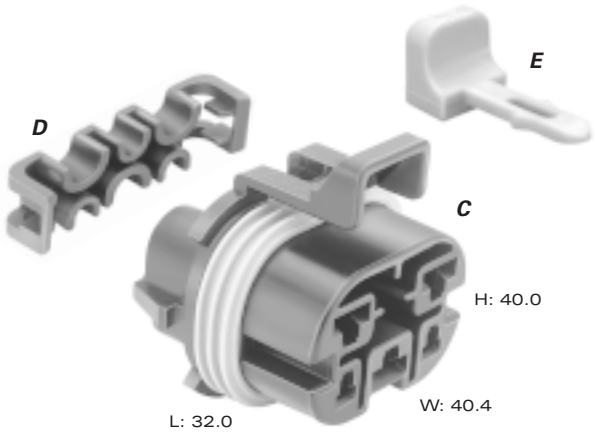


Downloaded from Arrow.com.



A PART NO: **12124898**
DESCRIPTION: Connector Assembly 4F
SIZE: 31.3L x 21.8H x 29.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 126
SEALS/PLUGS: See Page 128
TYPICAL APP: Alternator

B PART NO: **12045897**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PBT



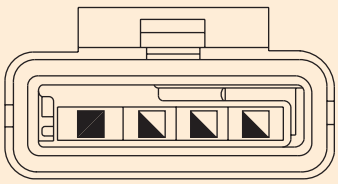
C PART NO: **12052287**
DESCRIPTION: Connector Assembly 5F
SIZE: 32.0L x 40.0H x 40.4W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 126
SEALS/PLUGS: See Page 128
TYPICAL APP: Switch

D PART NO: **12052290**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA66 HS IM

E PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

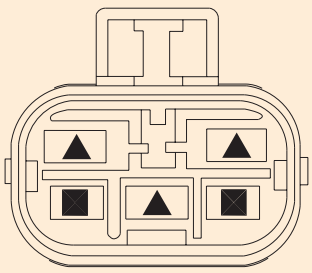
KEY:
◪ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



KEY:
■ 280 SERIES
▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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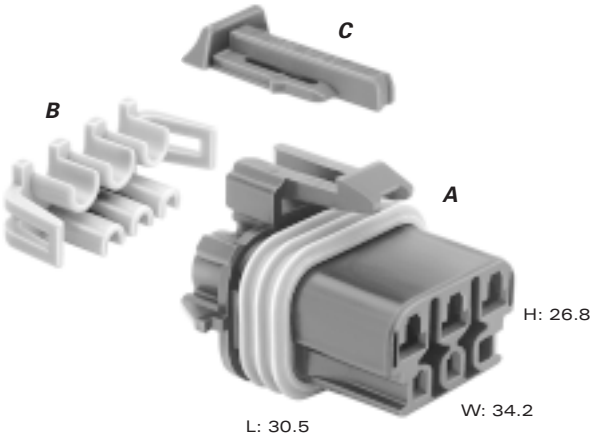


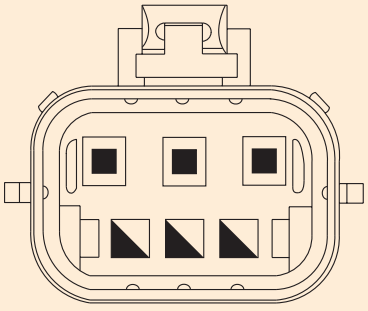
A PART NO: **12186347**
DESCRIPTION: Connector Assembly 6F
SIZE: 30.5L x 26.8H x 34.2W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 126
SEALS/PLUGS: See Page 128
TYPICAL APP: Wiper Motor

B PART NO: **12129124**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

KEY:
◪ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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Metri-Pack Series
Junction Systems

Available in pass-through and in-line connections, Metri-Pack Junction System Series connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Ideally suited for combination low energy and high current applications that do not require environmental protection, Metri-Pack Junction System Series products are extremely versatile.

Available in pass-through and in-line connections for underhood vehicle applications, Metri-Pack Junction System Series sealed connectors can meet or exceed the requirements for most marine, appliance, and industrial control applications.

Metri-Pack Junction Series sealed systems are ideally suited for combination, low-energy electronic, and high current applications that require protection from environmental hazards.

METRI-PACK JUNCTION

Metri-Pack Junction Features

- **Terminal Position Assurance (TPA)**
- **Bolt assisted connector to connector lock**
- **Both low and high voltage circuit capability**
- **Excellent resistance to temperature, chemicals and abrasion**
- **-40°C to 125°C temperature range**

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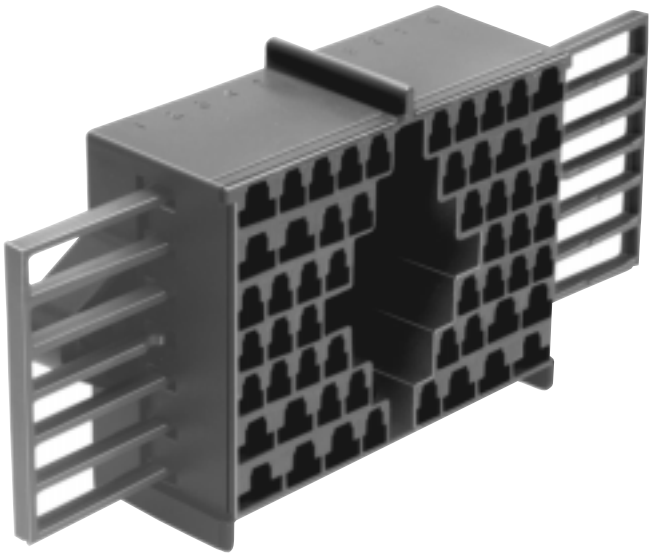
Female Unsealed System

Female Terminals

Secondary Lock



Secondary Lock

Female Connector

JUNCTION SYSTEMS FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	Secondary Lock
42way: 42	12015508	Black	PA6	12015510
				12015511
48way: 18	12084183	Black	PA66 HS IM	12047838
: 17	12047842	Black	PA66 HS IM	12047843
: 13	12047840	Gray	PPE	12047841
56way: 56	15394027	Black	PA6	15324764
116way: 116	12162463	Black	PA66 HS IM 14% GF	12047751

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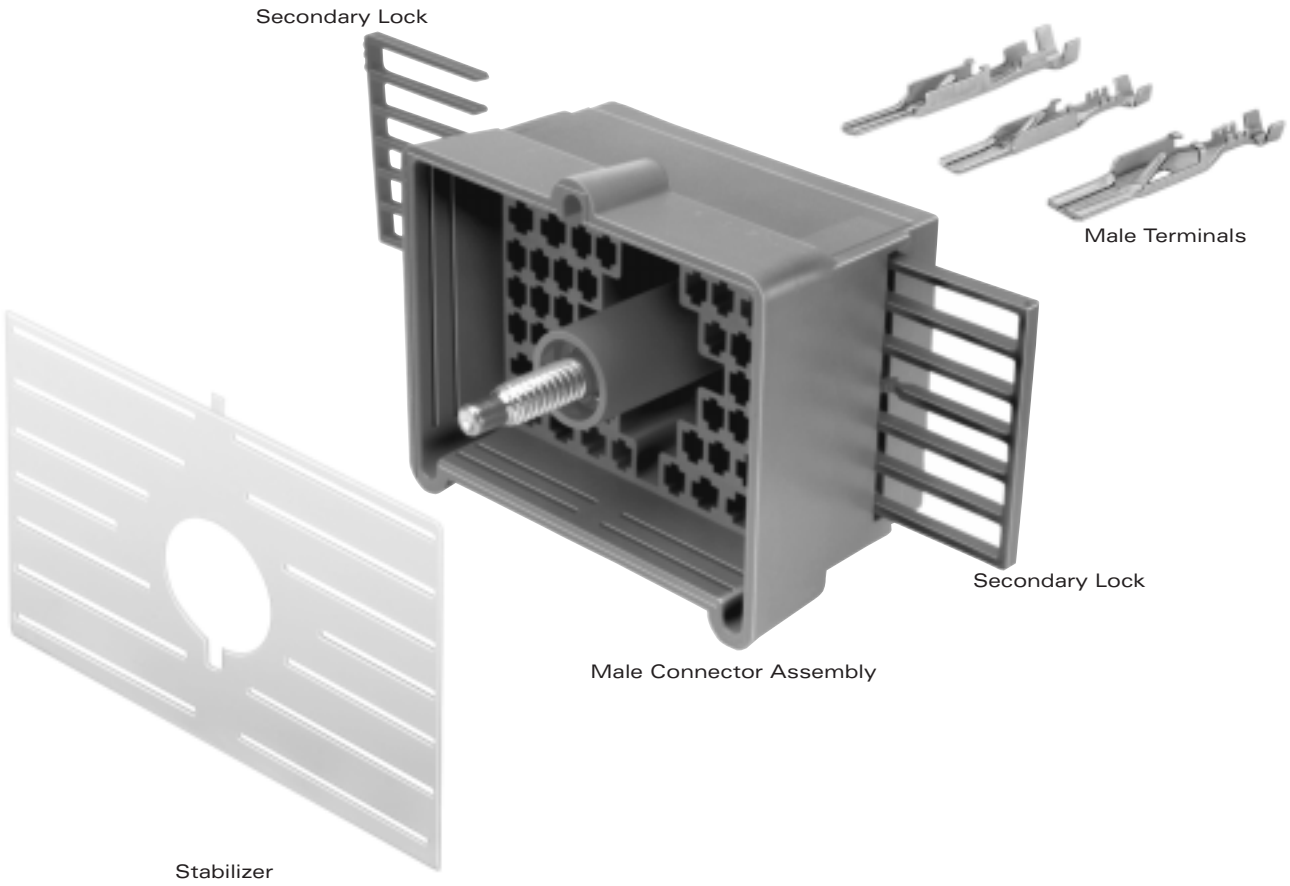
Male Unsealed System



JUNCTION SYSTEMS MALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Conn. Asm.	Color	Material	Secondary Lock	Stabilizer
42way: 25	12015509	Black	PA66 HS IM	12015510	12162412
: 17	12020629	Black	PA6	12015511	12162413
48way: 48	12077822	Black	PA6	12047845	12186880
				12047846	
				12047838	
56way: 56	12059735	Md. Gray	PA66 HS IM	15324764	12186869
116way: 116	12065705	Black	PPE	12047752	12124732

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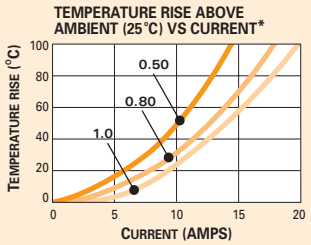
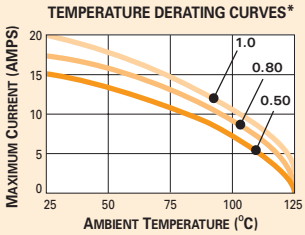
UNSEALED

Unsealed System Application Information

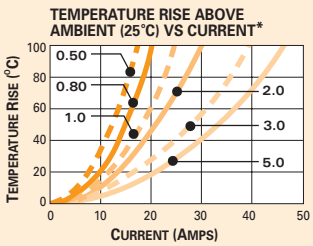
150 SERIES TERMINALS–Tin Plated

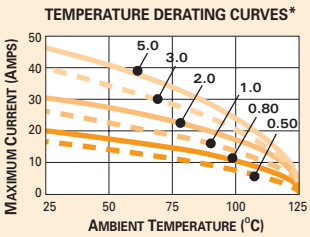




CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated





CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

150 SERIES FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12047767	1.0-0.80	Silicon Bronze	Tin
12064971	0.50-0.35	Silicon Bronze	Tin

480 SERIES FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084595	5.0	Tin Brass	Tin
12052221	3.0	Tin Brass	Tin
12124304	2.0-1.0	Tin Brass	Tin
12015860	0.80	Tin Brass	Tin
12052219	0.50-0.35	Tin Brass	Tin
12020366	1.0-0.50 (1 Req'd.) 0.80-0.50 (1 Req'd.)	Tin Brass	Tin

280 SERIES FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12015858	5.0	Tin Brass	Tin
12129494	3.0-2.0	Tin Brass	Tin
12034046	1.0-0.80	Tin Brass	Tin
12052217	0.50-0.35	Tin Brass	Tin
12162597*	3.0-2.0	Tin Brass	Tin
12162595*	1.0-0.80	Tin Brass	Tin
12162596*	0.50-0.35	Tin Brass	Tin

630 SERIES FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084590	5.0	Tin Brass	Tin
12084596	3.0 (2 Req'd.)	Tin Brass	Tin
12052224	3.0	Tin Brass	Tin
12015870	2.0-1.0	Tin Brass	Tin
12015869	1.0-0.80	Tin Brass	Tin
12020035	0.80-0.50 (2 Req'd.)	Tin Brass	Tin
12052222	0.50-0.35	Tin Brass	Tin

*** Thin Stock**—Electrical current restrictions may apply, contact your regional support representative at the number listed below for specifications.

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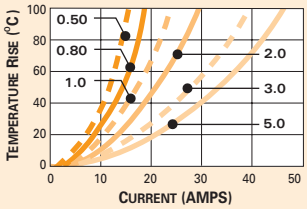
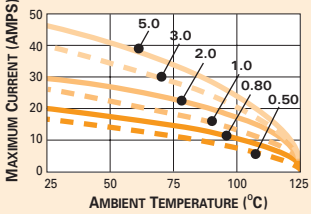
Unsealed System Application Information

480 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



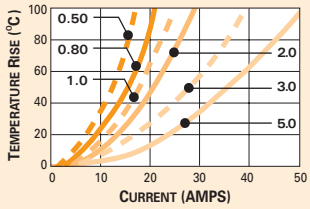
TEMPERATURE DERATING CURVES*



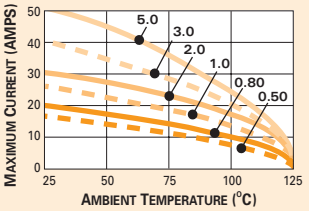
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 4.8

630 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 6.3

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

150 SERIES MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12047581	1.0-0.80	Tin Brass	Tin
12059894	0.50-0.35	Tin Brass	Tin

480 SERIES MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12033820	5.0	Tin Brass	Tin over Copper
12052827	3.0	Tin Brass	Tin over Copper
12020120	2.0-1.0	Tin Brass	Tin over Copper
12020119	1.0-0.80	Tin Brass	Tin over Copper
12066269	0.50-0.35	Tin Brass	Tin over Copper
12020784	0.35 (2 Req'd.)	Tin Brass	Tin over Copper

280 SERIES MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084586	5.0	Tin Brass	Tin
12129498	3.0-2.0	Tin Brass	Tin
12020116	1.0	Tin Brass	Tin
12034047	1.0-0.80	Tin Brass	Tin
12066271	0.50-0.35	Tin Brass	Tin
12020782	0.35 (2 Req'd.)	Tin Brass	Tin

630 SERIES MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12066493	5.0	Tin Brass	Tin over Copper
12052826	3.0	Tin Brass	Tin over Copper
12020365	3.0 (2 Req'd.)	Tin Brass	Tin over Copper
12020126	2.0-1.0	Tin Brass	Tin over Copper
12020125	1.0-0.80	Tin Brass	Tin over Copper
12033972	0.80-0.50 (2 Req'd.)	Tin Brass	Tin over Copper
12066454	0.50-0.35	Tin Brass	Tin over Copper

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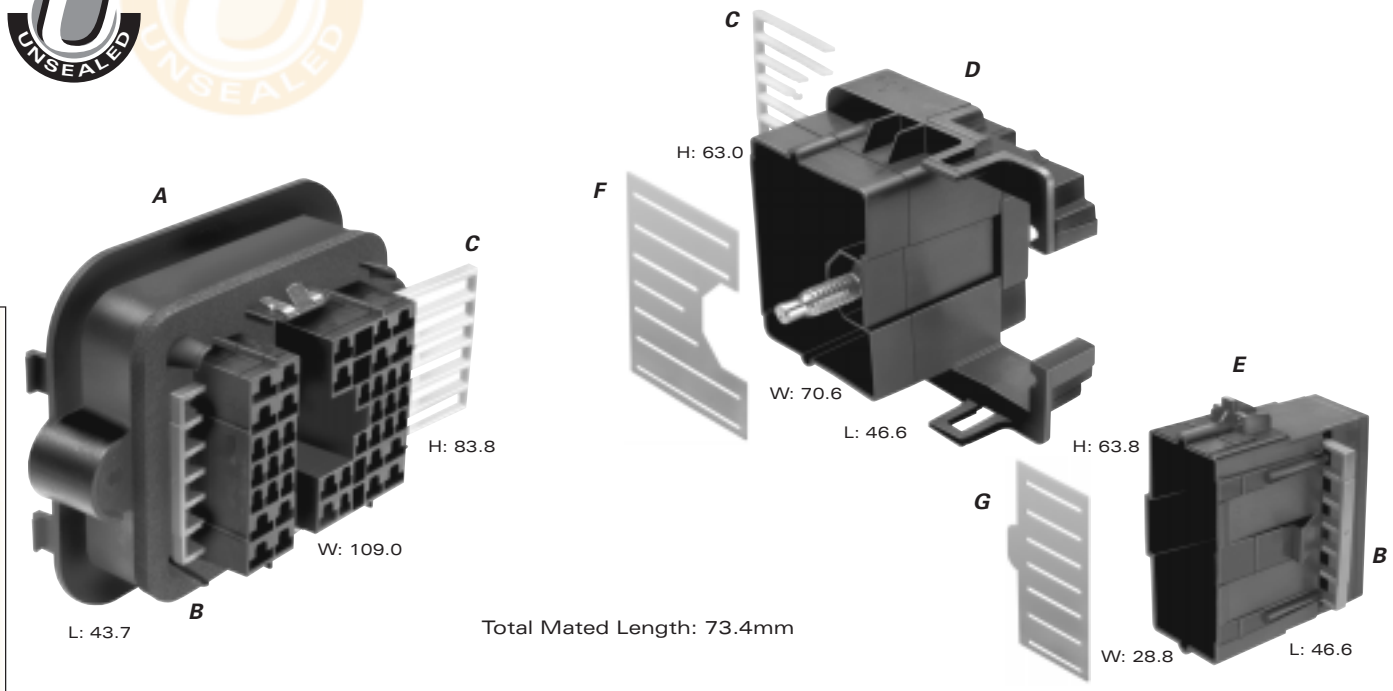


Total Mated Length: 73.4mm

A PART NO: **12015508**
DESCRIPTION: Connector Assembly 42F
SIZE: 43.7L x 83.8H x 109.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 138
NOTE: Available with Grease Covers 12015513 and 12033602

B PART NO: **12015511**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

C PART NO: **12015510**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

D PART NO: **12015509**
DESCRIPTION: Connector Assembly 25M
SIZE: 46.6L x 63.0H x 70.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 139

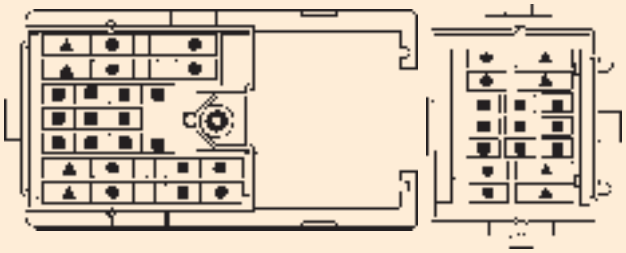
E PART NO: **12020629**
DESCRIPTION: Connector 17M
SIZE: 46.6L x 63.8H x 28.8W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 139
NOTE: Available with Grease Cover 12033601

F PART NO: **12162412**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

G PART NO: **12162413**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

KEY:
- ■ 280 SERIES
- ● 480 SERIES
- ▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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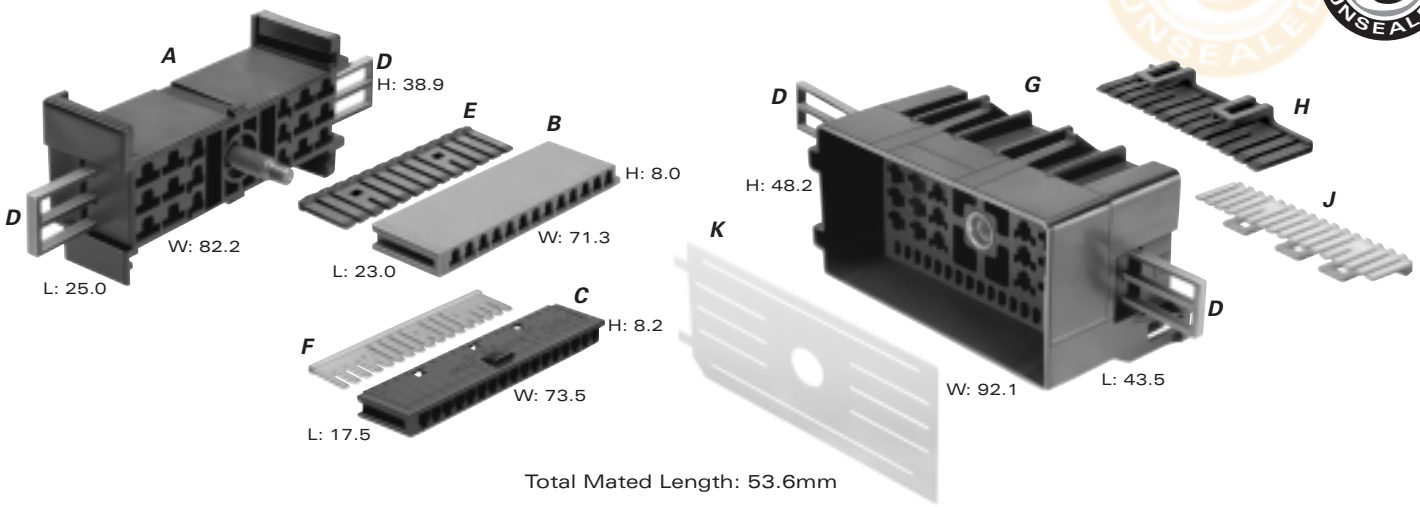


Total Mated Length: 53.6mm

A PART NO: **12084183**
DESCRIPTION: Connector Assembly 18F
SIZE: 25.0L x 38.9H x 82.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 138

B PART NO: **12047840**
DESCRIPTION: Connector 13F
SIZE: 23.0L x 8.0H x 71.3W
COLOR: Gray
MATERIAL: PPE
TERMINALS: See Page 138

C PART NO: **12047842**
DESCRIPTION: Connector 17F
SIZE: 17.5L x 8.2H x 73.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 138

D PART NO: **12047838**
DESCRIPTION: Secondary Lock
NUMBER REQ: 4
COLOR: Blue
MATERIAL: PBT

E PART NO: **12047841**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT

F PART NO: **12047843**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PBT

G PART NO: **12077822**
DESCRIPTION: Connector Assembly 48M
SIZE: 43.5L x 48.2H x 92.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 139

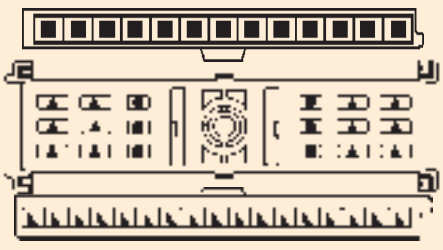
H PART NO: **12047845**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PBT

J PART NO: **12047846**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PBT IM

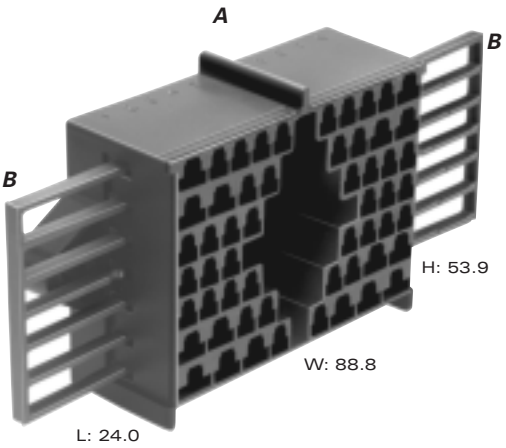
K PART NO: **12186880**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

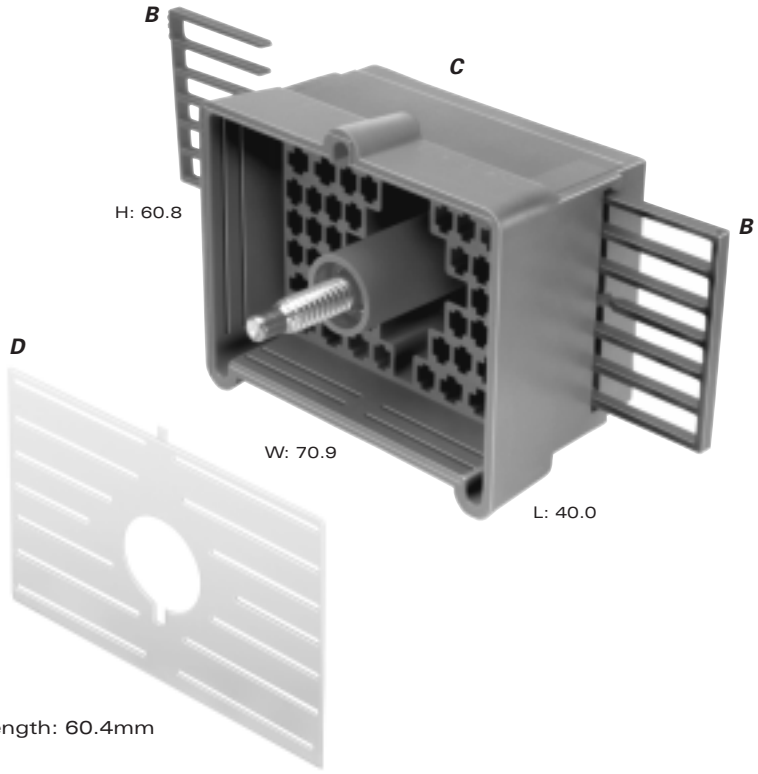
KEY:
- ◹ 150 SERIES
- ■ 280 SERIES
- ▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.





Total Mated Length: 60.4mm

A PART NO: **15394027**
DESCRIPTION: Connector Assembly 56F
SIZE: 24.0L x 53.9H x 88.8W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 138

B PART NO: **15324764**
DESCRIPTION: Secondary Lock
NUMBER REQ: 4
COLOR: Blue
MATERIAL: PBT

C PART NO: **12059735**
DESCRIPTION: Connector Assembly 56M
SIZE: 40.0L x 60.8H x 70.9W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 139

D PART NO: **12186869**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

KEY:
- ■ 280 SERIES
- ● 480 SERIES
- ▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.

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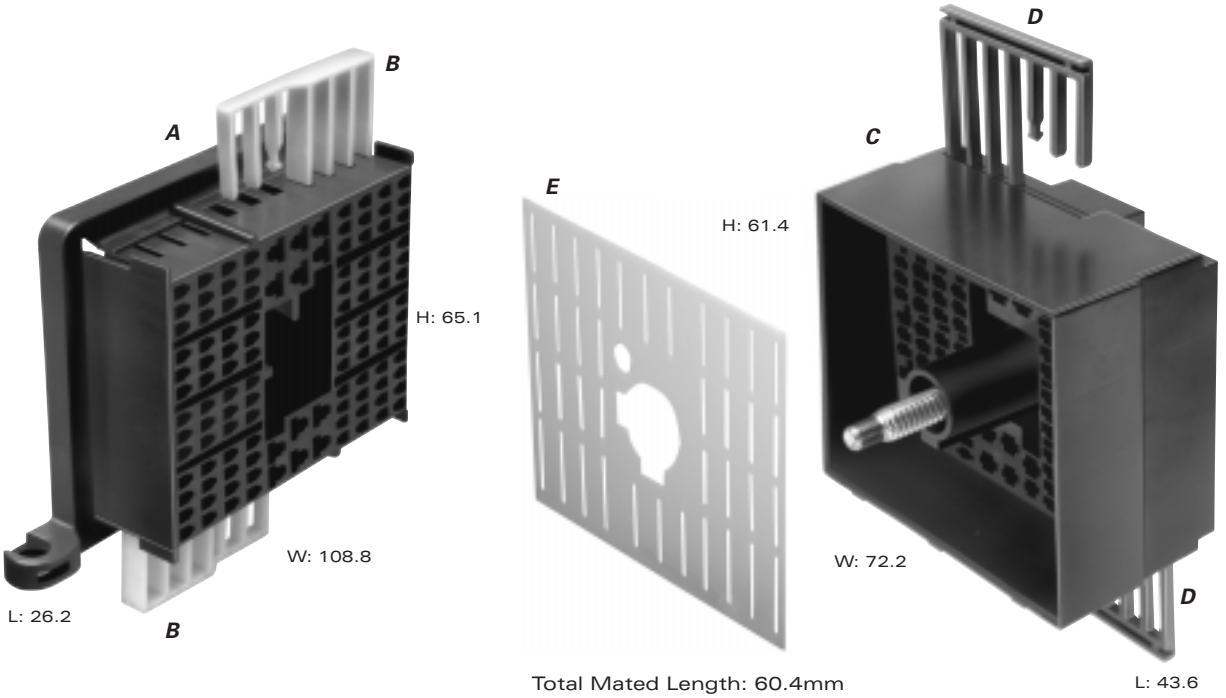


A PART NO: **12162463**
DESCRIPTION: Connector Assembly 116F
SIZE: 26.2L x 65.1H x 108.8W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 138

B PART NO: **12047751**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

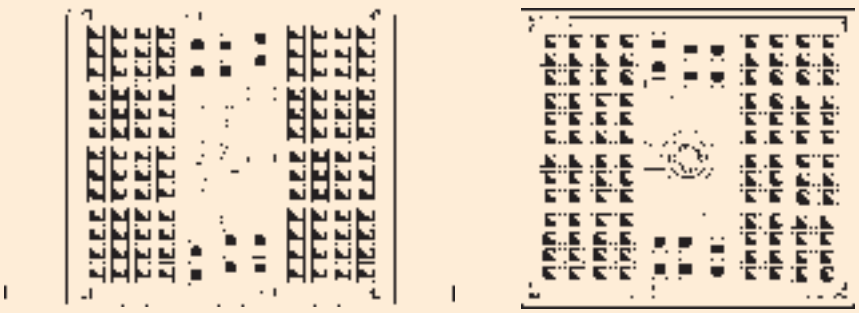
C PART NO: **12065705**
DESCRIPTION: Connector Assembly 116M
SIZE: 43.6L x 61.4H x 72.2W
COLOR: Black
MATERIAL: PPE
TERMINALS: See Page 139
NOTE: See product print for assembly information

D PART NO: **12047752**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

E PART NO: **12124732**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

KEY:
◹ 150 SERIES
■ 280 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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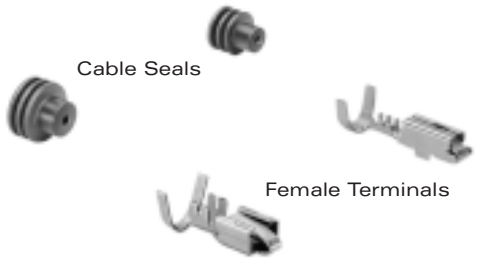
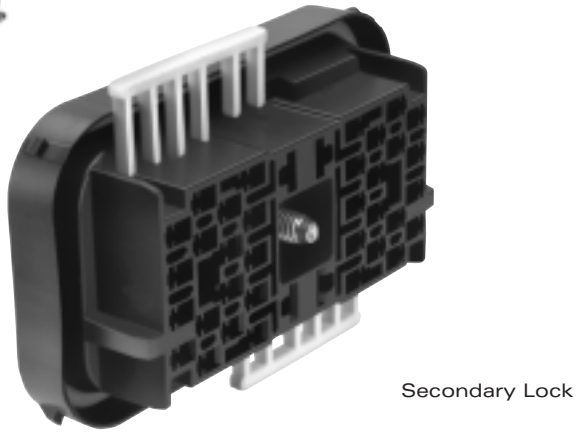
Female Sealed System





Female Connector Assembly

JUNCTION SYSTEMS FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	Secondary Lock
30	12065850	Black	PBT	12066050
36	12092491*	Black	PBT	12064835
38	12191499	Black	PA66 15% GF & 25% MF	12129669
78	12129206	Black	PA66 HS 33% GF	12129214

*Note: 12092491 (F) is unsealed for use in a protected environment.

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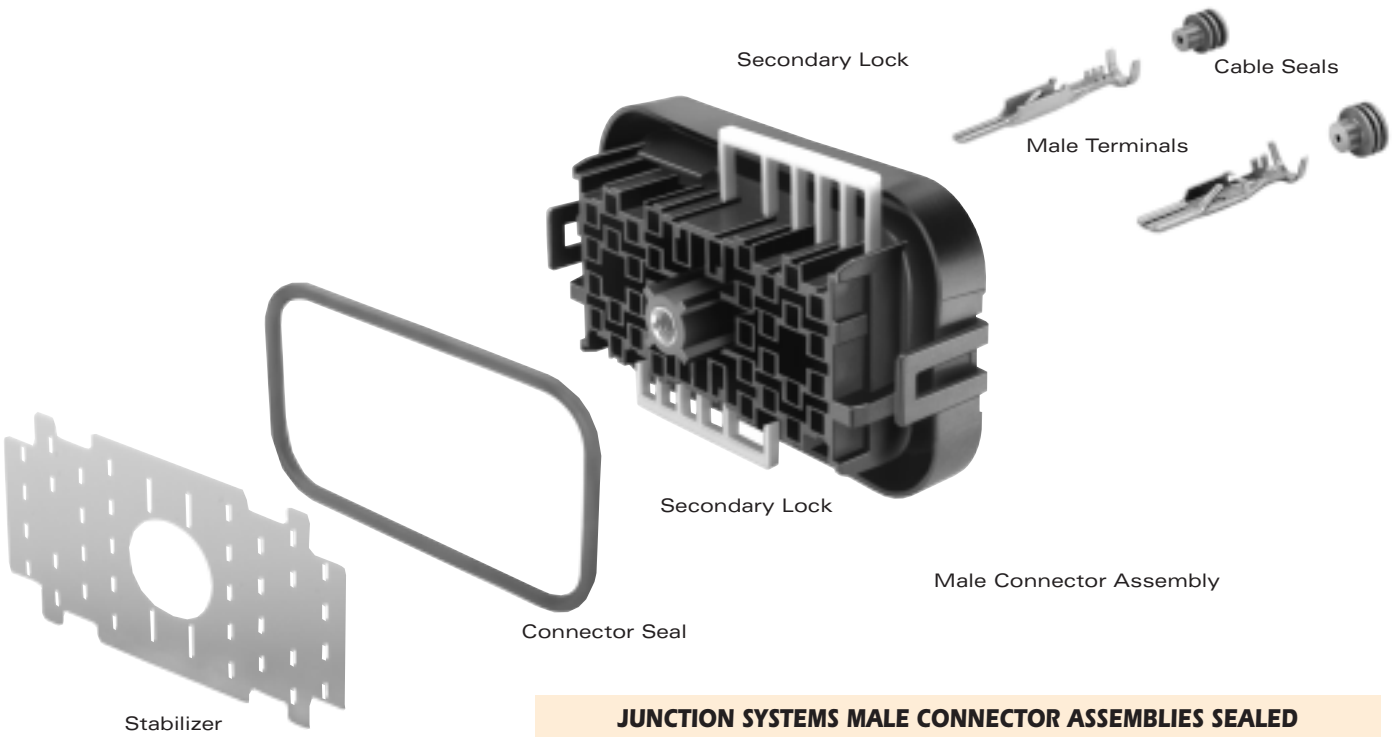
Male Sealed System



JUNCTION SYSTEMS MALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Conn. Asm.	Color	Material	Secondary Lock	Stabilizer	Shroud	Connector Seal
30	12160959	Black	PBT	12065848	–	12176538	12065849
36	12064839	Black	PBT	12064834	–	12066590	12064837
38	12191487	Dk. Gray	PA66 HS IM 14% GF	12129670	15317352	12161191	12129672
78	12176690	Black	PA66 HS 33% GF	12129213	12162573	12162527	–

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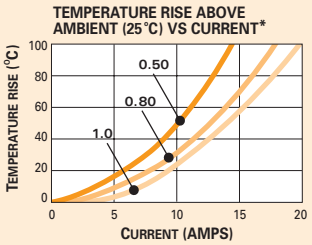
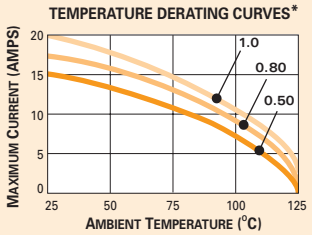
Sealed System Application Information

150 SERIES TERMINALS–Tin Plated

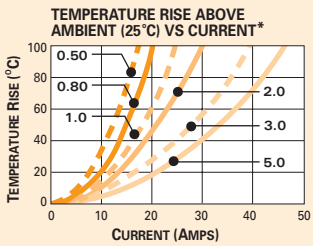


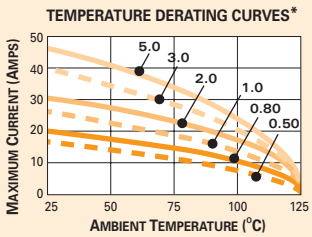


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated





CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

150 SERIES FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048074	1.0-0.80	Silicon Bronze	Tin
12084200	0.50-0.35	Silicon Bronze	Tin
12160223	1.0-0.80	Beryllium Copper	Silver/Nickel
12160222	0.50-0.35	Beryllium Copper	Silver/Nickel

280 SERIES FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12077413	5.0	Tin Brass	Tin
12129493	3.0-2.0	Tin Brass	Tin
12077411	1.0-0.80	Tin Brass	Tin
12084201	0.50-0.35	Tin Brass	Tin
12176387	5.0	Beryllium Copper	Silver/Nickel
12176388	3.0-2.0	Beryllium Copper	Silver/Nickel
12176389	1.0-0.80	Beryllium Copper	Silver/Nickel

480 SERIES FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052139	5.0-3.0	Tin Brass	Tin
12048451	2.0-1.0	Tin Brass	Tin
12048450	0.80-0.50	Tin Brass	Tin

630 SERIES FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052456	5.0-3.0	Tin Brass	Tin
12052455	2.0-1.0	Tin Brass	Tin
12052457	0.80-0.50	Tin Brass	Tin

TANGLESS

280 TANGLESS SERIES FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12110853	5.0-3.0	Tin Brass	Tin
12129409	2.0	Tin Brass	Tin
12110845*	3.0-2.0	Tin Brass	Tin
12110847*	1.0-0.80	Tin Brass	Tin
12110846*	0.50-0.35	Tin Brass	Tin

Use for Part No. 12191499 (Shown on Page 151)

* Thin Stock—Electrical current restrictions may apply, contact your regional support representative at the number listed below.

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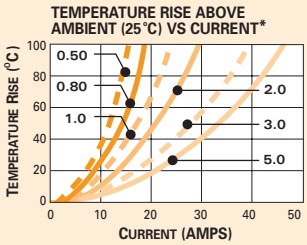
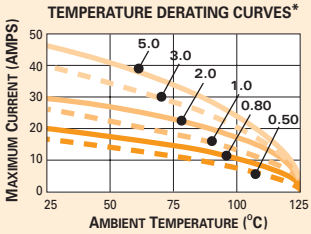
Sealed System Application Information

480 SERIES TERMINALS–Tin Plated

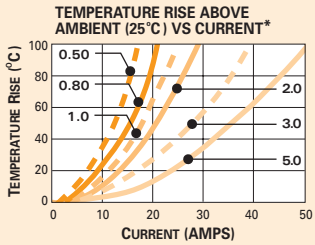


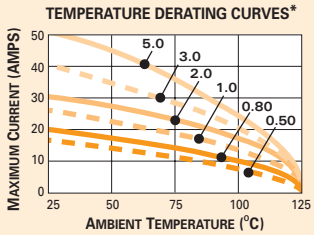


CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-42
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 4.8

630 SERIES TERMINALS–Tin Plated





CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-46
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 6.3

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

150 SERIES MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12045773	1.0-0.80	Tin Brass	Tin
12077628	0.50-0.35	Tin Brass	Tin

480 SERIES MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12052172	5.0	Tin Brass	Tin
12065197	3.0	Tin Brass	Tin
12065196	2.0-1.0	Tin Brass	Tin

280 SERIES MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048254	5.0	Tin Brass	Tin
12129497	3.0-2.0	Tin Brass	Tin
12048159	1.0-0.80	Tin Brass	Tin
12124977	0.50-0.35	Tin Brass	Tin

630 SERIES MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12064736	5.0	Tin Brass	Tin
12064737	3.0	Tin Brass	Tin
12064735	2.0-1.0	Tin Brass	Tin
12064734	0.80-0.50	Tin Brass	Tin

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Sealed System Cable Seals & Cavity Plugs

150 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12052924	12048086	2.85-2.03	Silicone	Dk. Red
12089442	12089678	2.15-1.60	Silicone	White
12052925	12048087	1.70-1.29	Silicone	Blue
12124669	12084193	1.009-0.995	Silicone	Tan

150 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059168	5.2mm	Silicone	Dk. Red

*Cavity plugs seal unused female and male cavitites.

280 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

280 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

*Cavity plugs seal unused female and male cavitites.

480 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12065703	12034170	5.16-4.40	Silicone	Orange
12052453	12048443	4.50-3.61	Silicone	Purple
12052452	12048442	3.75-2.81	Silicone	Red
12048433	12048441	2.85-2.01	Silicone	White
12052931	12052930	2.15-1.60	Silicone	Yellow
12162068	12162067	1.70-1.29	Silicone	Pink

480 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12066082	8.5mm	Silicone	Lt. Green

*Cavity plugs seal unused female and male cavitites.

630 METRI-PACK CABLE SEALS

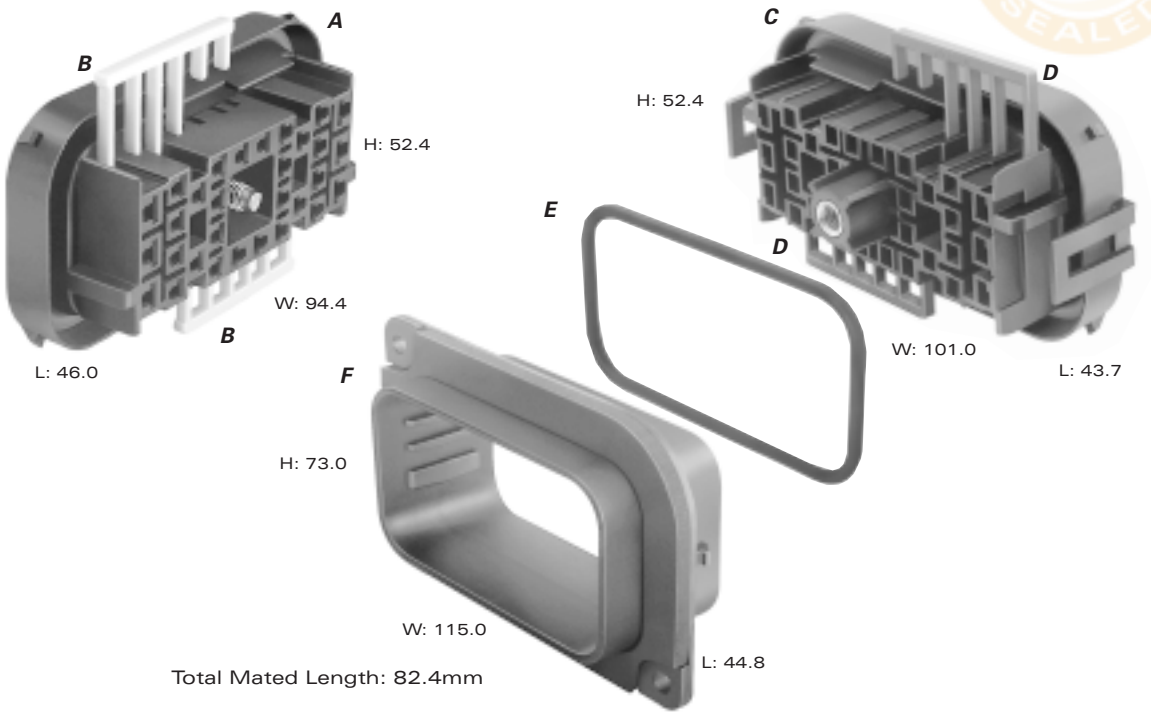
Reel Part #	Loose Part #	Cable Diameter	Material	Color
12059257	12052386	5.15-4.40	Silicone	Green
12059260	12052668	4.50-3.61	Silicone	Blue
12059258	12052387	3.75-2.81	Silicone	Lt. Gray
12059259	12052388	2.85-2.01	Silicone	Dk. Red
12077760	12077759	2.15-1.65	Silicone	Tan

630 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059255	9.8mm	Silicone	Lt. Green

*Cavity plugs seal unused female and male cavitites.

Downloaded from Arrow.com.



A PART NO: **12065850**
DESCRIPTION: Connector Assembly 30F
SIZE: 46.0L x 52.4H x 94.4W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 146
SEALS/PLUGS: See Page 148

B PART NO: **12066050**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

C PART NO: **12160959**
DESCRIPTION: Connector Assembly 30M
SIZE: 43.7L x 52.4H x 101.0W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 147
SEALS/PLUGS: See Page 148
NOTE: Wire dress cover 12066129 is available.

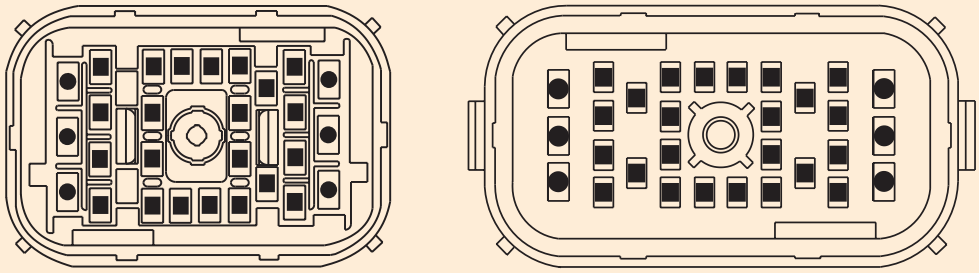
D PART NO: **12065848**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

E PART NO: **12065849**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

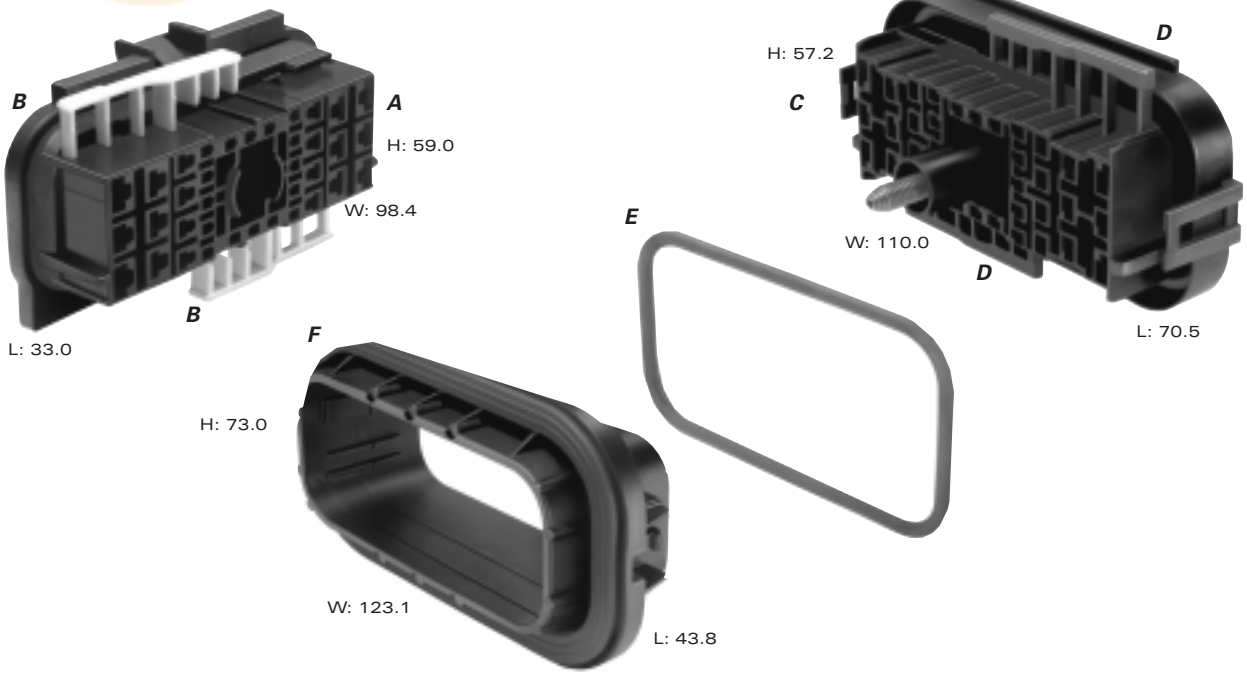
F PART NO: **12176538**
DESCRIPTION: Pass-Through Shroud
SIZE: 44.8L x 73.0H x 115.0W
COLOR: Black
MATERIAL: PBT 15% GF
NOTE: Body mount shroud 12065847 is available.

KEY:
■ 280 SERIES
● 480 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



Total Mated Length: 88.9mm

A PART NO: **12092491**
DESCRIPTION: Connector Assembly 36F **(Unsealed)**
SIZE: 33.0L x 59.0H x 98.4W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 138 for Unsealed terminals

B PART NO: **12064835**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

C PART NO: **12064839**
DESCRIPTION: Connector Assembly 36M
SIZE: 70.5L x 57.2H x 110.0W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 147
SEALS/PLUGS: See Page 148

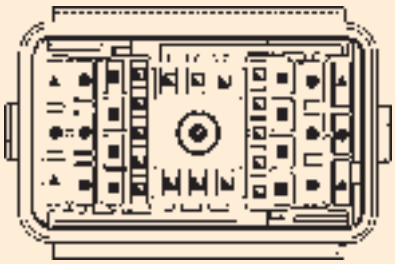
D PART NO: **12064834**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

E PART NO: **12064837**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

F PART NO: **12066590**
DESCRIPTION: Sliding Shroud
SIZE: 43.8L x 73.0H x 123.1W
COLOR: Black
MATERIAL: PBT 30% GF

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES
- ● 480 SERIES
- ▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



http://delphi.com/products/connect

North American Region	European Region	Asia Pacific Region	South American Region
1-800-PACKARD	49-202-291-2000	65-730-9900	55-12-378-2002

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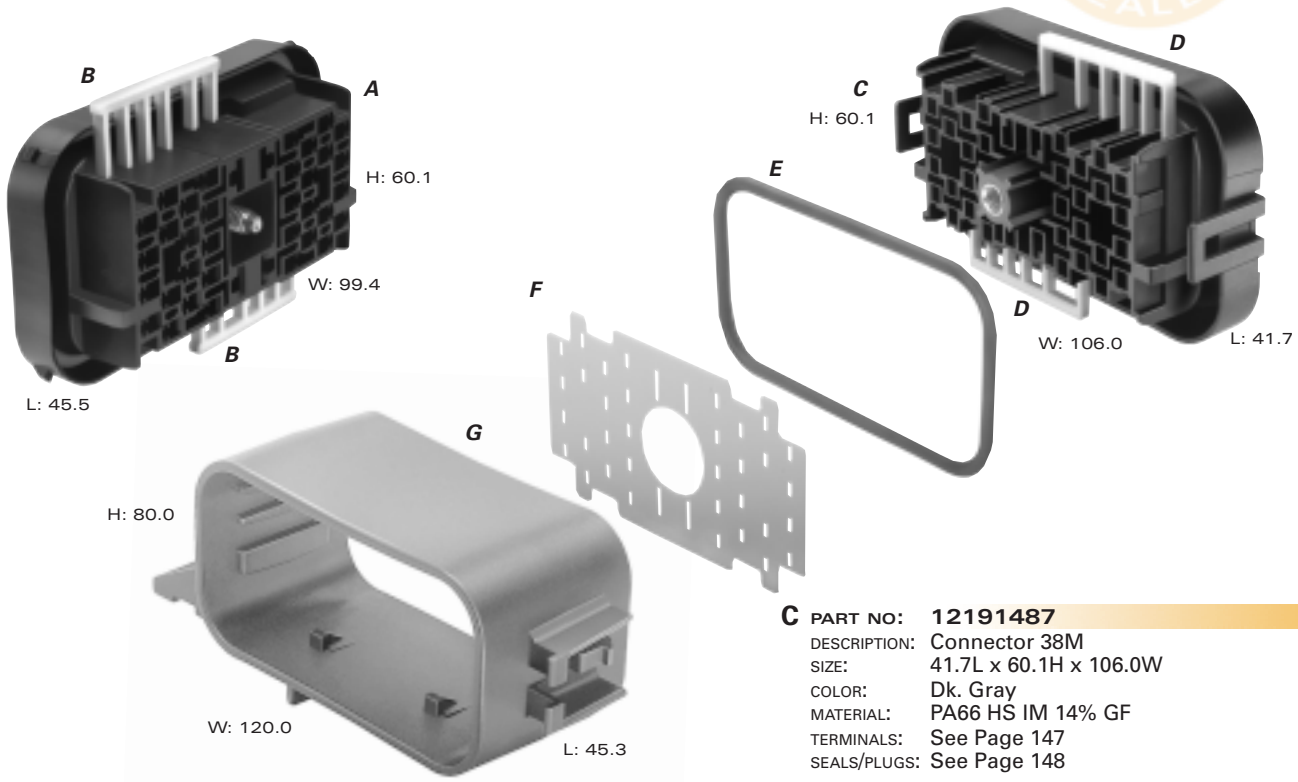


Total Mated Length: 85.3mm

A PART NO: **12191499**
DESCRIPTION: Connector Assembly 38F
SIZE: 45.5L x 60.1H x 99.4W
COLOR: Black
MATERIAL: PA66 15% GF & 25% MF
TERMINALS: See Page 146 - 280 Tangless
See Page 146 - 630 Series
SEALS/PLUGS: See Page 148

B PART NO: **12129669**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

C PART NO: **12191487**
DESCRIPTION: Connector 38M
SIZE: 41.7L x 60.1H x 106.0W
COLOR: Dk. Gray
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 147
SEALS/PLUGS: See Page 148

D PART NO: **12129670**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

E PART NO: **12129672**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

F PART NO: **15317352**
DESCRIPTION: Stabilizer
COLOR: Natural
MATERIAL: Mylar

G PART NO: **12161191**
DESCRIPTION: Pass-Through Shroud
SIZE: 45.3L x 80.0H x 120.0W
COLOR: Black
MATERIAL: PBT 15% GF
NOTE: Body mount shroud 12160809 is available.

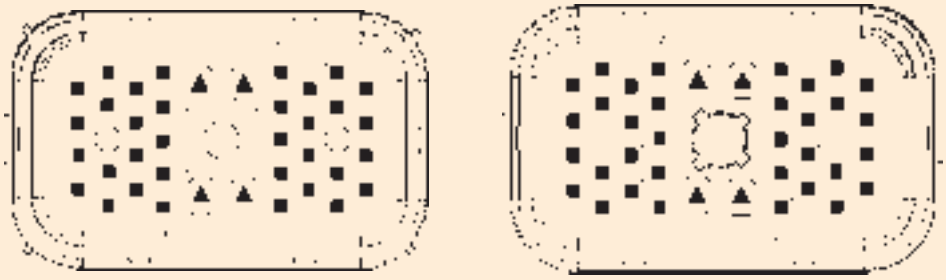
KEY:

TANGLESS

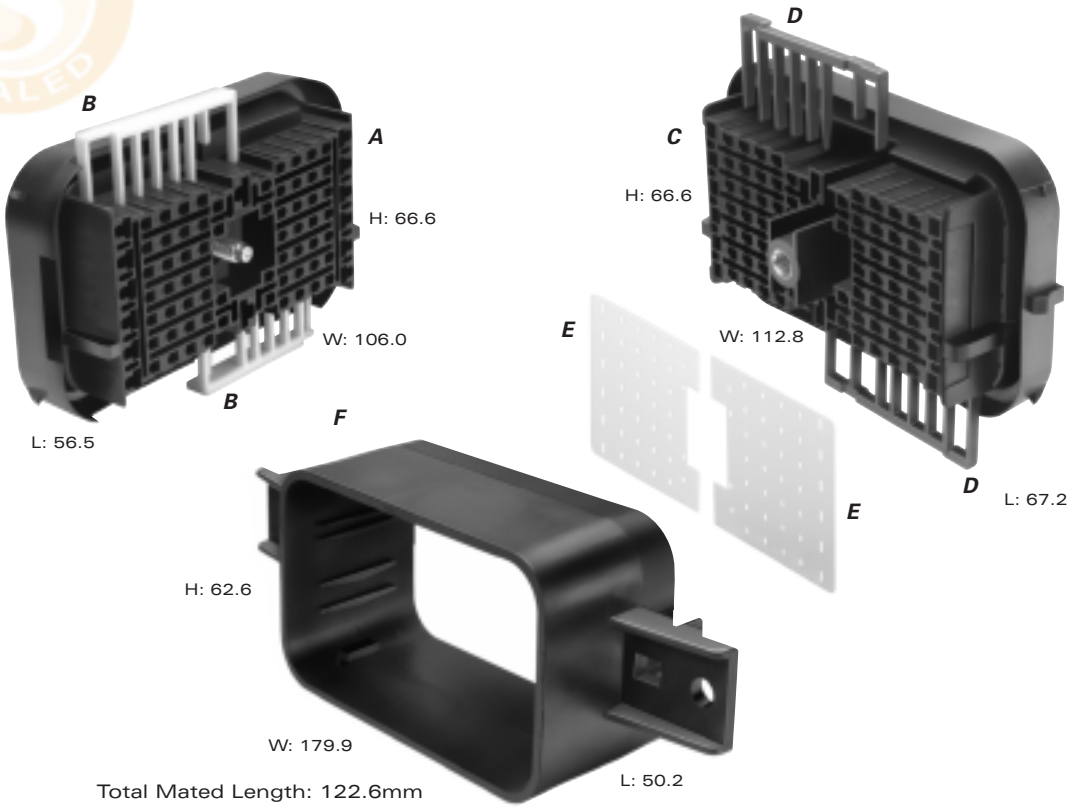
■ 280 SERIES

▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



Total Mated Length: 122.6mm

A PART NO: **12129206**
DESCRIPTION: Connector Assembly 78F
SIZE: 56.5L x 66.6H x 106.0W
COLOR: Black
MATERIAL: PA66 HS 33% GF
TERMINALS: See Page 146
SEALS/PLUGS: See Page 148

B PART NO: **12129214**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PBT

C PART NO: **12176690**
DESCRIPTION: Connector Assembly 78M
SIZE: 67.2L x 66.6H x 112.8W
COLOR: Black
MATERIAL: PA66 HS 33% GF
TERMINALS: See Page 147
SEALS/PLUGS: See Page 148

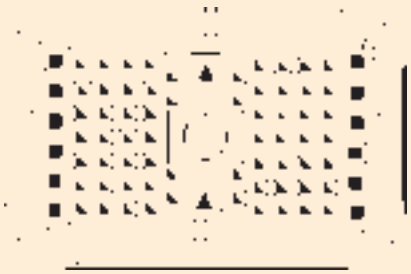
D PART NO: **12129213**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT

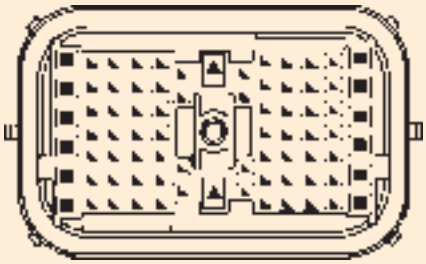
E PART NO: **12162573**
DESCRIPTION: Stabilizer
NUMBER REQ: 2
COLOR: Natural
MATERIAL: Mylar

F PART NO: **12162527**
DESCRIPTION: Sliding Shroud
SIZE: 50.2L x 62.6H x 179.9W
COLOR: Black
MATERIAL: PBT IM

KEY:
- ◹ 150 SERIES
- ■ 280 SERIES
- ▲ 630 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.





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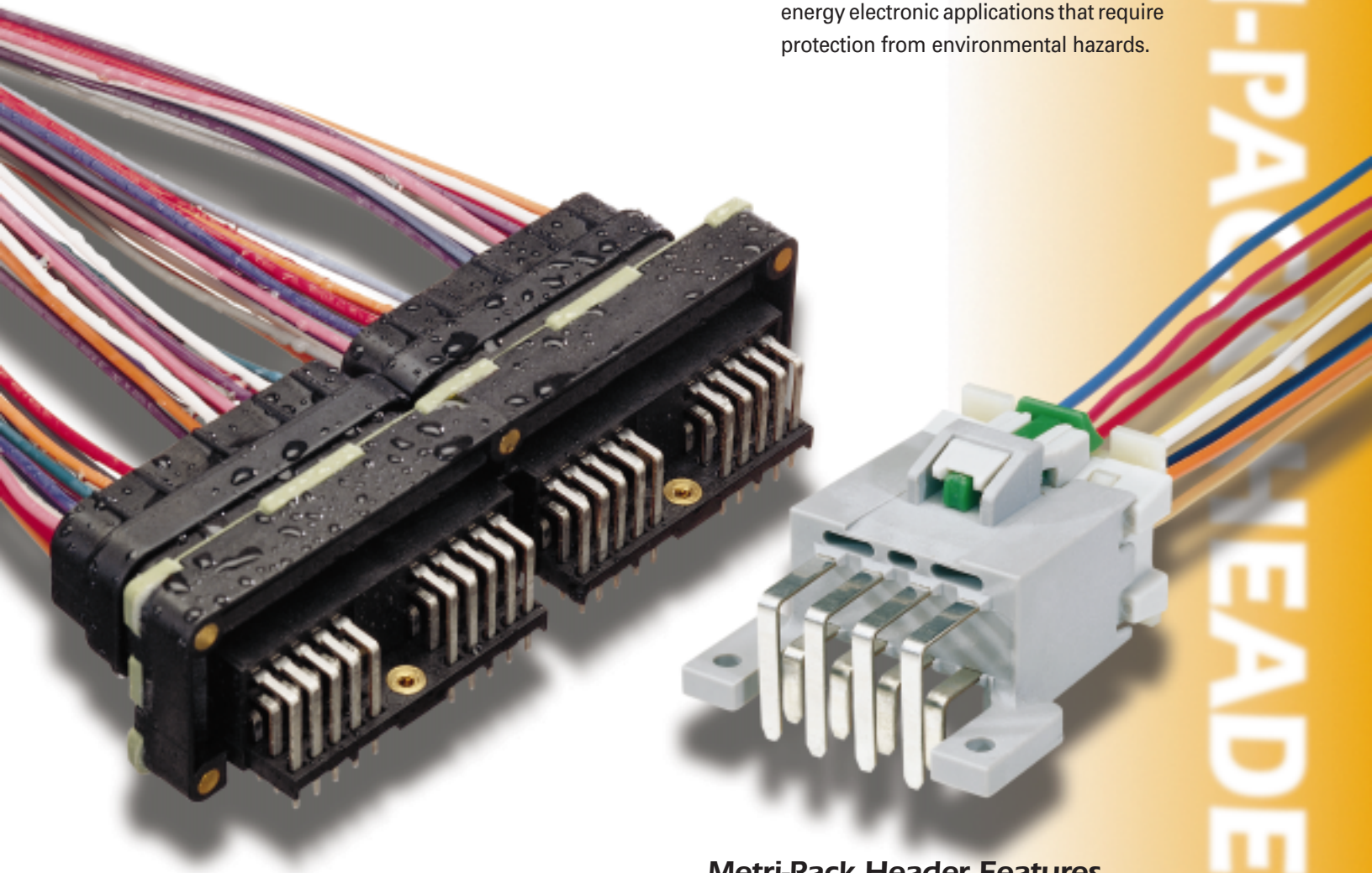
Metri-Pack Series Header

METRI-PACK SERIES HEADER

The Metri-Pack 280 Series unsealed electronic header is a versatile, and extremely rugged system designed to meet customer's power circuit needs. This system offers the combination of excellent low energy electronic circuits and power circuit capability in a single connection.

The Metri-Pack 150 Series sealed electronic header is a rugged system designed for severe underhood environments. This system offers the combination of excellent low energy electronic circuits and power circuit capability in a single connection.

Metri-Pack 150 Series sealed header systems are ideally suited for critical, low-energy electronic applications that require protection from environmental hazards.



Metri-Pack Header Features

- **Terminal Position Assurance (TPA)**
- **14 Amps continuous maximum current rating for 150 Metri-Pack Series**
- **30 Amps continuous maximum current rating for 280 Metri-Pack Series**
- **Low energy, low voltage capability**
- **Small overall dimensions**
- **Bolt assist connector to connector lock**
- **-40°C to 125°C temperature range**

METRI-PACK HEADER

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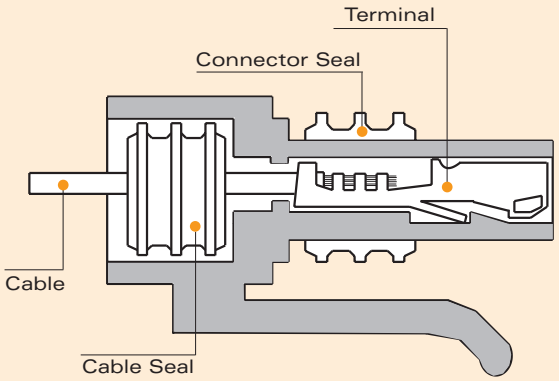
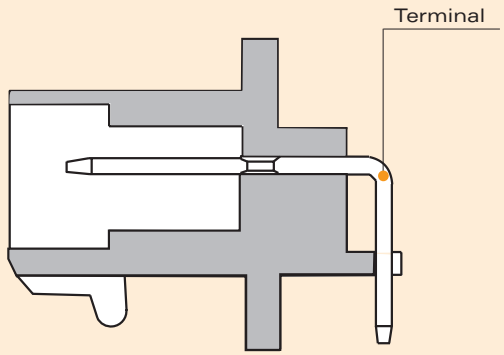
•150 HEADER

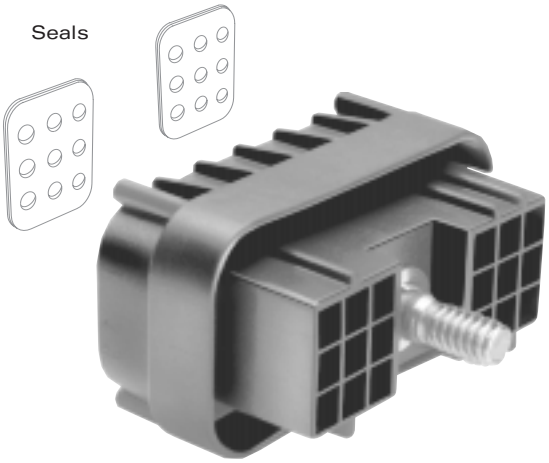
Cross Sectional View



Female Connector Assembly



Male Header Connector Assembly



Female Connector Assembly

Female Terminal

150 PULL-TO-SEAT FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12089290	0.50-0.35	Silicon Bronze	Tin
12103881	1.0-0.80	Silicon Bronze	Tin
12110236	0.80	Beryllium Copper	Tin

150 METRI-PACK FEMALE CONNECTOR ASSEMBLIES SEALED*

# Cavities	Connector Assembly	Color	Material
18way: 18	12040921	Black	PBT 30% GF
30way: 30	12048455	Dk. Gray	PET 30% GF
48way: 18	12040921	Black	PBT 30% GF
: 30	12034398	Black	PET 30% GF
60way: 30	12034398	Black	PET 30% GF
: 30	12034400	Black	PET 30% GF

*Multiple cable seal is included in connector assembly.

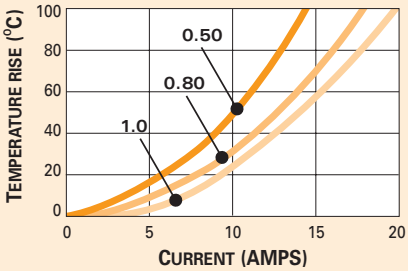
Downloaded from Arrow.com.

Sealed System Application Information

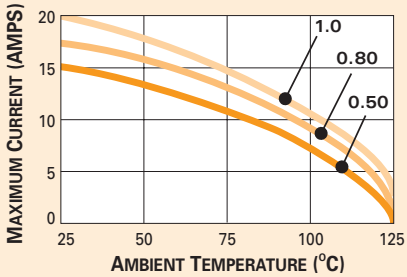
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-14
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <10mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Header
Connector Assembly

12065266

12034413

150 METRI-PACK MALE HEADER CONNECTOR ASSEMBLIES SEALED

Pins	Connector	Color	Material
18	12040923	Black	PET 30% GF
30	12048453	Dk. Gray	PET 30% GF
48	12052130	Black	PET 30% GF
60	12034396	Black	PET 30% GF

Terminals Included in Male Header.

CABLE SEAL PLUGS

Part #	Cable Seal Hole Diameter (mm)	Material	Color	Type
12065266	1.85-1.65	PA6	Md. Gray	Machine Insertion
12034413	1.85-1.10	PA66 HS IM	Black	Hand Insertion

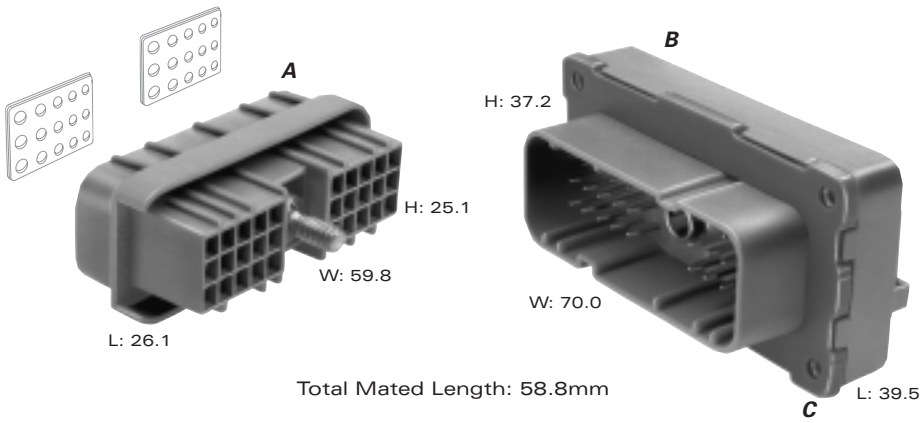
SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Overall mated length varies with bolt measurement.
- Inner connector seal included in Male Header Connector Assemblies where applicable.

Downloaded from Arrow.com.

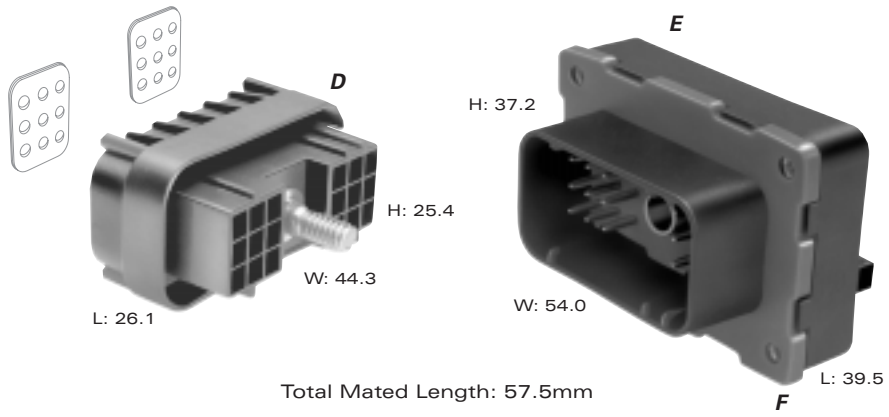
•150 HEADER



A PART NO: **12048455**
DESCRIPTION: Connector Assembly 30F
SIZE: 26.1L x 25.1H x 59.8W
COLOR: Dk. Gray
MATERIAL: PET 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

B PART NO: **12048453**
DESCRIPTION: Connector Assembly 30M
SIZE: 39.5L x 37.2H x 70.0W
COLOR: Dk. Gray
MATERIAL: PET 30% GF
NOTE: Shipping cover 12040542 included.

C PART NO: **12048456**
DESCRIPTION: Flange Seal
COLOR: Green
MATERIAL: Silicone



D PART NO: **12040921**
DESCRIPTION: Connector Assembly 18F
SIZE: 26.1L x 25.4H x 44.3W
COLOR: Black
MATERIAL: PBT 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

E PART NO: **12040923**
DESCRIPTION: Connector Assembly 18M
SIZE: 39.5L x 37.2H x 54.0W
COLOR: Black
MATERIAL: PET 30% GF
NOTE: Shipping cover 12040940 included.

F PART NO: **12040938**
DESCRIPTION: Flange Seal
COLOR: Green
MATERIAL: Silicone

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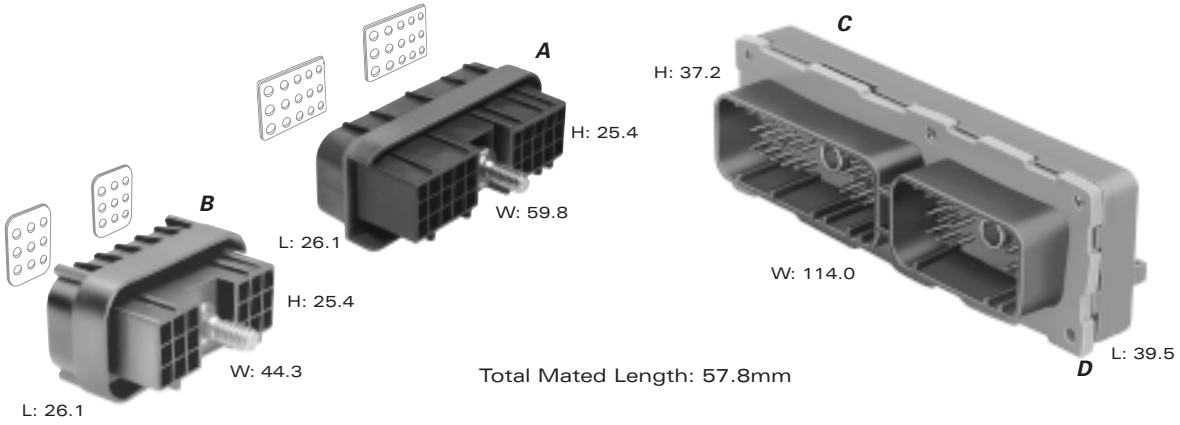

Total Mated Length: 57.8mm

A
PART NO: 12034398
DESCRIPTION: Connector Assembly 30F
SIZE: 26.1L x 25.4H x 59.8W
COLOR: Black
MATERIAL: PET 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

B
PART NO: 12040921
DESCRIPTION: Connector Assembly 18F
SIZE: 26.1L x 25.4H x 44.3W
COLOR: Black
MATERIAL: PBT 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

C
PART NO: 12052130
DESCRIPTION: Connector Assembly 48M
SIZE: 39.5L x 37.2H x 114.0W
COLOR: Black
MATERIAL: PET 30% GF
NOTE: Shipping covers 12040940 and 12040542 included.

D
PART NO: 12052131
DESCRIPTION: Flange Seal
COLOR: Green
MATERIAL: Silicone

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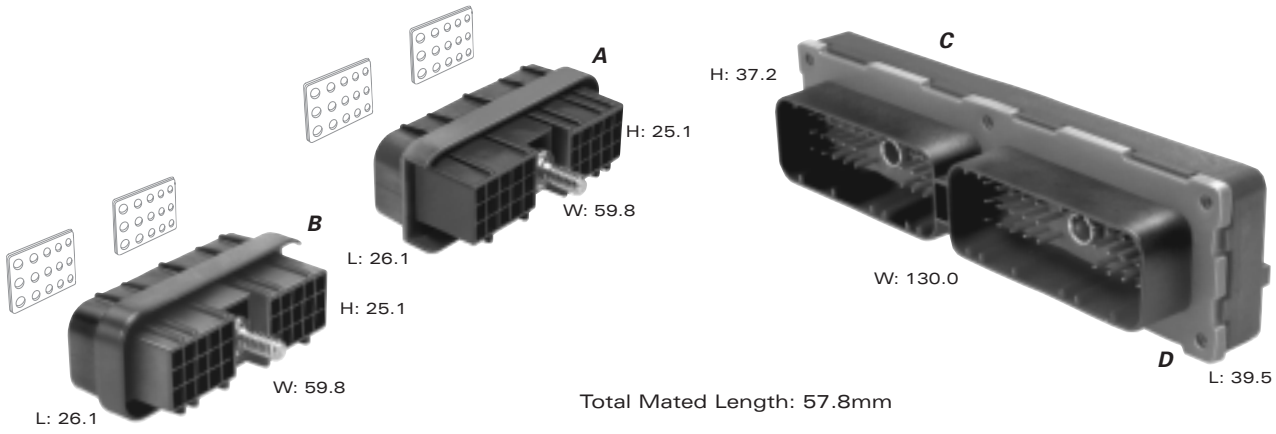
•150 HEADER



Total Mated Length: 57.8mm

A
PART NO: 12034398
DESCRIPTION: Connector Assembly 30F
SIZE: 26.1L x 25.1H x 59.8W
COLOR: Black
MATERIAL: PET 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

B
PART NO: 12034400
DESCRIPTION: Connector Assembly 30F
SIZE: 26.1L x 25.1H x 59.8W
COLOR: Black
MATERIAL: PET 30% GF
TERMINALS: See Page 154, 150 Pull-To-Seat Female
PLUGS: See Page 155, Cable Seal Plugs

C
PART NO: 12034396
DESCRIPTION: Connector Assembly 60M
SIZE: 39.5L x 37.2H x 130.0W
COLOR: Black
MATERIAL: PET 30% GF
NOTE: Shipping cover 12040542 (2 Req'd.) included

D
PART NO: 12040780
DESCRIPTION: Flange Seal
COLOR: Green
MATERIAL: Silicone

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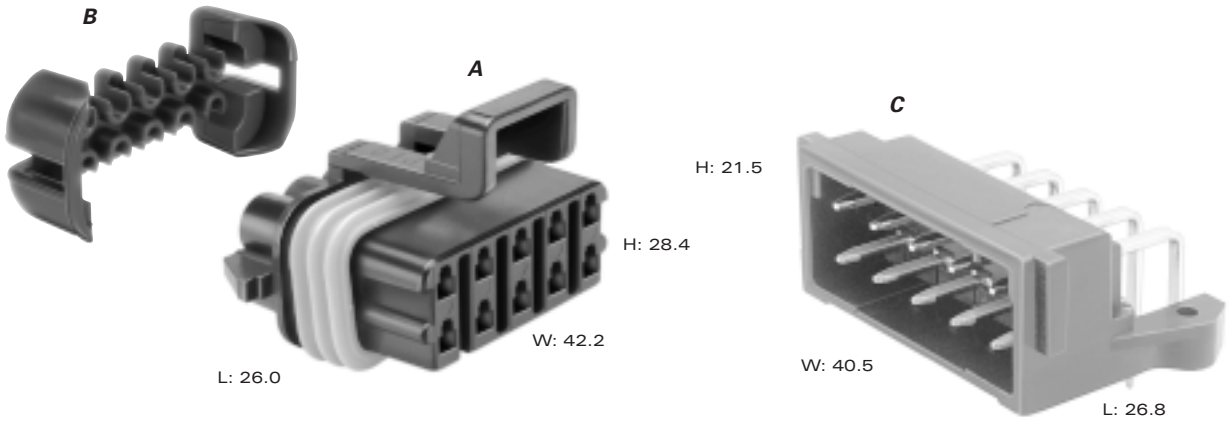

Total Mated Length: 46.7mm

A PART NO: **12065425**
DESCRIPTION: Connector Assembly 10F
SIZE: 26.0L x 28.4H x 42.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See below, 150 Female Push to Seat
SEALS/PLUGS: See below, 150 Metri-Pack

B PART NO: **12124264**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PA6

C PART NO: **12160446**
DESCRIPTION: Connector Assembly 10M
SIZE: 26.8L x 21.5H x 40.5W
COLOR: Black
MATERIAL: PBT 30% GF
NOTE: Sealing Shroud and Locking Feature for Connector Assembly must be designed into mating device housing.

150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12048074	1.0-0.80	Silicon Bronze	Tin
12084200	0.50-0.35	Silicon Bronze	Tin
12160223	1.0-0.80	Beryllium Copper	Silver/Nickel
12160222	0.50-0.35	Beryllium Copper	Silver/Nickel

150 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059168	5.2mm	Silicone	Dk. Red

*Cavity plugs seal unused female and male cavities.

150 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12052924	12048086	2.85-2.03	Silicone	Dk. Red
12089442	12089678	2.15-1.60	Silicone	White
12052925	12048087	1.70-1.29	Silicone	Blue
12124669	12084193	1.009-0.995	Silicone	Tan

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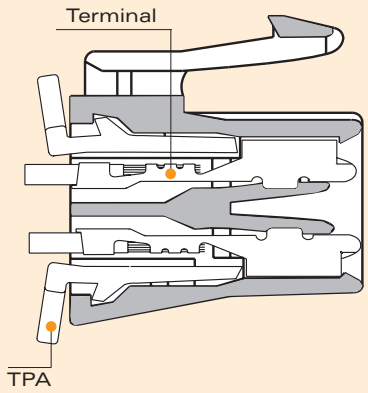
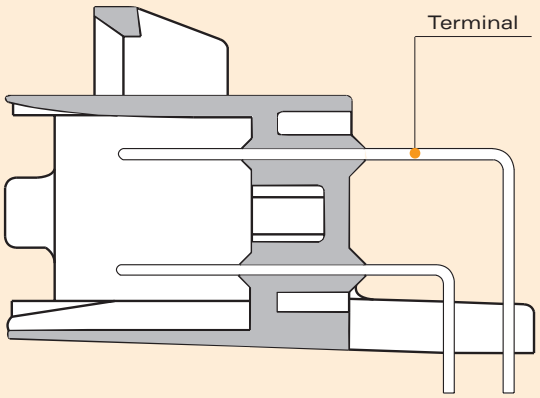
• 280 HEADER

UNSEALED

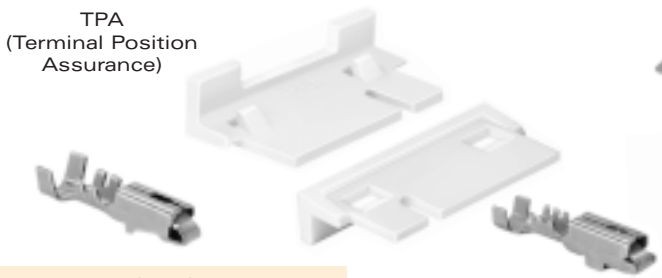
Cross Sectional View



Female Connector



Male Header Connector Assembly



Female Terminal

Female Connector

TANGLESS

280 TANGLESS FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12129425	5.0	Tin Brass	Tin
12129663	3.0	Tin Brass	Tin
12129424	2.0-1.0	Tin Brass	Tin
12110842*	3.0-2.0	Tin Brass	Tin
12110844*	1.0-0.80	Tin Brass	Tin
12110843*	0.50-0.35	Tin Brass	Tin
12129061*	0.35 (2 Req'd.)	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions apply, contact your regional support representative at the number listed below.

280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12015858	5.0	Tin Brass	Tin
12129494	3.0-2.0	Tin Brass	Tin
12034046	1.0-0.80	Tin Brass	Tin
12052217	0.50-0.35	Tin Brass	Tin
12162597*	3.0-2.0	Tin Brass	Tin
12162595*	1.0-0.80	Tin Brass	Tin
12162596*	0.50-0.35	Tin Brass	Tin

***Thin Stock**—Electrical current restrictions apply, contact your regional support representative at the number listed below.

280 METRI-PACK FEMALE CONNECTOR UNSEALED

# Cavities	Connector	Color	Material	TPA
4	12052856	Black	PA66 HS IM	15324456

TANGLESS

280 METRI-PACK FLEXLOCK FEMALE CONNECTOR UNSEALED

# Cavities	Connector	Color	Material	TPA
8	15357040	Lt. Gray	PA66 HS IM	15324332

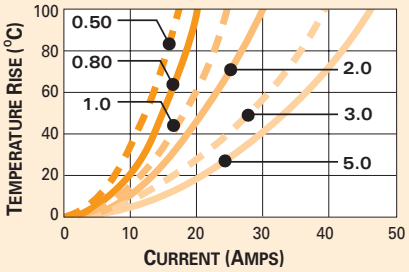
Downloaded from Arrow.com.

Unsealed System Application Information

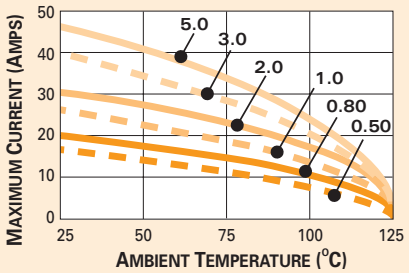
CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 6.9
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

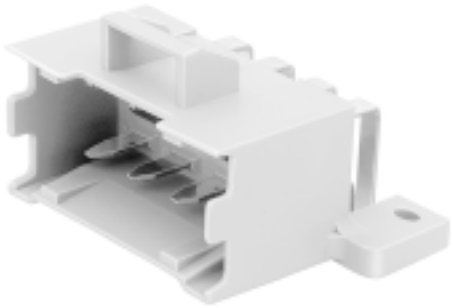
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



Male Header Connector Assembly

280 METRI-PACK MALE HEADER CONNECTOR ASSEMBLY UNSEALED

Pins	Connector	Color	Material
4	12110440	Black	PA66 HS IM

TANGLESS

280 METRI-PACK MALE HEADER CONNECTOR ASSEMBLY UNSEALED

Pins	Connector	Color	Material
8	12146724	Gray	PBT 30% GF

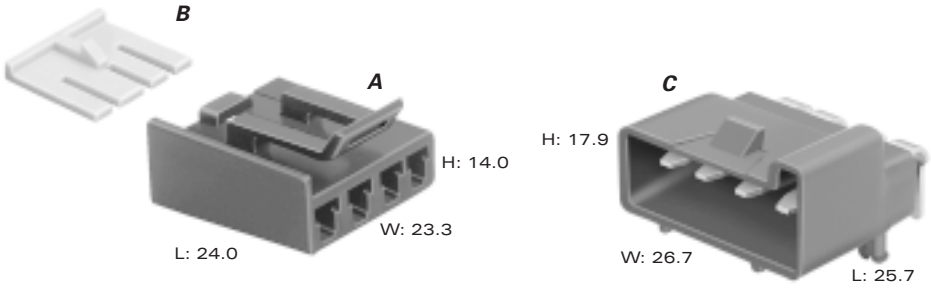
SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

Downloaded from Arrow.com.

280 Header

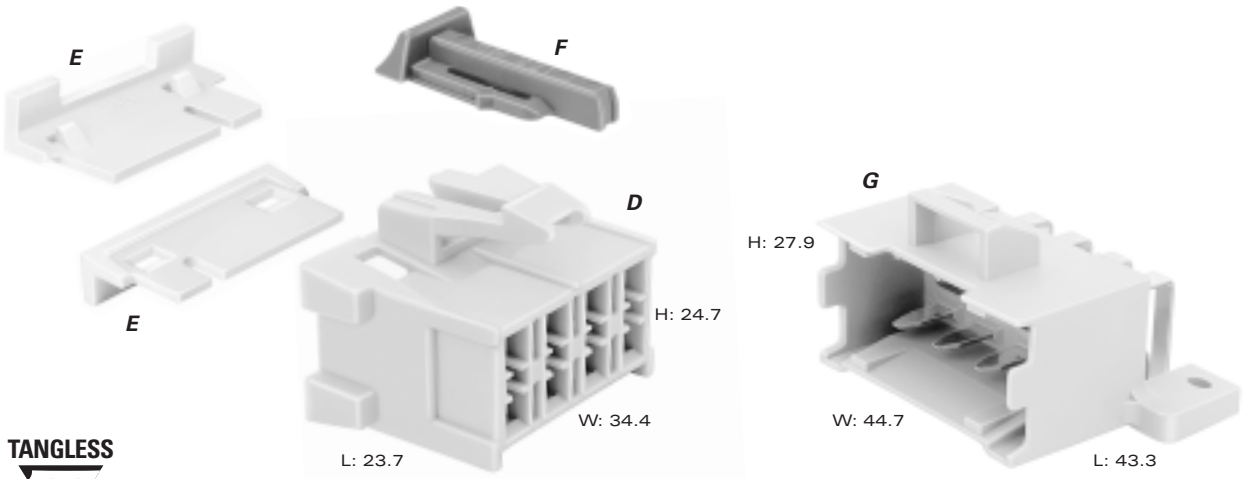


Total Mated Length: 40.4mm

A PART NO: **12052856**
DESCRIPTION: Connector 4F
SIZE: 24.0L x 14.0H x 23.3W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 160, 280 Female

B PART NO: **15324456**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

C PART NO: **12110440**
DESCRIPTION: Connector 4M
SIZE: 25.7L x 17.9H x 26.7W
COLOR: Black
MATERIAL: PA66 HS IM



TANGLESS

Total Mated Length: 50.8mm

D PART NO: **15357040 (Lt. Gray)**
12129088 (Black)
DESCRIPTION: Connector 8F
SIZE: 23.7L x 24.7H x 34.4W
MATERIAL: PA66 HS IM
TERMINALS: See Page 160, 280 Tangless Female

E PART NO: **15324332**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PA66 HS IM

F PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

G PART NO: **12146724 (Gray)**
12146735 (Black)
DESCRIPTION: Connector 8M
SIZE: 43.3L x 27.9H x 44.7W
MATERIAL: PBT 30% GF

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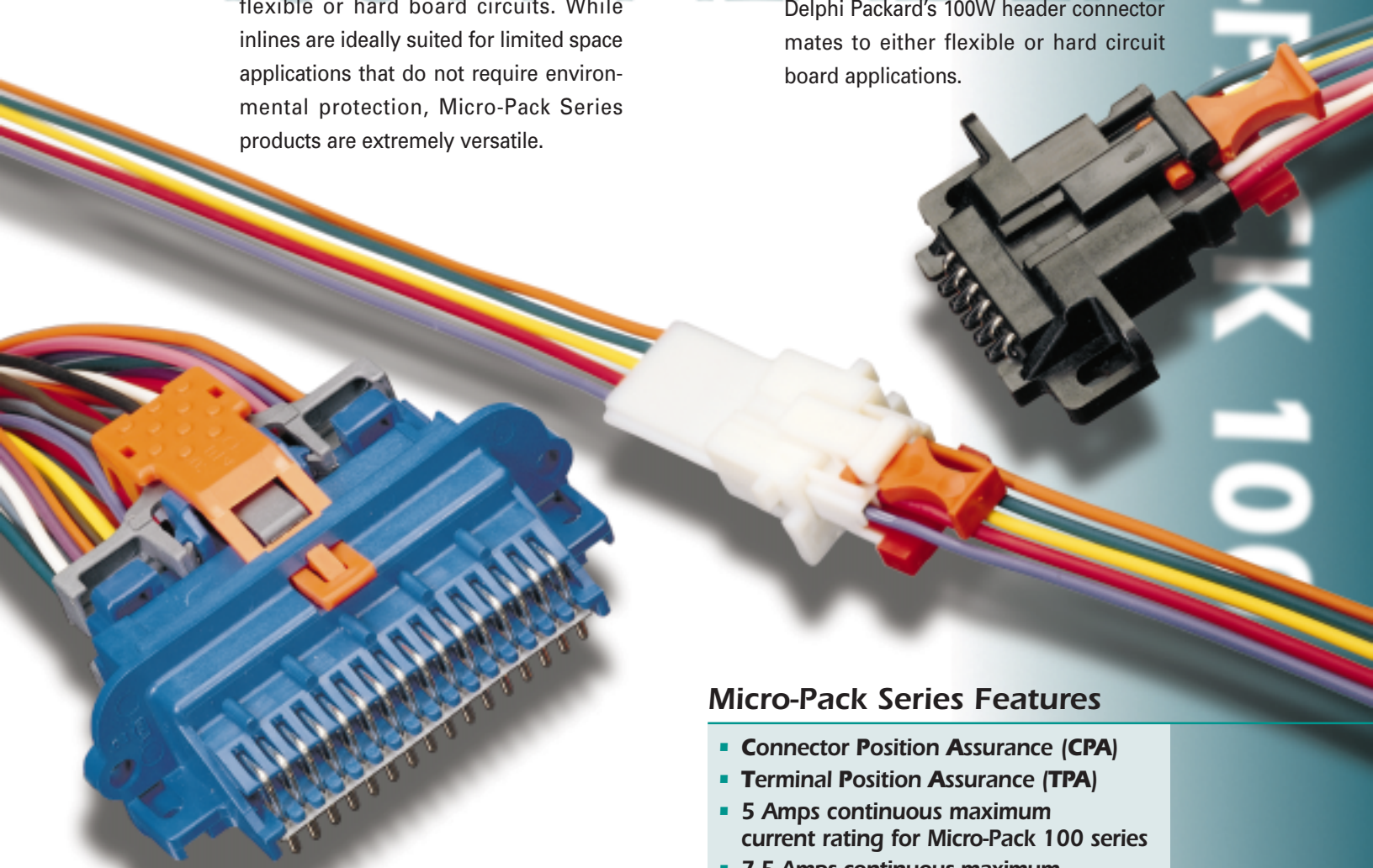
Micro-Pack Series

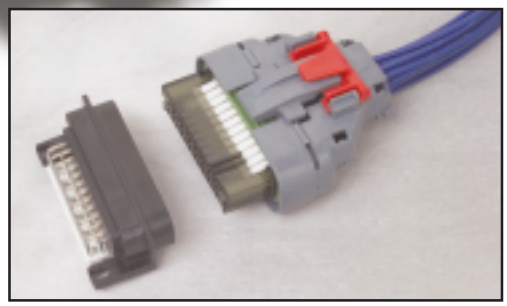
100 In-Line, 100 Header & 100W Header

Available in electronic header and in-line connections, Micro-Pack Series connector is an excellent low energy system designed to meet the needs of high density applications.

Header connectors are available in straight, 90°, and 180° mounting to either flexible or hard board circuits. While inlines are ideally suited for limited space applications that do not require environmental protection, Micro-Pack Series products are extremely versatile.

The 100W series is available in both electronic header and in-line connection systems. This Micro-Pack series connection is an excellent low energy system designed to meet the needs of high density applications, requiring protection from environmental hazards. Delphi Packard's 100W header connector mates to either flexible or hard circuit board applications.



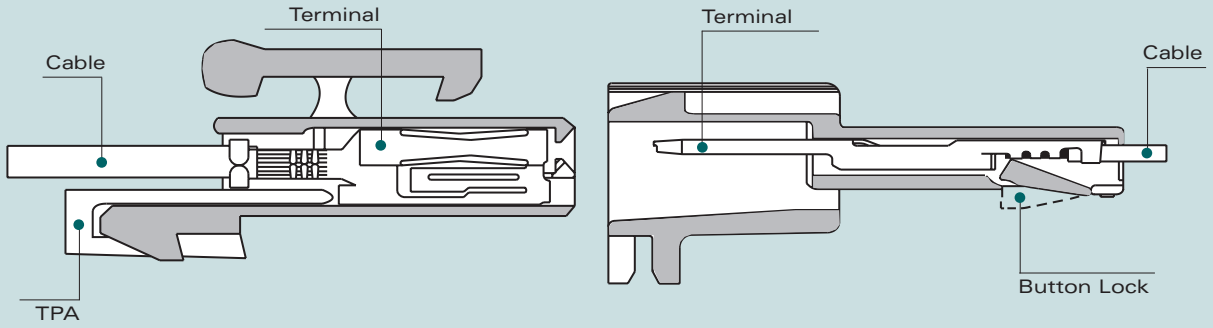


Micro-Pack Series Features

- **Connector Position Assurance (CPA)**
- **Terminal Position Assurance (TPA)**
- **5 Amps continuous maximum current rating for Micro-Pack 100 series**
- **7.5 Amps continuous maximum current rating for Micro-Pack 100W series**
- **Small overall dimensions**
- **High circuit density**
- **Low energy, low voltage capability**
- **-40°C to 85°C temperature range for Micro-Pack 100 series**
- **-40°C to 125°C temperature range for Micro-Pack 100W series**

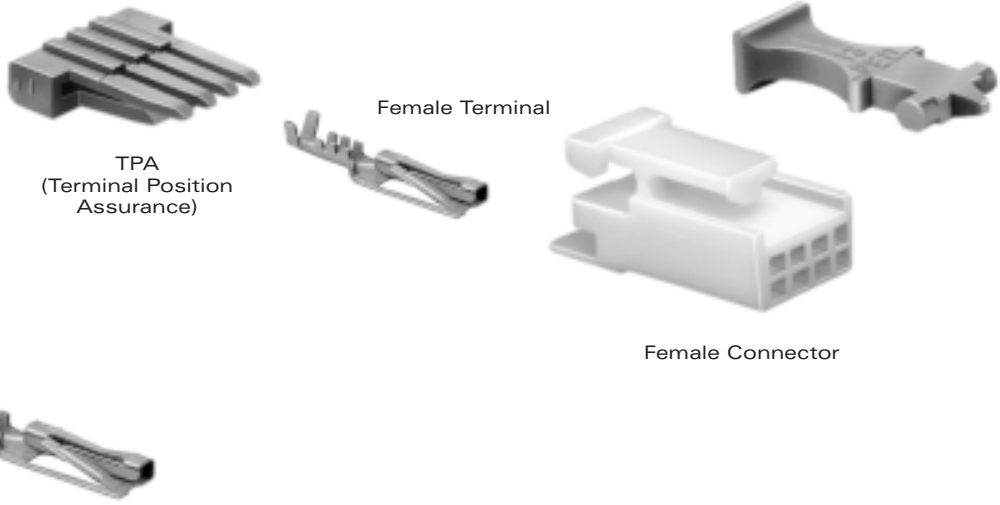
Downloaded from Arrow.com.

Cross Sectional View



Female Connector

Male Connector



MICRO-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12146448	1.0-0.80	Copper Nickel Alloy	Tin
12146447	0.50-0.35	Copper Nickel Alloy	Tin

MICRO-PACK FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
4	12066189	Natural	PBT	12059160
5	12064982	Black	PBT	12064987
7	12065873	Black	PBT	12065943
9	12064980	Black	PBT	12064986
10	12047531	Black	PA66 HS IM	Button Lock

Downloaded from Arrow.com.

Unsealed System Application Information

CABLE RANGE (mm²): 0.35-1.0

CURRENT RANGE (AMPS): 0-5

TEMP RANGE °C: ..... -40 to 85

RESISTANCE: ..... <10mΩ@20mV

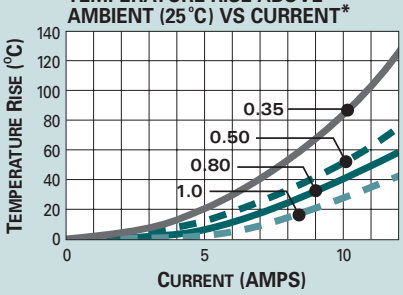
VOLTAGE DROP: ..... <10.0mV/amp

CENTERLINE SPACING (mm): 3.0

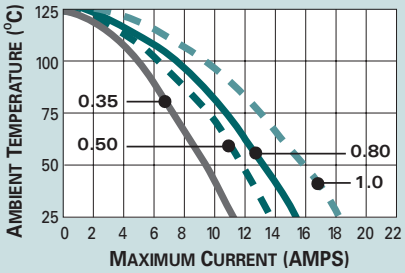
TERMINAL DIAMETER (mm): 1.0

MICRO-PACK 100 TERMINALS–Tin Plated

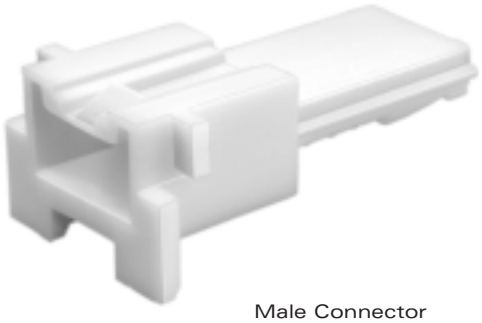
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



Male Connector

Male Terminal

MICRO-PACK MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA
4	12040903	Natural	PBT	Button Lock
5	12047829	Black	PBT	Button Lock
7	12065874	Black	PBT	Button Lock
9	12040905	Black	PBT	Button Lock
10	12047814	Black	PBT	Button Lock

MICRO-PACK MALE TERMINALS UNSEALED

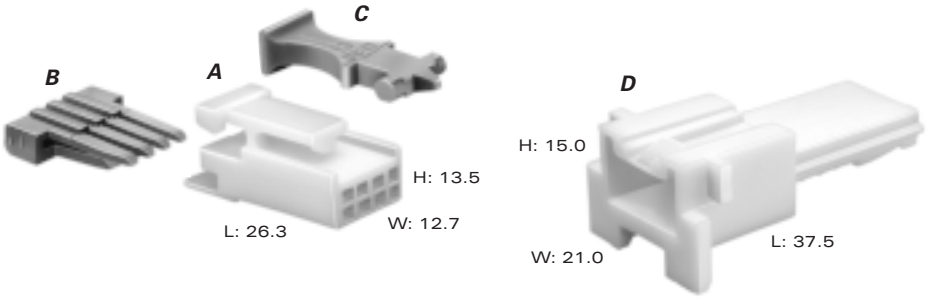
Part #	Cable Range (mm²)	Material	Plating
12084449	0.80-0.50	Tin Brass	Tin
12040902	0.50-0.35	Tin Brass	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.

Downloaded from Arrow.com.



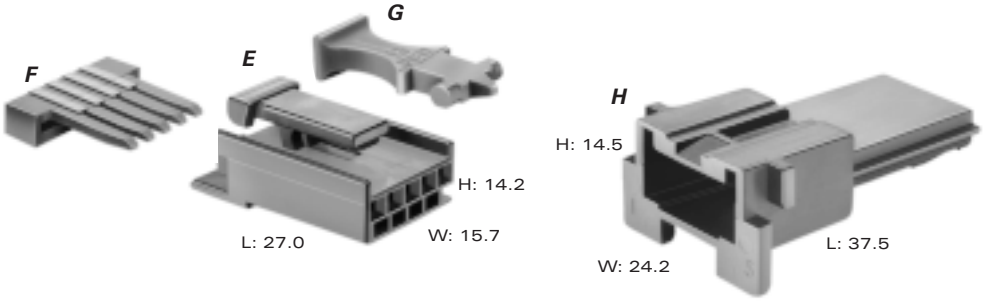
Total Mated Length: 50.9mm

A PART NO: **12066189**
DESCRIPTION: Connector 4F
SIZE: 26.3L x 13.5H x 12.7W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 164

B PART NO: **12059160**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

C PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

D PART NO: **12040903**
DESCRIPTION: Connector 4M - with Button Lock
SIZE: 37.5L x 15.0H x 21.0W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 165



Total Mated Length: 53.0mm

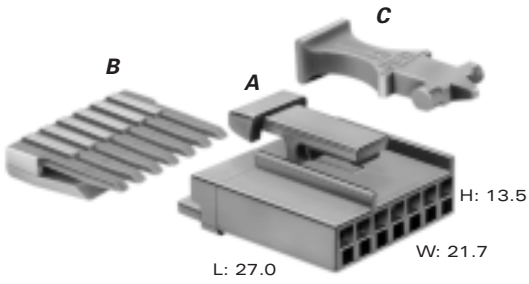
E PART NO: **12064982 (Black)**
12064983 (Natural)
DESCRIPTION: Connector 5F
SIZE: 27.0L x 14.2H x 15.7W
MATERIAL: PBT
TERMINALS: See Page 164

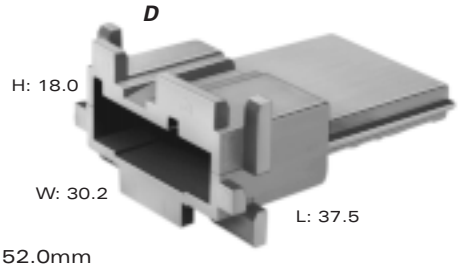
F PART NO: **12064987**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

G PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

H PART NO: **12047829 (Black)**
12047815 (Natural)
DESCRIPTION: Connector 5M - with Button Lock
SIZE: 37.5L x 14.5H x 24.2W
MATERIAL: PBT
TERMINALS: See Page 165

Downloaded from Arrow.com.





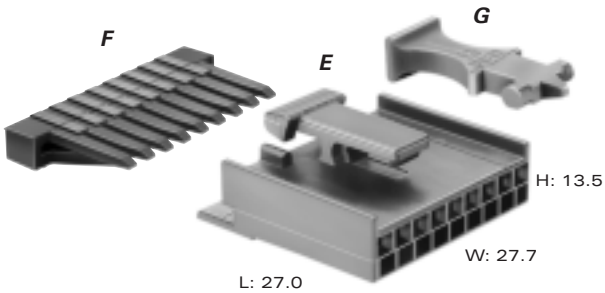
Total Mated Length: 52.0mm

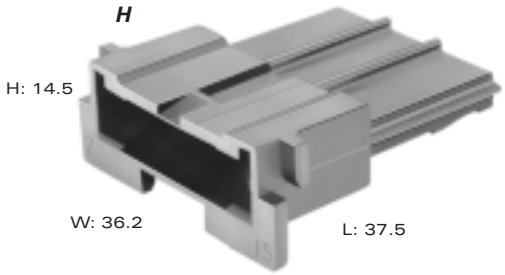
A PART NO: **12065873**
DESCRIPTION: Connector 7F
SIZE: 27.0L x 13.5H x 21.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 164

B PART NO: **12065943**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

C PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

D PART NO: **12065874**
DESCRIPTION: Connector 7M - with Button Lock
SIZE: 37.5L x 18.0H x 30.2W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 165





Total Mated Length: 52.0mm

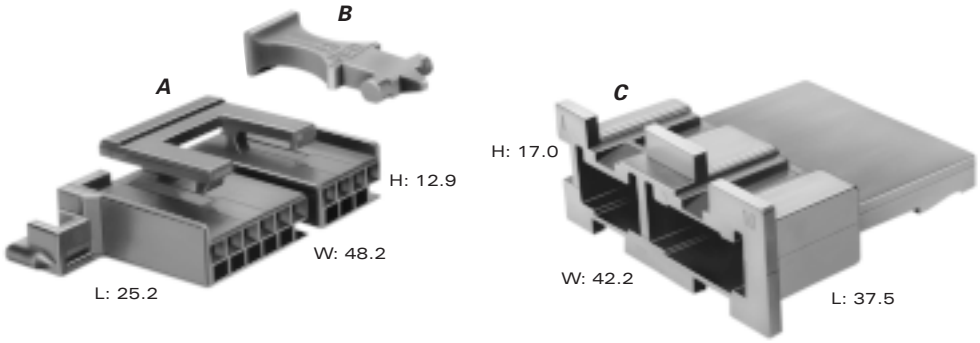
E PART NO: **12064980**
DESCRIPTION: Connector 9F
SIZE: 27.0L x 13.5H x 27.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 164

F PART NO: **12064986**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

G PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

H PART NO: **12040905**
DESCRIPTION: Connector 9M - with Button Lock
SIZE: 37.5L x 14.5H x 36.2W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 165

Downloaded from Arrow.com.



Total Mated Length: 48.0mm

A PART NO: **12047531**
DESCRIPTION: Connector 10F - with Button Lock
SIZE: 25.2L x 12.9H x 48.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 164

B PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

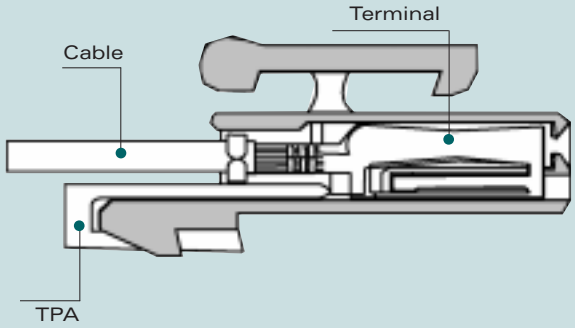
C PART NO: **12047814**
DESCRIPTION: Connector 10M - with Button Lock
SIZE: 37.5L x 17.0H x 42.2W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 165

Downloaded from Arrow.com.

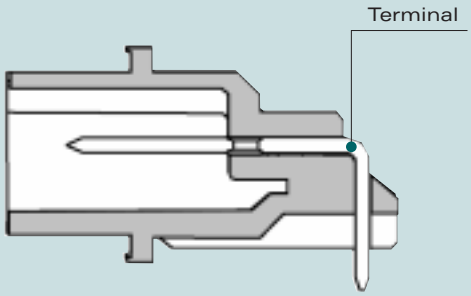
Downloaded from Arrow.com.

.100 HEADER

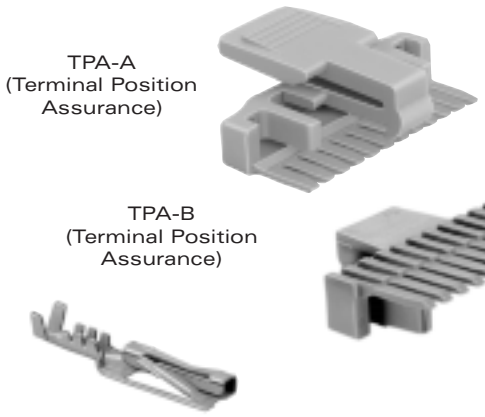
Cross Sectional View

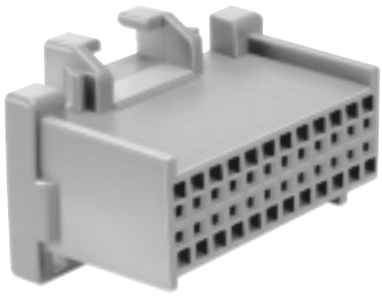


Female Connector



Male Header Connector Assembly





Female Connector

MICRO-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12146448	1.0-0.80	Copper Nickel Alloy	Tin
12146447	0.50-0.35	Copper Nickel Alloy	Tin

Nickel/Gold plating available.

MICRO-PACK FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	TPA-A	TPA-B
6way: 6	12064993	Black	PBT	12066170	–
10way: 4	12066189	Natural	PBT	12059160	–
: 6	12064993	Black	PBT	12066170	–
12way:12	12064799	Black	PBT 30% GF	12064822	12064823
13way: 4	12066189	Natural	PBT	12059160	–
: 9	12066130	Natural	PBT	12064986	–
15way: 6	12064978	Gray	PBT	12066170	–
: 9	12064980	Black	PBT	12064986	–
16way :16	12110259	Green	PBT 30% GF	12048344	12048345
20way: 10	12047531	Black	PA66 HS IM	Button Lock	–
: 10	12065785	Gray	PBT	Button Lock	–
24way: 24	12110088	Lt. Gray	PBT 30% GF	12047900	12047901
32way: 32	12110113	Dk. Red	PBT 30% GF	12045889	12045890
32way: 32	12110207	Lt. Blue	PBT 30% GF	12045889	12045890
40way: 16	12084945	Gray	PBT 30% GF	12048344	12048345
: 24	12110088	Lt. Gray	PBT 30% GF	12047900	12047901
48way: 24	12110244	Pink	PBT 30% GF	12047900	12047901
: 24	12110206	Lt. Blue	PBT 30% GF	12047900	12047901
56way: 24	12110206	Lt. Blue	PBT 30% GF	12047900	12047901
: 32	12110207	Lt. Blue	PBT 30% GF	12045889	12045890
64way: 16	12084945	Gray	PBT 30% GF	12048344	12048345
: 24	12110088	Lt. Gray	PBT 30% GF	12047900	12047901
: 24	12110244	Pink	PBT 30% GF	12047900	12047901
Mixed					
32way: 8	15357040	Md. Gray	PA66 HS IM	15324332	–
: 24	12110088	Lt. Gray	PBT 30% GF	12047900	12047901

http://delphi.com/products/connect

North American Region 1-800-PACKARD
European Region 49-202-291-2000
Asia Pacific Region 65-730-9900
South American Region 55-12-378-2002

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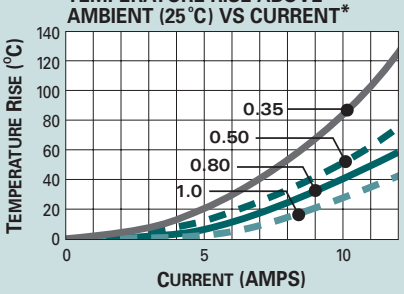
Unsealed System Application Information

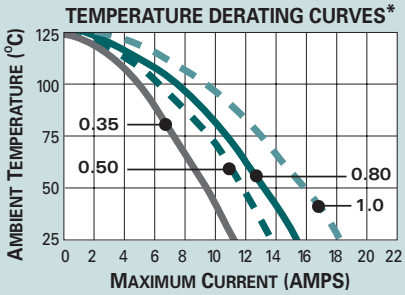
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-5
TEMP RANGE °C: ..... -40 to 85
RESISTANCE: .....<10mΩ@20mV
VOLTAGE DROP: ..... <10.0mV/amp
CENTERLINE SPACING (mm):.....3.0
TERMINAL DIAMETER (mm): 1.0

MICRO-PACK 100 TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*

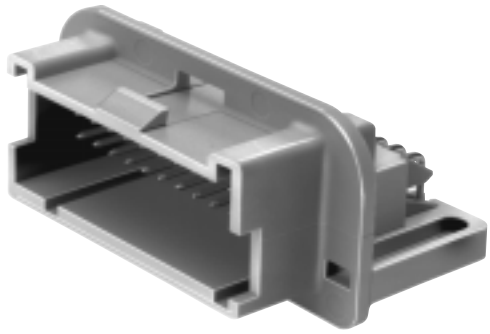


TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

CPA
(Connector Position Assurance)



Male Header Connector Assembly

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Different color and connector indexing features are also available.
- Low profile and right angle TPAs also available.

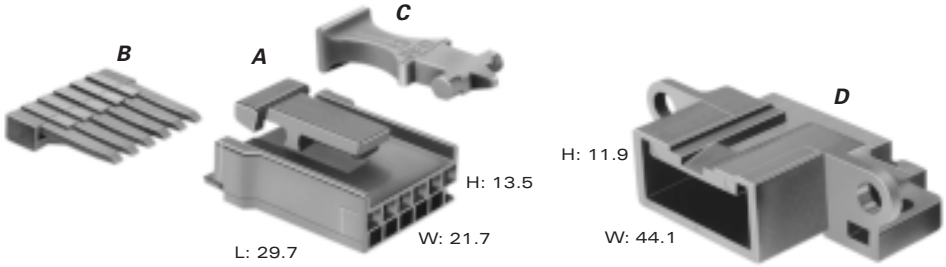
MICRO-PACK MALE HEADER CONNECTOR ASSEMBLIES UNSEALED

# Pins	Connector	Color	Material	# Pins	Connector	Color	Material
6	12065870	Black	PBT 30% GF	32*	12129340	Dk. Red	PBT 30% GF
10	12065647	Black	PBT 30% GF	32*	12110323	Lt. Blue	PBT 30% GF
12	12064798	Black	PBT 30% GF	40	12191050	Gray	PBT 30% GF
13	12066307	Black	PBT 30% GF	48	12191140	Natural	PBT 30% GF
15	12059915	Black	PBT 30% GF	56*	12110209	Lt. Blue	PBT 30% GF
16	12110261	Green	PBT 30% GF	64	12160861	Black	PBT 30% GF
20*	12089852	Gray	PBT 30% GF	**Mixed**			
24	12092886	Gray	PBT 30% GF	32	15357042	Gray	PBT 30% GF

Terminals included in connector assembly.
* Gold plating available.

Downloaded from Arrow.com.

•100 HEADER



Total Mated Length: 49.7mm

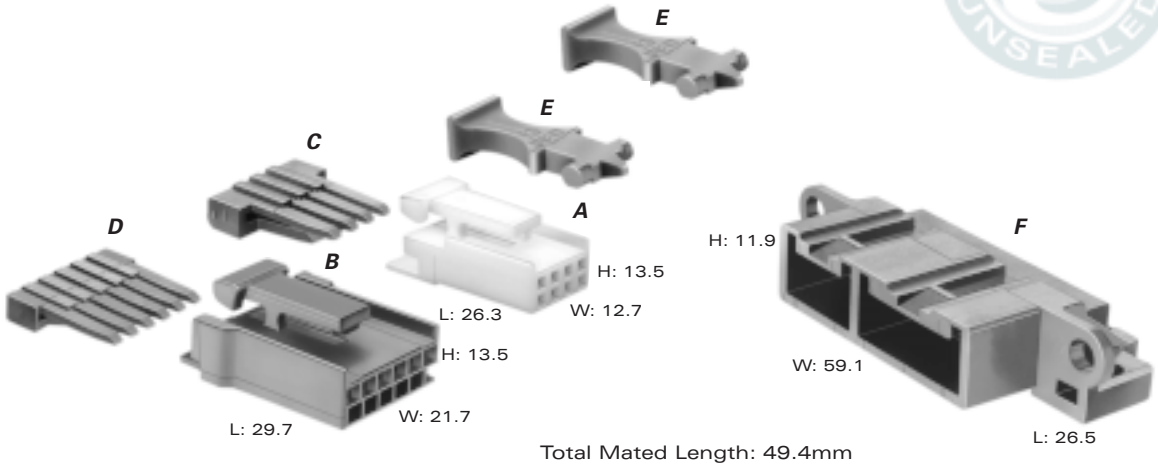
A PART NO: **12064993**
DESCRIPTION: Connector 6F
SIZE: 29.7L x 13.5H x 21.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 170

B PART NO: **12066170**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

C PART NO: **12064989**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

D PART NO: **12065870**
DESCRIPTION: Connector Assembly 6M
SIZE: 26.5L x 11.9H x 44.1W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



Total Mated Length: 49.4mm

A PART NO: **12066189**
DESCRIPTION: Connector 4F
SIZE: 26.3L x 13.5H x 12.7W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 170

B PART NO: **12064993**
DESCRIPTION: Connector 6F
SIZE: 29.7L x 13.5H x 21.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 170

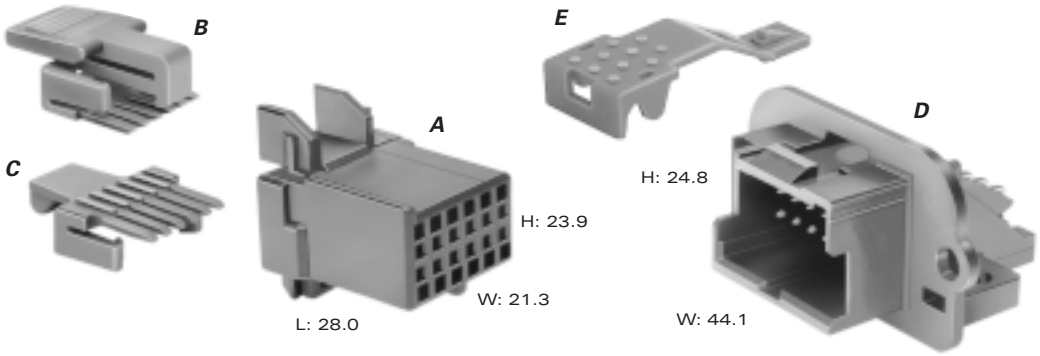
C PART NO: **12059160**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

D PART NO: **12066170**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

E PART NO: **12064989**
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

F PART NO: **12065647**
DESCRIPTION: Connector Assembly 10M
SIZE: 26.5L x 11.9H x 59.1W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



Total Mated Length: 39.1mm

A PART NO: **12064799**
DESCRIPTION: Connector 12F
SIZE: 28.0L x 23.9H x 21.3W
COLOR: Black
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

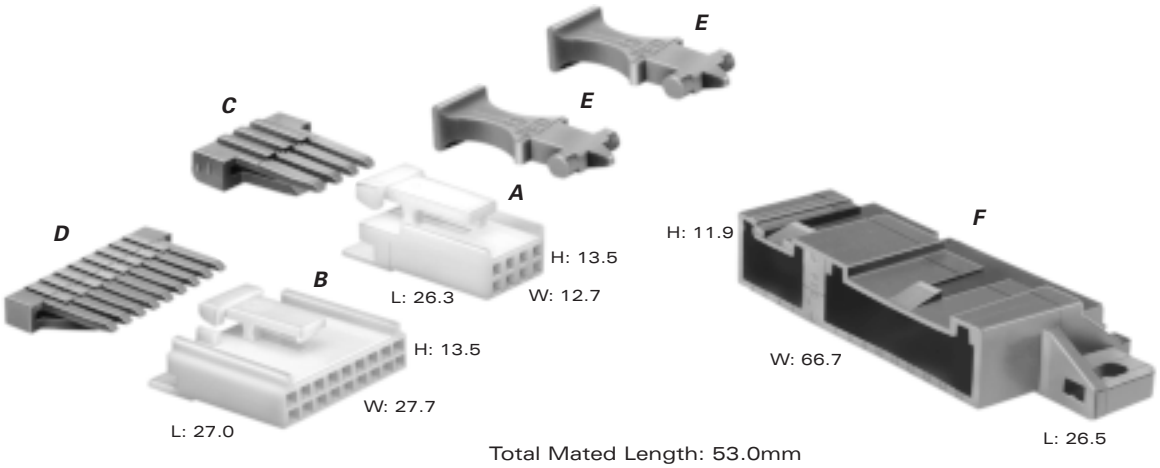
B PART NO: **12064822**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

C PART NO: **12064823**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12064798**
DESCRIPTION: Connector Assembly 12M
SIZE: 33.6L x 24.8H x 44.1W
COLOR: Black
MATERIAL: PBT 30% GF

E PART NO: **12077899**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.



Total Mated Length: 53.0mm

A PART NO: 12066189
DESCRIPTION: Connector 4F
SIZE: 26.3L x 13.5H x 12.7W
COLOR: Natural
MATERIAL: PBT
TERMINAL: See Page 170

B PART NO: 12066130
DESCRIPTION: Connector 9F
SIZE: 27.0L x 13.5H x 27.7W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 170

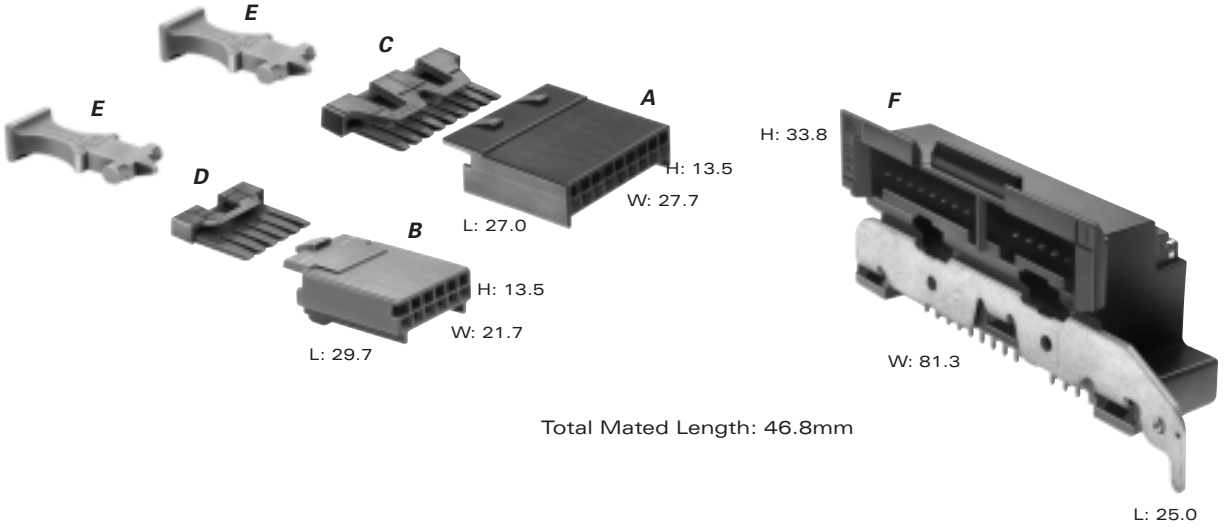
C PART NO: 12059160
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA6

D PART NO: 12064986
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

E PART NO: 12064989
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

F PART NO: 12066307
DESCRIPTION: Connector Assembly 13M
SIZE: 26.5L x 11.9H x 66.7W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



Total Mated Length: 46.8mm

A PART NO: **12064980**
DESCRIPTION: Connector 9F
SIZE: 27.0L x 13.5H x 27.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 170

B PART NO: **12064978**
DESCRIPTION: Connector 6F
SIZE: 29.7L x 13.5H x 21.7W
COLOR: Gray
MATERIAL: PBT
TERMINALS: See Page 170

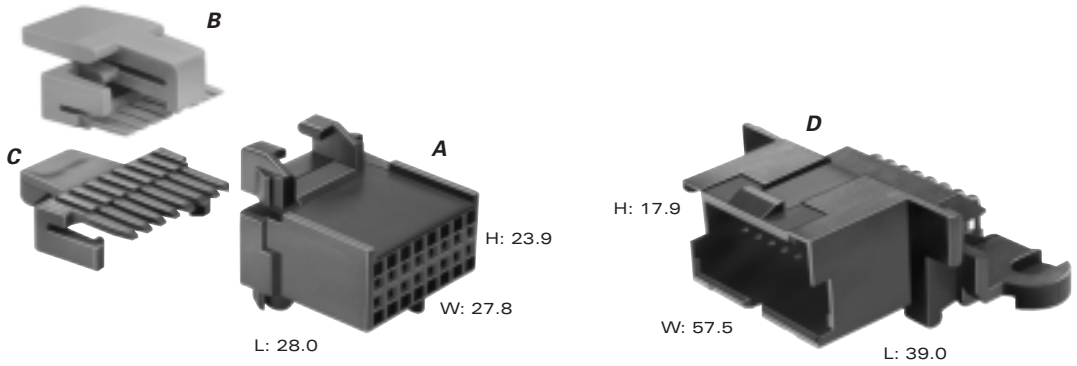
C PART NO: **12064986**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

D PART NO: **12066170**
DESCRIPTION: TPA
COLOR: Red
MATERIAL: PA6

E PART NO: **12064989**
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

F PART NO: **12059915**
DESCRIPTION: Connector Assembly 15M
SIZE: 25.0L x 33.8H x 81.3W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



Total Mated Length: 60.4mm

A PART NO: **12110259* (Green)**
12084944* (Black)
12084945* (Gray)

DESCRIPTION: Connector 16F
SIZE: 28.0L x 23.9H x 27.8W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

B PART NO: **12048344**

DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

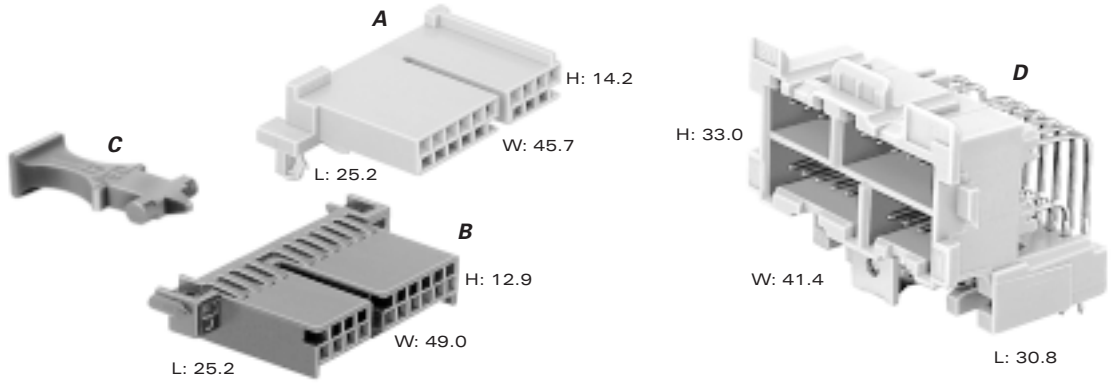
C PART NO: **12048345**

DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12110261* (Green)**
12084948* (Black)
12084949* (Gray)

DESCRIPTION: Connector Assembly 16M
SIZE: 39.0L x 17.9H x 57.5W
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

Downloaded from Arrow.com.



Total Mated Length: 55.3mm

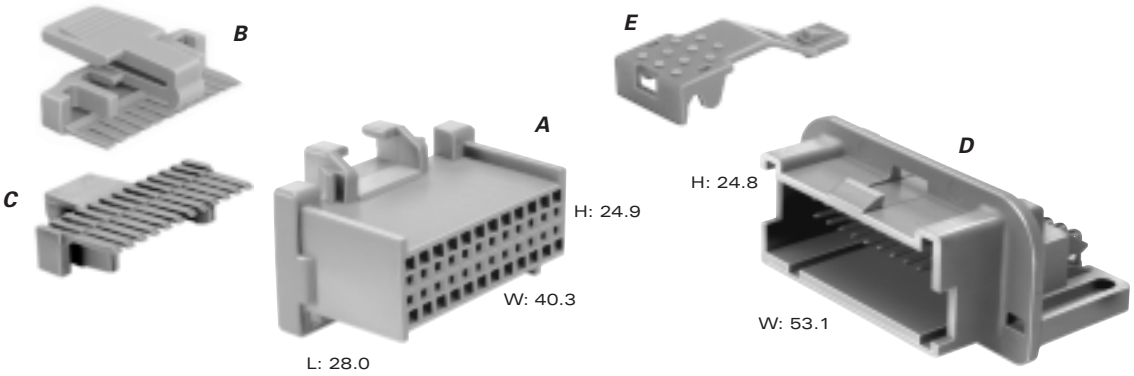
A PART NO: 12065785
DESCRIPTION: Connector 10F - with Button Lock
SIZE: 25.2L x 14.2H x 45.7W
COLOR: Gray
MATERIAL: PBT
TERMINALS: See Page 170

B PART NO: 12047531
DESCRIPTION: Connector 10F - with Button Lock
SIZE: 25.2L x 12.9H x 49.0W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 170

C PART NO: 12064989
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

D PART NO: 12089852
DESCRIPTION: Connector Assembly 20M
SIZE: 30.8L x 33.0H x 41.4W
COLOR: Gray
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



A PART NO: **12110088**
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.9H x 40.3W
COLOR: Lt. Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

B PART NO: **12047900**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

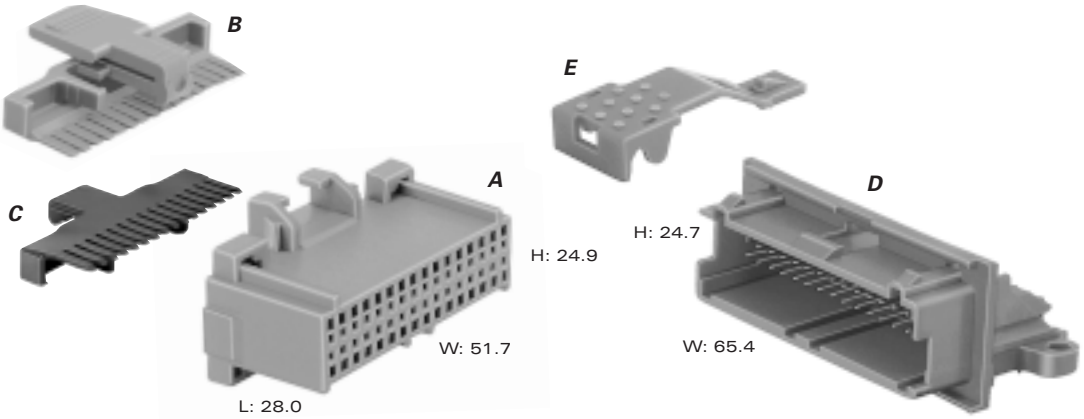
C PART NO: **12047901**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12092886**
DESCRIPTION: Connector Assembly 24M
SIZE: 33.5L x 24.8H x 53.1W
COLOR: Gray
MATERIAL: PBT 30% GF

E PART NO: **12077899**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.

•100 HEADER



Total Mated Length: 59.3mm

A PART NO: **12110113* (Dk. Red)**
12110114* (White)
12110115* (Dk. Blue)
12110112* (Tan)

DESCRIPTION: Connector 32F
SIZE: 28.0L x 24.9H x 51.7W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

B PART NO: **12045889**

DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

C PART NO: **12045890**

DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

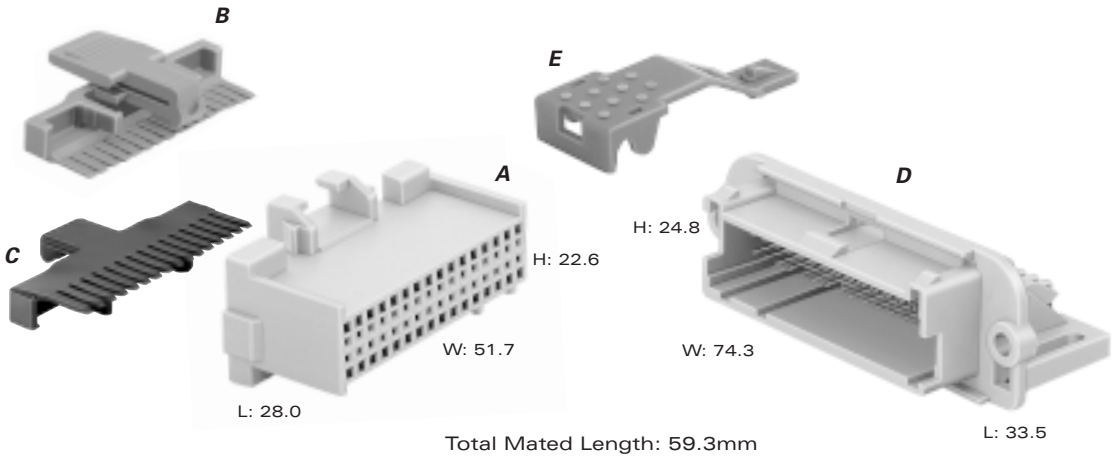
D PART NO: **12129340* (Dk. Red)**
12129341* (Natural)
12129342* (Dk. Blue)
12129369* (Tan)

DESCRIPTION: Connector Assembly 32M
SIZE: 33.5L x 24.7H x 65.4W
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

E PART NO: **12077899**

DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.



Total Mated Length: 59.3mm

A PART NO: **12110207**
DESCRIPTION: Connector 32F
SIZE: 28.0L x 22.6H x 51.7W
COLOR: Lt. Blue
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

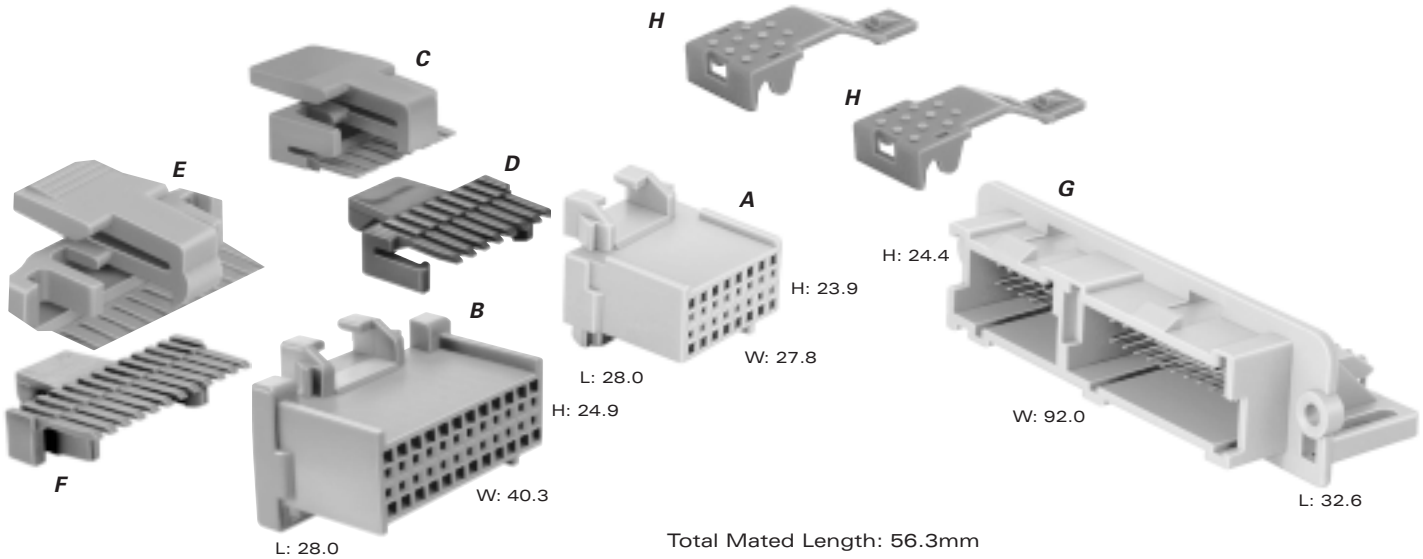
B PART NO: **12045889**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

C PART NO: **12045890**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

D PART NO: **12110323**
DESCRIPTION: Connector Assembly 32M
SIZE: 33.5L x 24.8H x 74.3W
COLOR: Lt. Blue
MATERIAL: PBT 30% GF

E PART NO: **12077899**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.



Total Mated Length: 56.3mm

A PART NO: **12084945**
DESCRIPTION: Connector 16F
SIZE: 28.0L x 23.9H x 27.8W
COLOR: Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

B PART NO: **12110088**
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.9H x 40.3W
COLOR: Lt. Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

C PART NO: **12048344**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12048345**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

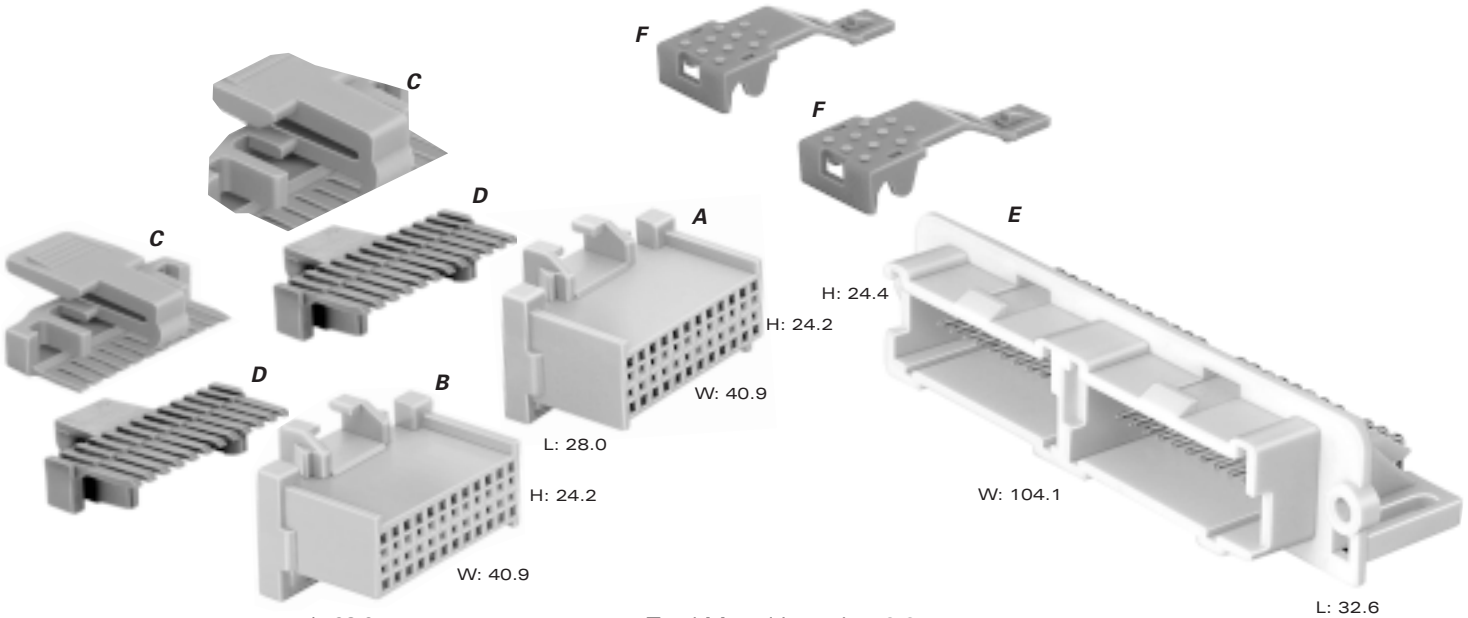
E PART NO: **12047900**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

F PART NO: **12047901**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

G PART NO: **12191050**
DESCRIPTION: Connector Assembly 40M
SIZE: 32.6L x 24.4H x 92.0W
COLOR: Gray
MATERIAL: PBT 30% GF

H PART NO: **12077899**
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.



Total Mated Length: 56.3mm

A PART NO: 12110244
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.2H x 40.9W
COLOR: Pink
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

B PART NO: 12110206
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.2H x 40.9W
COLOR: Lt. Blue
MATERIAL: PBT 30% GF
TERMINALS: See Page 170

C PART NO: 12047900
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

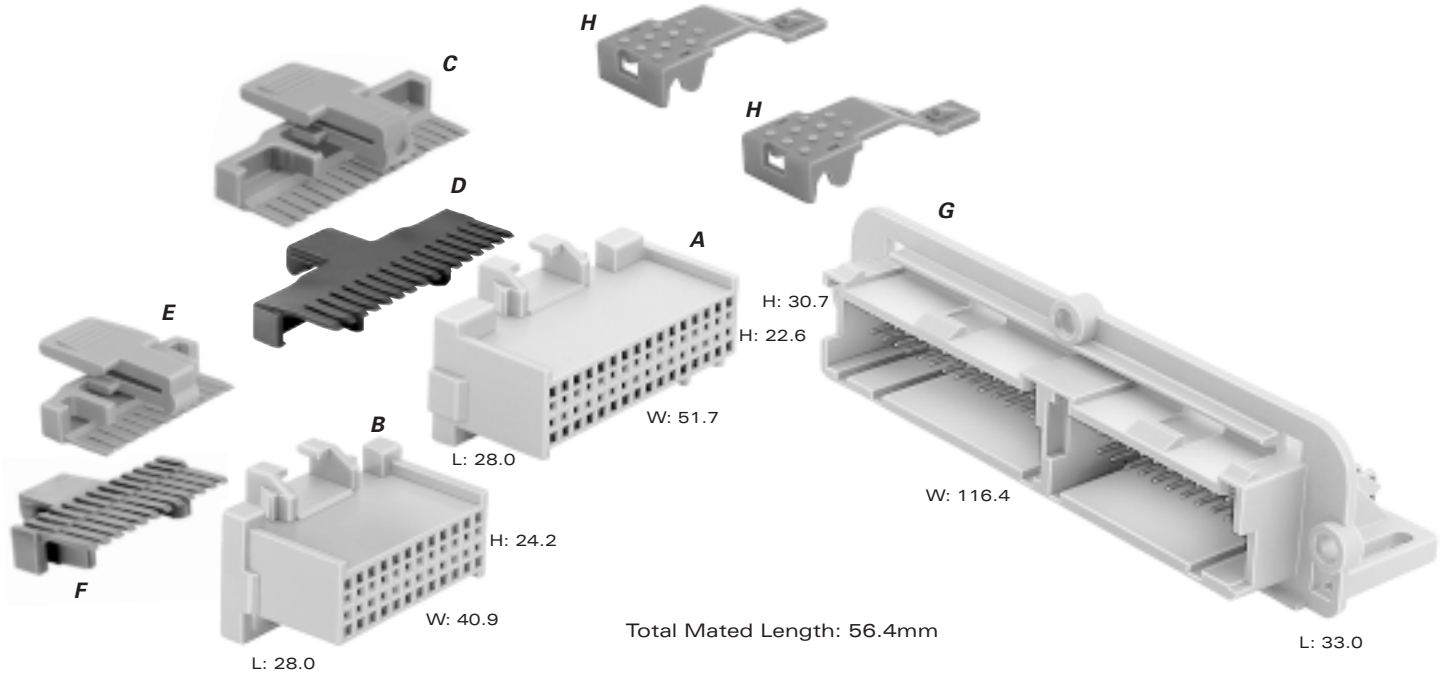
D PART NO: 12047901
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

E PART NO: 12191140
DESCRIPTION: Connector Assembly 48M
SIZE: 32.6L x 24.4H x 104.1W
COLOR: Natural
MATERIAL: PBT 30% GF

F PART NO: 12077899
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.

•100 HEADER



A PART NO: **12110207* (Lt. Blue)**
12110245* (Pink)
12160779* (Brown)
DESCRIPTION: Connector 32F
SIZE: 28.0L x 22.6H x 51.7W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

B PART NO: **12110206* (Lt. Blue)**
12110244* (Pink)
12160778* (Brown)
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.2H x 40.9W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

C PART NO: **12045889**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12045890**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA6

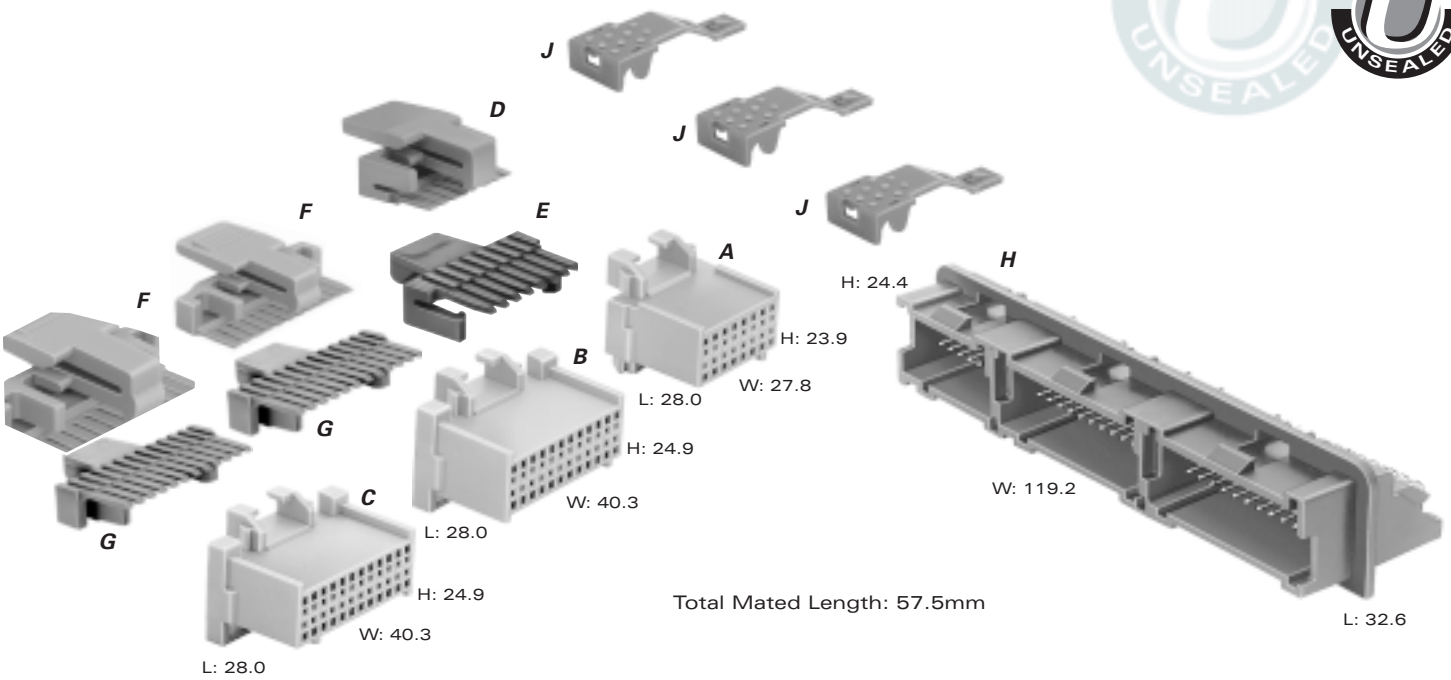
E PART NO: **12047900**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

F PART NO: **12047901**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

G PART NO: **12110209* (Lt. Blue)**
12110241* (Pink)
12160777* (Brown)
DESCRIPTION: Connector Assembly 56M
SIZE: 33.0L x 30.7H x 116.4W
COLOR: Lt. Blue
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

H PART NO: **12077899**
DESCRIPTION: CPA
NUMBER REQ: 2
COLOR: Orange
MATERIAL: PP

Downloaded from Arrow.com.



A PART NO: **12084945* (Gray)**
12191375* (Purple)
DESCRIPTION: Connector 16F
SIZE: 28.0L x 23.9H x 27.8W
COLOR: Gray
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

B PART NO: **12110088* (Lt. Gray)**
12110206* (Lt. Blue)
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.9H x 40.3W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

C PART NO: **12110244* (Pink)**
12160778* (Brown)
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.9H x 40.3W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

D PART NO: **12048344**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

E PART NO: **12048345**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

F PART NO: **12047900**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

G PART NO: **12047901**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PA6

H PART NO: **12160861* (Black)**
12191293* (Dk. Blue)
DESCRIPTION: Connector Assembly 64M
SIZE: 32.6L x 24.4H x 119.2W
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

J PART NO: **12077899**
DESCRIPTION: CPA
NUMBER REQ: 3
COLOR: Orange
MATERIAL: PP

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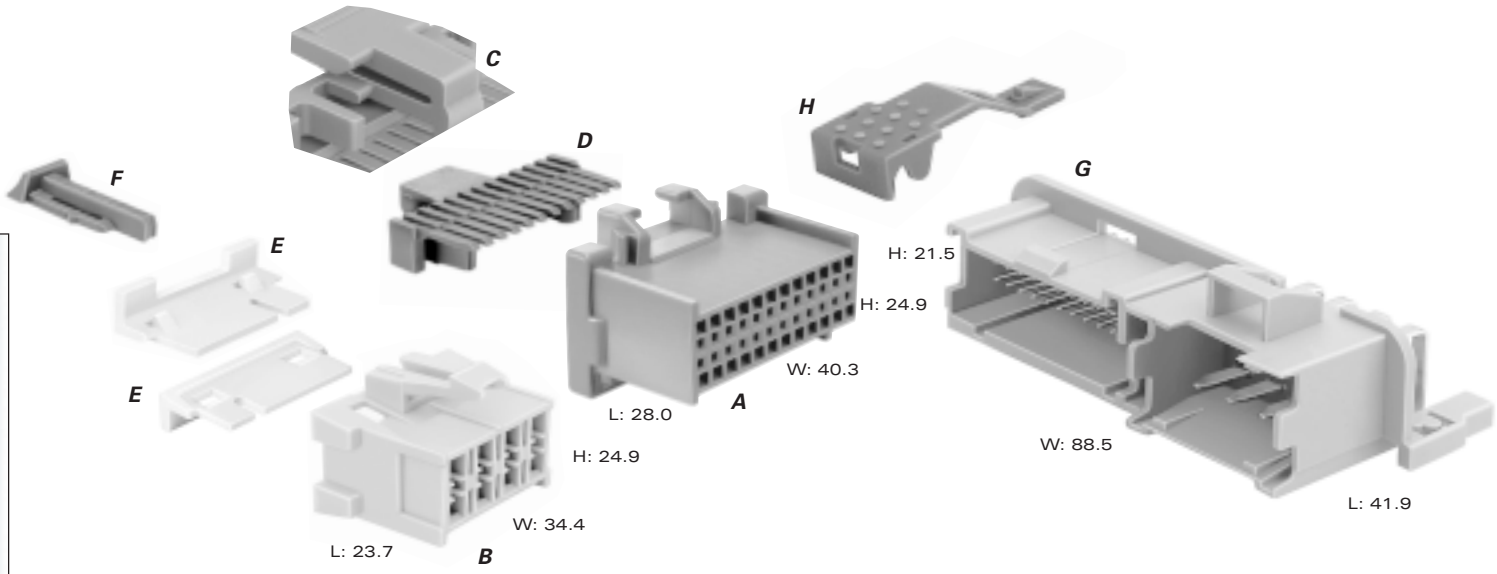
•100 MIXED



Total Mated Length: 59.7mm

A PART NO: **12110088* (Lt. Gray)**
12110206* (Lt. Blue)
12110244* (Pink)
DESCRIPTION: Connector 24F
SIZE: 28.0L x 24.9H x 40.3W
MATERIAL: PBT 30% GF
TERMINALS: See Page 170
*DIFFERENT INDEXING FEATURE.

B PART NO: **15357040**
DESCRIPTION: Connector 8F
SIZE: 23.7L x 24.9H x 34.4W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 160, 280 Metri-Pack Tangless

C PART NO: **12047900**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

D PART NO: **12047901**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6

E PART NO: **15324332**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PA66 HS IM

F PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

G PART NO: **15357042* (Gray)**
15357044* (Lt. Blue)
15357046* (Pink)
DESCRIPTION: Connector Assembly 32M
SIZE: 41.9L x 21.5H x 88.5W
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

H PART NO: **12077899**
DESCRIPTION: CPA
COLOR: Orange
MATERIAL: PP

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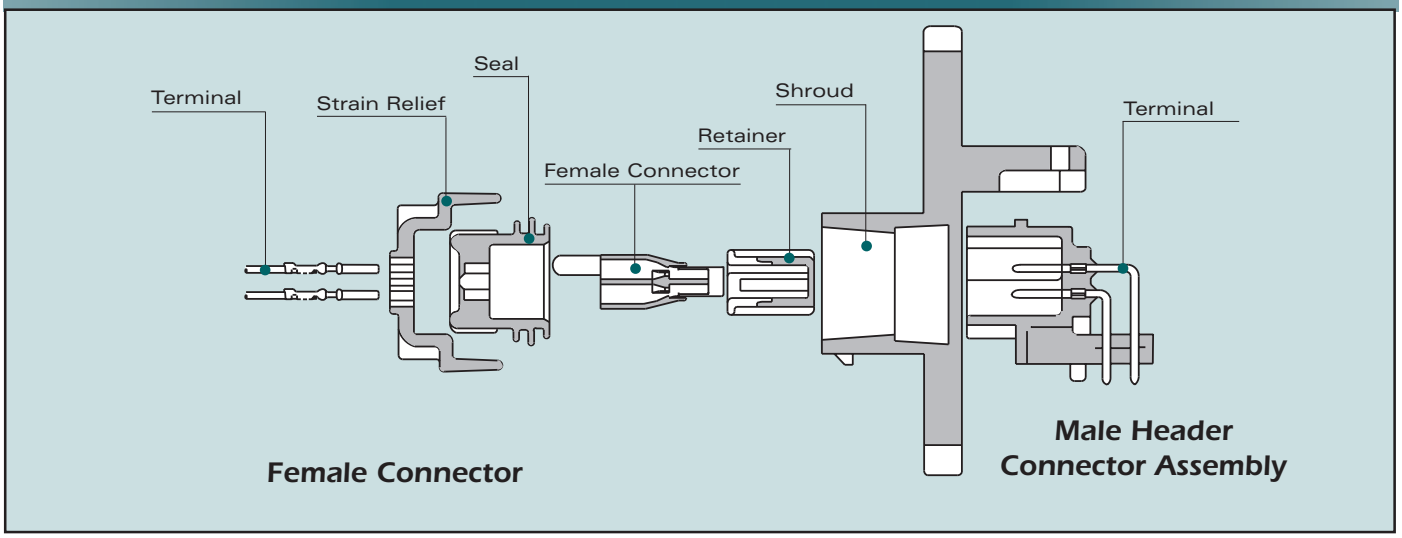
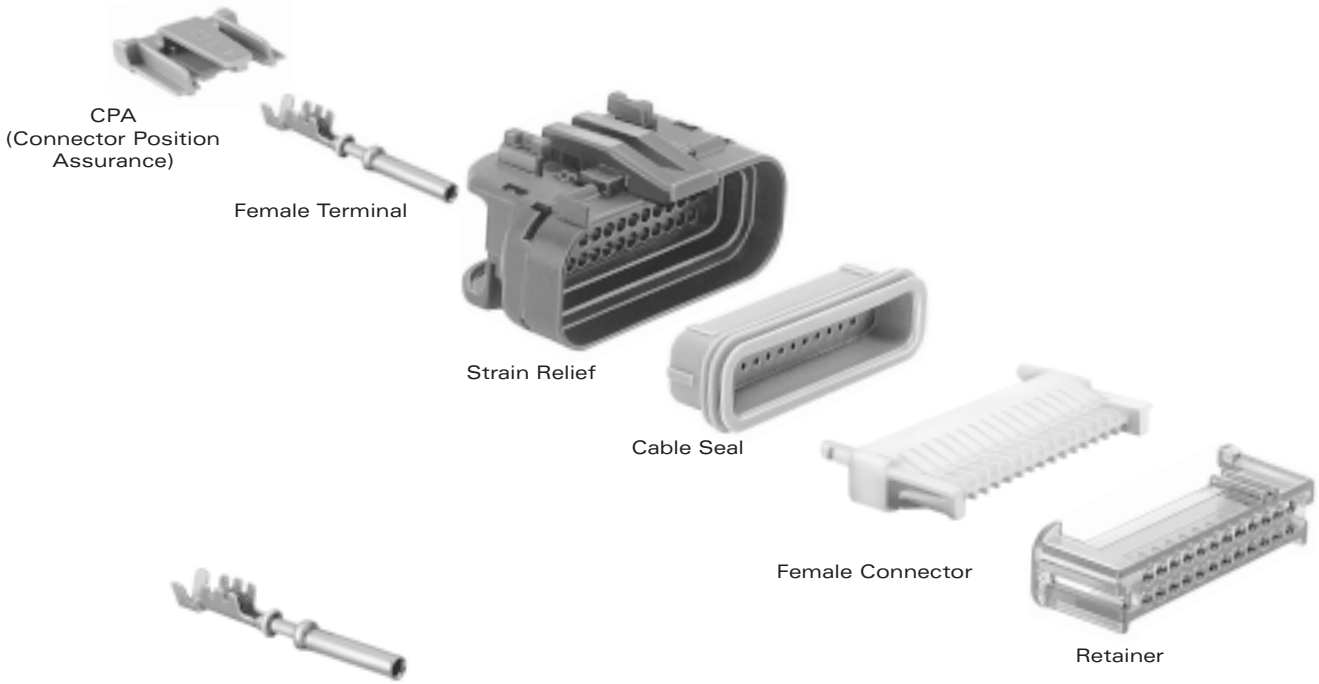
.100W Header

Cross Sectional View





MICRO-PACK FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12084912	0.80	Phosphor Bronze	Gold/Nickel
12084913	0.50-0.35	Phosphor Bronze	Gold/Nickel

MICRO-PACK FEMALE CONNECTORS SEALED

# Cavities	Connector	Color	Material	TPA	Retainer**	Seal	Strain Relief
24	12129225	Natural	PBT	–	12129183	12110403*	12160848
32	12129025	Natural	PBT	–	12129023	12129026*	12129030
36	12110487	Black	PBT	–	12110488	12110489*	12110490
Mixed							
32	12160423	Black	PBT	12160419	12160418	12160425 12160426	12160424

*Validated for 0.80-0.50 cable.
**Retainers provide terminal position assurance.

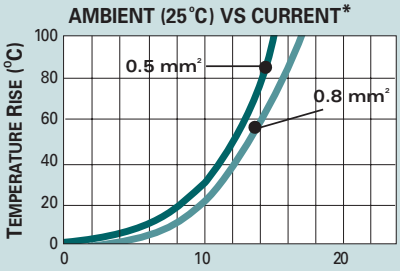
Downloaded from Arrow.com.

Sealed System Application Information

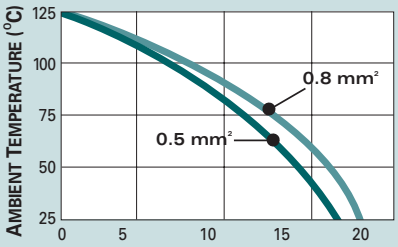
CABLE RANGE (mm²): 0.35-0.8
CURRENT RANGE (AMPS): 0-7.5
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 3.5
TERMINAL DIAMETER (mm): 1.0

MICRO-PACK 100W TERMINALS – Gold Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Header Connector Assembly

MICRO-PACK MALE HEADER CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material
24	12092320	Black	PBT 30% GF
32	12129008	Blue	PBT 30% GF
36	12110485	Black	PBT 30% GF
Mixed			
32	12146993	Black	PBT 30% GF

Terminals included in connector assembly.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Sealing shroud and locking feature for connector assembly must be designed into mating device housing.

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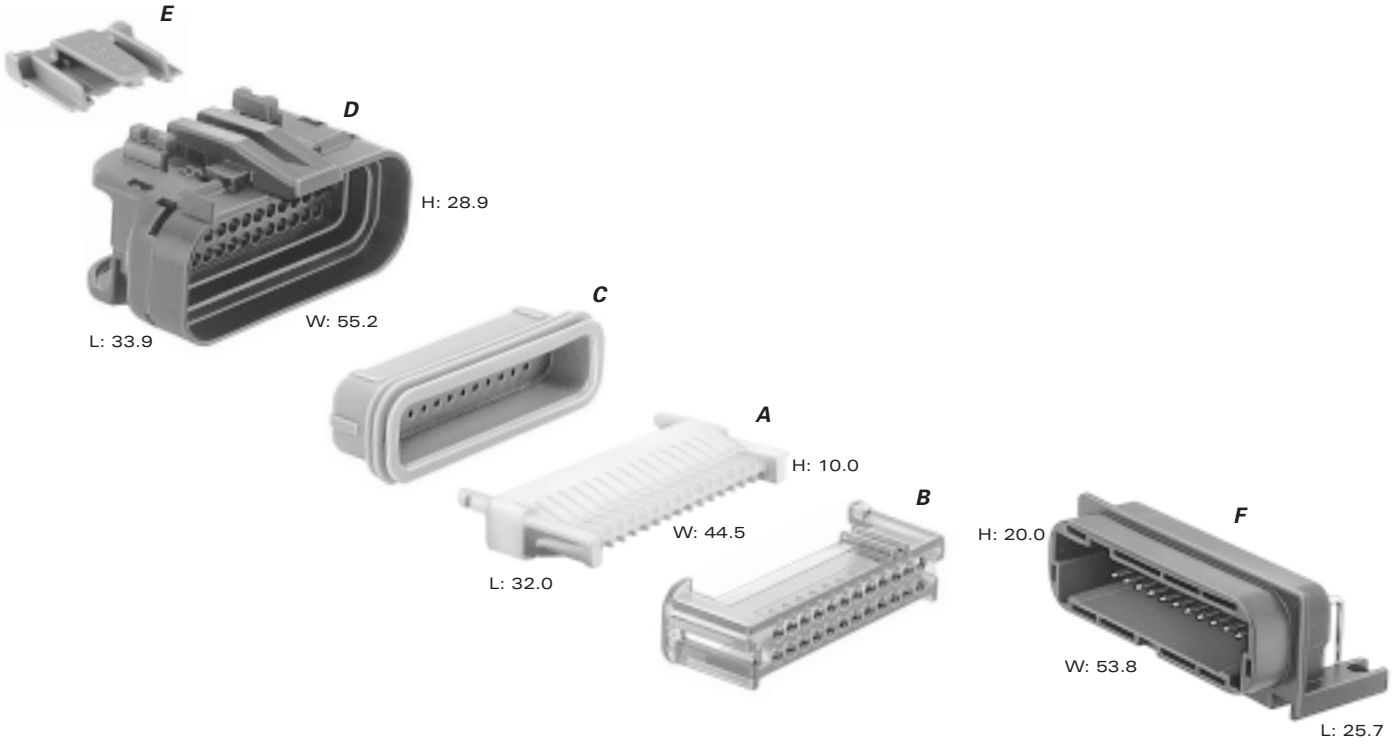


Total Mated Length: 61.2mm

A PART NO: **12129225**
DESCRIPTION: Connector 24F
SIZE: 32.0L x 10.0H x 44.5
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 188

B PART NO: **12129183**
DESCRIPTION: Retainer 24F
COLOR: Black
MATERIAL: PC

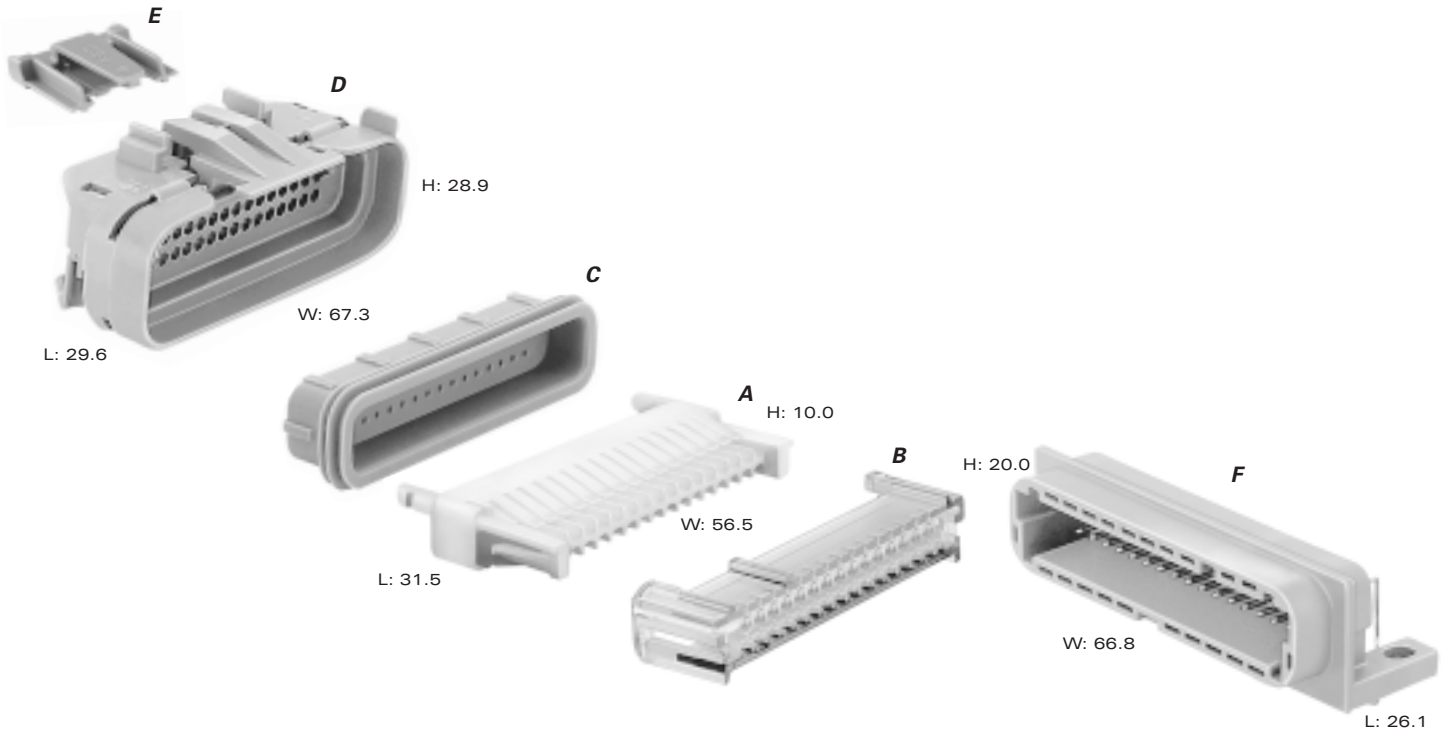
C PART NO: **12110403**
DESCRIPTION: Seal 24F
COLOR: Green
MATERIAL: Silicone

D PART NO: **12160848** Black (Right Wire Dress)
12129858 Gray (Straight Wire Dress)
12129811 Gray (Right Wire Dress)
DESCRIPTION: Strain Relief 24F
SIZE: 33.9L x 28.9H x 55.2W
MATERIAL: TEEE

E PART NO: **12110299**
DESCRIPTION: CPA
COLOR: Red
MATERIAL: PBT

F PART NO: **12092320**
DESCRIPTION: Connector Assembly 24M
SIZE: 25.7L x 20.0H x 53.8W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



Total Mated Length: 57.6mm

A PART NO: **12129025**
DESCRIPTION: Connector 32F
SIZE: 31.5L x 10.0H x 56.5W
COLOR: Natural
MATERIAL: PBT
TERMINALS: See Page 188

B PART NO: **12129023* (Md. Blue)**
12129021* (Black)
12129022* (Clear)
DESCRIPTION: Retainer 32F
MATERIAL: PC
*DIFFERENT INDEXING FEATURE.

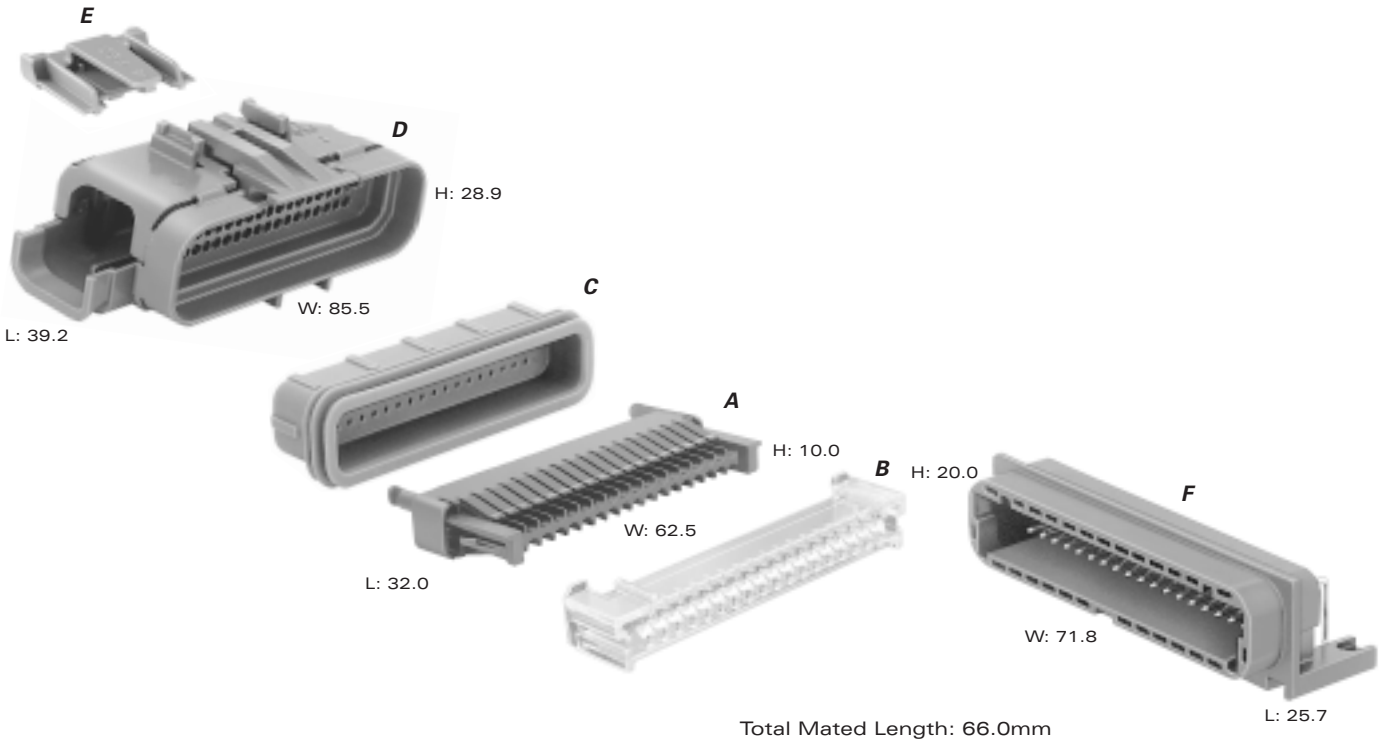
C PART NO: **12129026**
DESCRIPTION: Seal 32F
COLOR: Green
MATERIAL: Silicone

D PART NO: **12129030 (Right Wire Dress)**
12129028 (Left Wire Dress)
DESCRIPTION: Strain Relief 32F
SIZE: 29.6L x 28.9H x 67.3W
COLOR: Gray
MATERIAL: TEEE

E PART NO: **12110299**
DESCRIPTION: CPA
COLOR: Red
MATERIAL: PBT

F PART NO: **12129008* (Blue)**
12186041* (Black)
12186043* (Gray)
DESCRIPTION: Connector Assembly 32M
SIZE: 26.1L x 20.0H x 66.8W
MATERIAL: PBT 30% GF
*DIFFERENT INDEXING FEATURE.

Downloaded from Arrow.com.



Total Mated Length: 66.0mm

A PART NO: **12110487**
DESCRIPTION: Connector 36F
SIZE: 32.0L x 10.0H x 62.5W
COLOR: Black
MATERIAL: PBT
TERMINALS: See Page 188

B PART NO: **12110488**
DESCRIPTION: Retainer 36F
COLOR: Clear
MATERIAL: PC

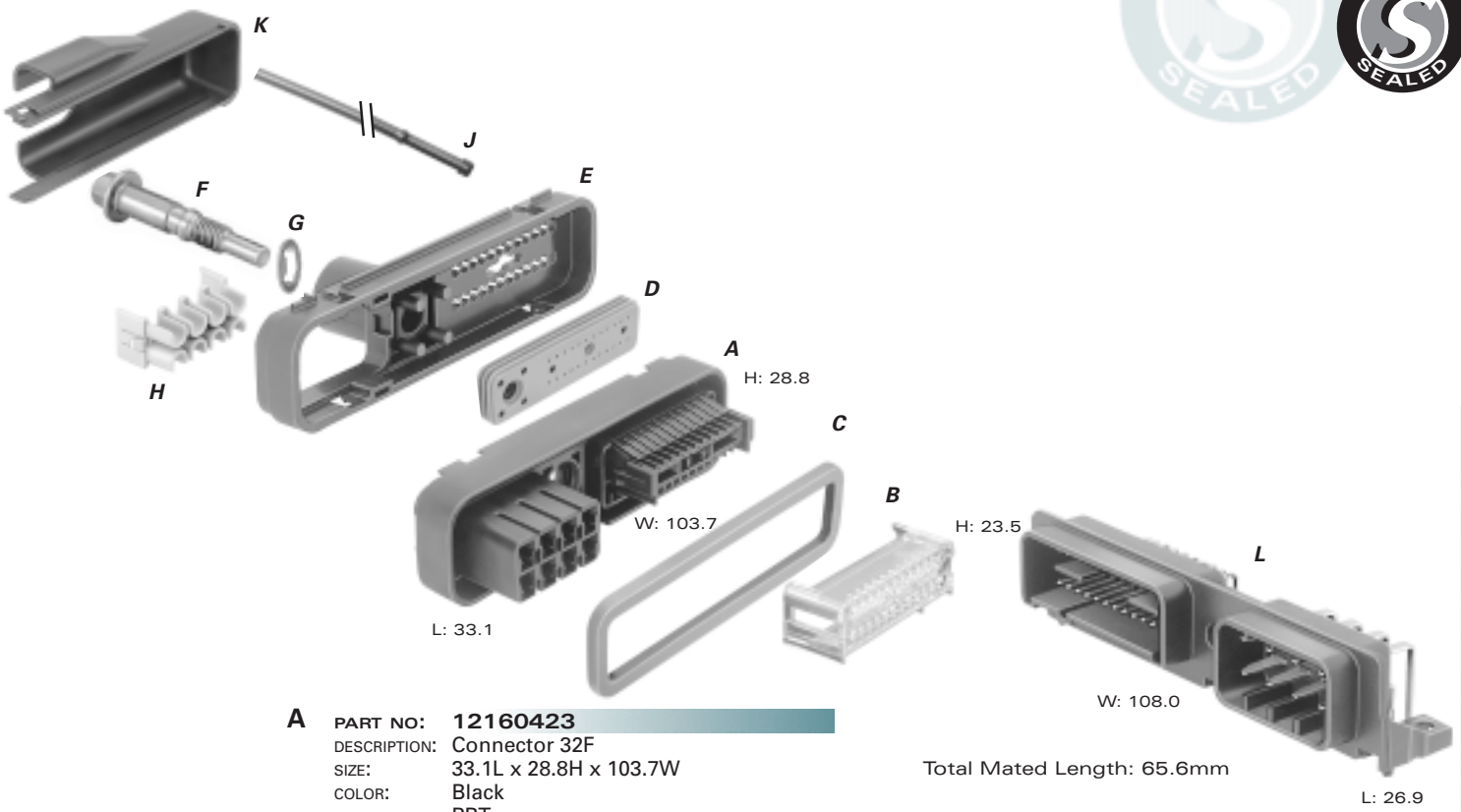
C PART NO: **12110489**
DESCRIPTION: Seal 36F
COLOR: Green
MATERIAL: Silicone

D PART NO: **12110490 (Right Wire Dress)**
DESCRIPTION: Strain Relief 36F
SIZE: 39.2L x 28.9H x 85.5W
COLOR: Gray
MATERIAL: TEEE

E PART NO: **12110299**
DESCRIPTION: CPA
COLOR: Red
MATERIAL: PBT

F PART NO: **12110485**
DESCRIPTION: Connector Assembly 36M
SIZE: 25.7L x 20.0H x 71.8W
COLOR: Black
MATERIAL: PBT 30% GF

Downloaded from Arrow.com.



A PART NO: **12160423**
DESCRIPTION: Connector 32F
SIZE: 33.1L x 28.8H x 103.7W
COLOR: Black
MATERIAL: PBT
TERMINALS: See page 188, Micro-Pack Sealed
See below, 280 Metri-Pack Tangless

B PART NO: **12160418**
DESCRIPTION: Retainer 24F
COLOR: Red
MATERIAL: PC

C PART NO: **12160425**
DESCRIPTION: Connector Seal
COLOR: Green
MATERIAL: Silicone

D PART NO: **12160426**
DESCRIPTION: Seal 32F
COLOR: Green
MATERIAL: Silicone

E PART NO: **12160424**
DESCRIPTION: Strain Relief
SIZE: 25.9L x 28.7H x 98.6W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF

F PART NO: **12160427**
DESCRIPTION: Bolt
SIZE: M4 Hex Head
MATERIAL: Zinc Plated Steel

G PART NO: **12103406**
DESCRIPTION: Bolt Retainer
MATERIAL: Zinc Plated Steel

H PART NO: **12160419**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

J PART NO: **12161104**
DESCRIPTION: Vent Tube
COLOR: Black
MATERIAL: PA6
LENGTH: 1180mm
APPLICATION: Vents Air Pressure inside Module.

K PART NO: **12160420**
DESCRIPTION: Wire Dress Cover
COLOR: Black
MATERIAL: PA66 HS IM 14% GF

L PART NO: **12146993**
DESCRIPTION: Connector Assembly 32M
SIZE: 26.9L x 23.5H x 108.0W
COLOR: Black
MATERIAL: PBT 30% GF

TANGLESS

280 TANGLESS FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12110853	5.0-3.0	Tin Brass	Tin
12129409	2.0-1.0	Tin Brass	Tin
12110845*	3.0-2.0	Tin Brass	Tin
12110847*	1.0-0.80	Tin Brass	Tin
12110846*	0.50-0.35	Tin Brass	Tin

*** Thin Stock**—Electrical current restrictions may apply, contact your regional support representative at the number listed below.

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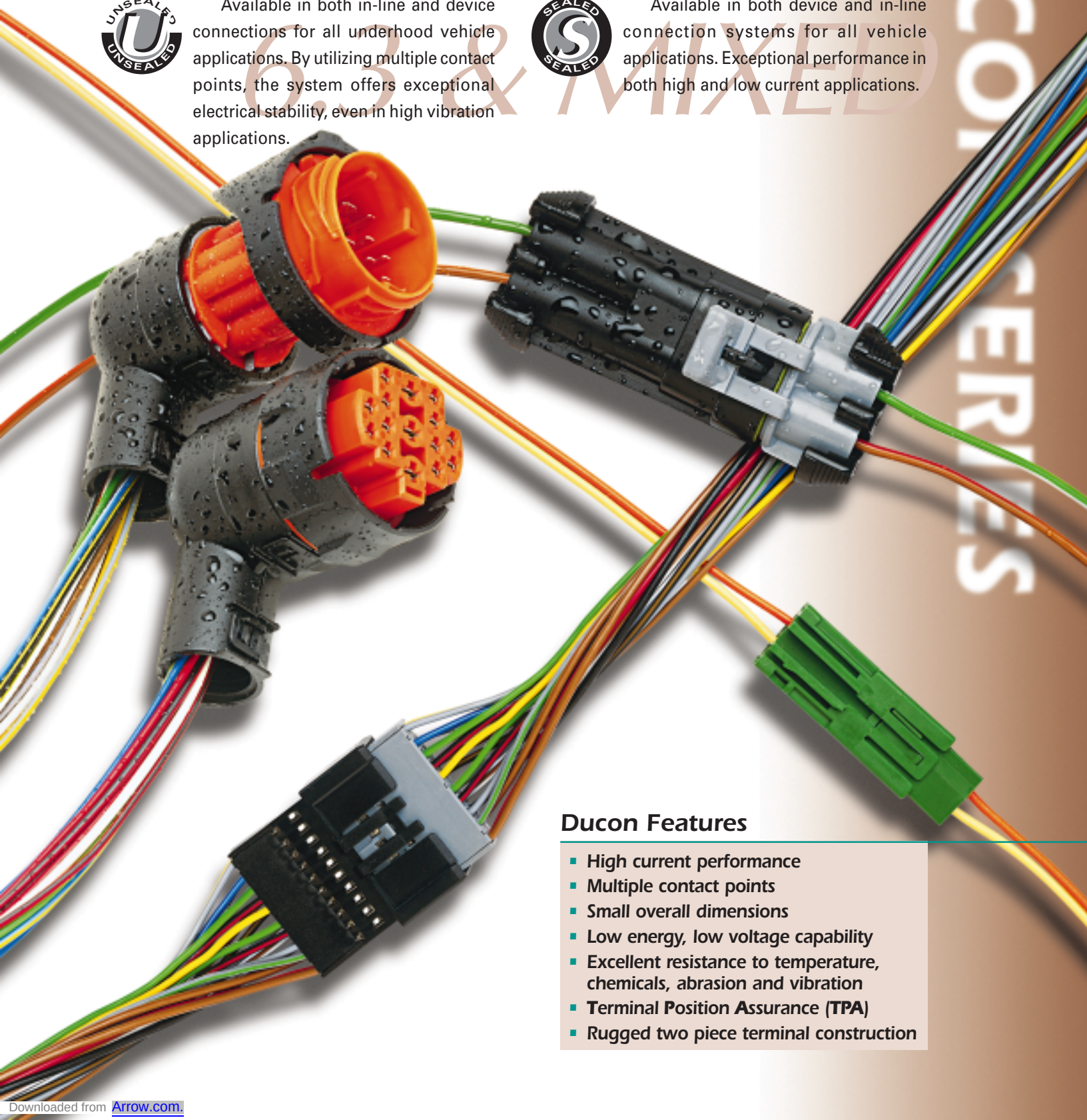
Ducon Series

0.8, 1.5, 2.8, 4.8, 6.3 & Mixed

Available in both in-line and device connections for all underhood vehicle applications. By utilizing multiple contact points, the system offers exceptional electrical stability, even in high vibration applications.

Available in both device and in-line connection systems for all vehicle applications. Exceptional performance in both high and low current applications.

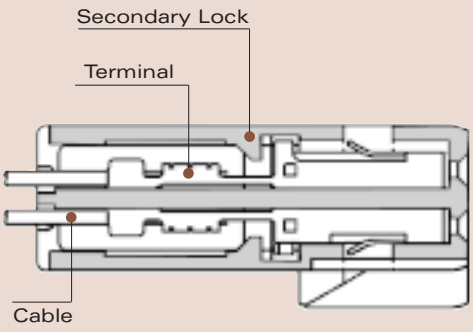


Ducon Features

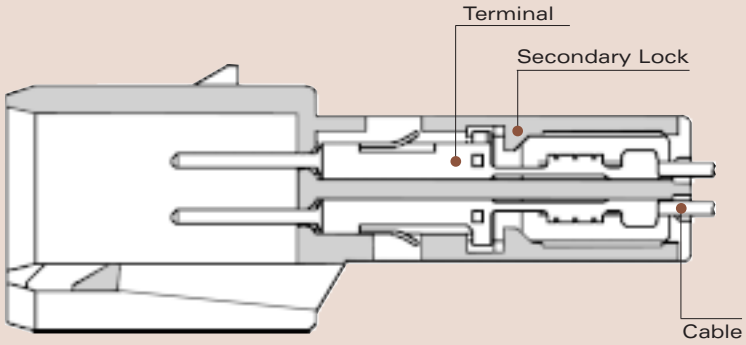
- High current performance
- Multiple contact points
- Small overall dimensions
- Low energy, low voltage capability
- Excellent resistance to temperature, chemicals, abrasion and vibration
- Terminal Position Assurance (TPA)
- Rugged two piece terminal construction

Downloaded from Arrow.com.

Cross Sectional View

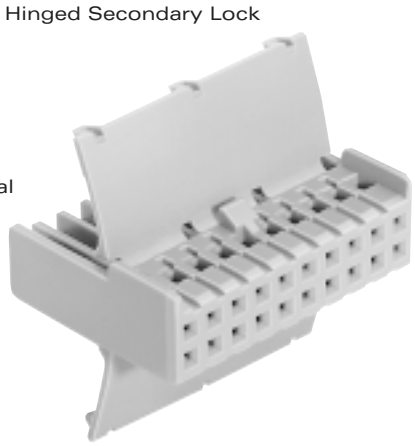


Female Connector



Male Connector

Female Terminal



Female Connector

0.8 FEMALE TERMINAL UNSEALED			
Part #	Cable Range (mm^2)	Material	Plating
12131423	1.0-0.5	Copper Nickel Silicon Alloy	Tin

0.8 FEMALE CONNECTOR UNSEALED			
# Cavities	Connector	Color	Material
20	15344037	Gray	PA6

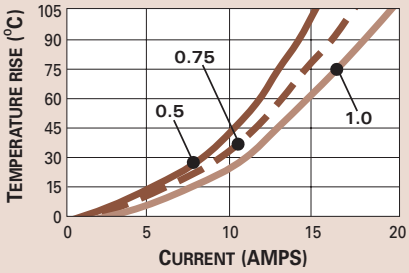
Downloaded from Arrow.com.

Unsealed System Application Information

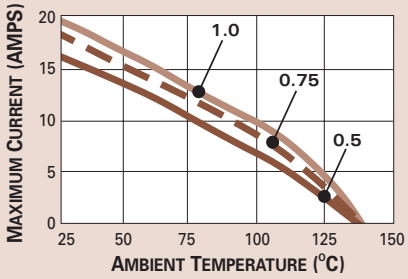
CABLE RANGE (mm²): 0.5-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 3.0
BLADE WIDTH (mm): 0.8

0.8 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional repesentative at the number listed below.

Hinged Secondary Lock

Male Terminal

Male Connector

0.8 MALE CONNECTOR UNSEALED

# Cavities	Connector	Color	Material
20	15344038	Black	PA6

0.8 MALE TERMINAL UNSEALED

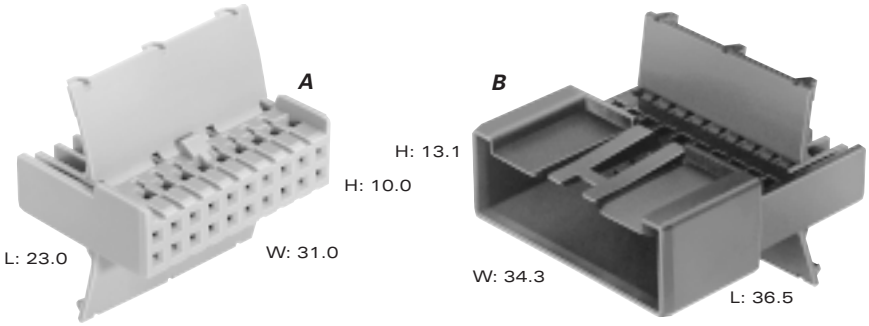
Part #	Cable Range (mm²)	Material	Plating
15327159	1.0-0.50	Copper Nickel Silicon Alloy	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Ducon Connection Systems have been validated using DIN Cable Standards.

Downloaded from Arrow.com.

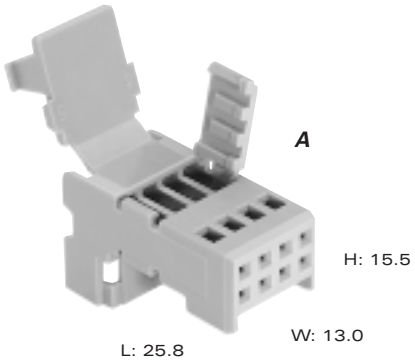


Total Mated Length: 44.5mm

A PART NO: **15344037**
DESCRIPTION: Connector 20F
SIZE: 23.0L x 10.0H x 31.0W
COLOR: Gray
MATERIAL: PA6
TERMINALS: See Page 198

B PART NO: **15344038**
DESCRIPTION: Connector 20M
SIZE: 36.5L x 13.1H x 34.3W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 199

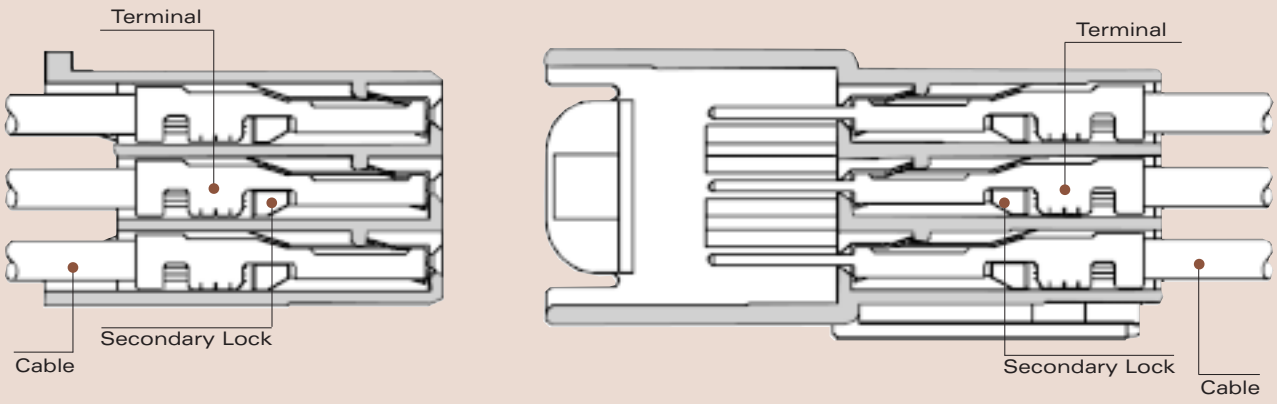
Downloaded from Arrow.com.

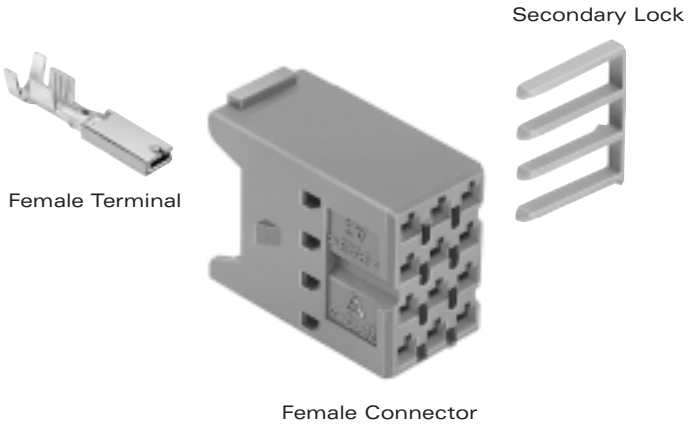


A PART NO: **15327190**
DESCRIPTION: Connector 8F
SIZE: 25.8L x 15.5H x 13.0W
COLOR: Gray
MATERIAL: PA66
TERMINALS: See Page 198

Downloaded from Arrow.com.

Cross Sectional View





1.5 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12147302	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147303	2.5-1.5	Copper Nickel Silicon Alloy	Tin

1.5 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	Secondary Lock
9	15336766	Blue	PA6	15354674
12	12185284	Green	PA6	12198533
15	12185081	Black	PA6	12185080

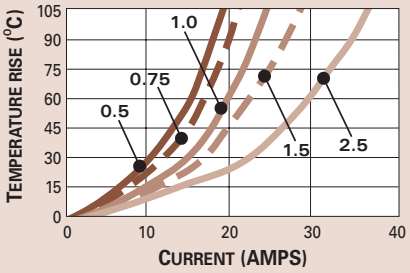
Downloaded from Arrow.com.

Unsealed System Application Information

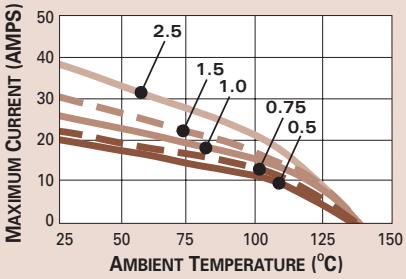
CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 25
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 4.5
BLADE WIDTH (mm): 1.5

1.5 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector

Male Terminal

1.5 MALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	Secondary Lock
9	12185085	Blue	PA6	15354674
12	12184963	Green	PA6	12198533
15	12184934	Black	PA6	12184935

1.5 MALE TERMINALS UNSEALED

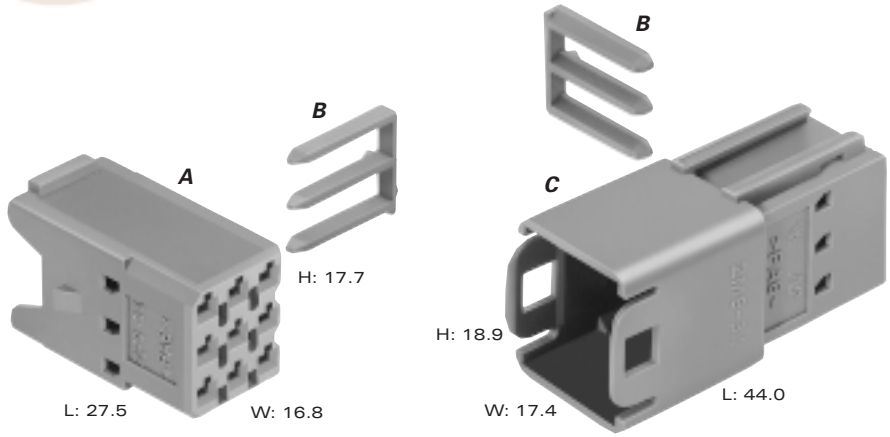
Part #	Cable Range (mm²)	Material	Plating
12147299	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147300	2.5-1.5	Copper Nickel Silicon Alloy	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Ducon Connection Systems have been validated using DIN Cable Standards.

Downloaded from Arrow.com.

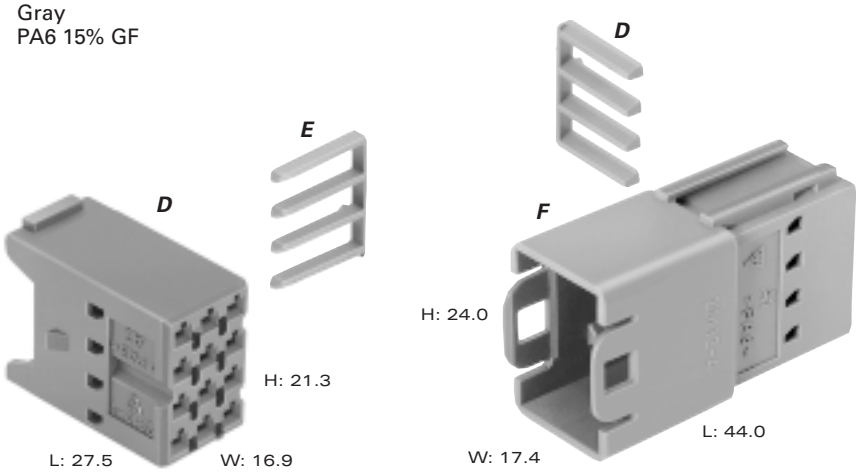


Total Mated Length: 50.5mm

A PART NO: **15336766**
DESCRIPTION: Connector 9F
SIZE: 27.5L x 17.7H x 16.8W
COLOR: Blue
MATERIAL: PA6
TERMINALS: See Page 202

B PART NO: **15354674**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

C PART NO: **12185085**
DESCRIPTION: Connector 9M (Clip Slot)
SIZE: 44.0L x 18.9H x 17.4W
COLOR: Blue
MATERIAL: PA6
TERMINALS: See Page 203



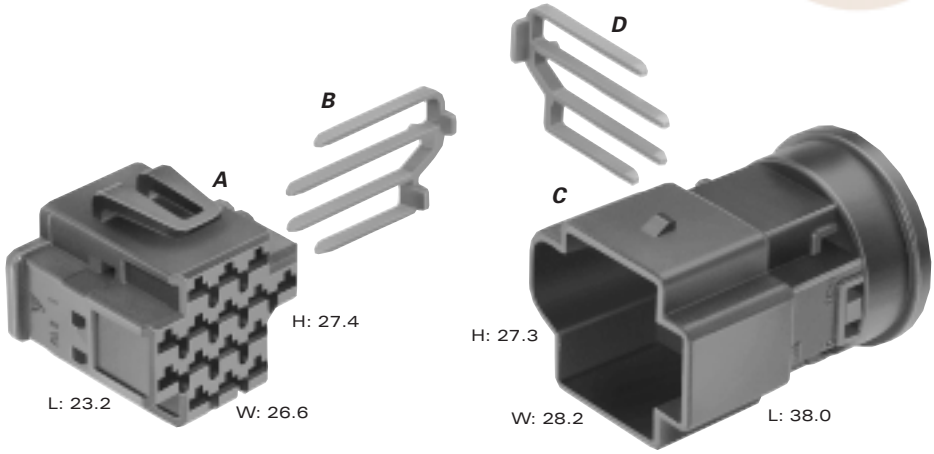
Total Mated Length: 50.5mm

D PART NO: **12185284**
DESCRIPTION: Connector 12F
SIZE: 27.5L x 21.3H x 16.9W
COLOR: Green
MATERIAL: PA6
TERMINALS: See Page 202

E PART NO: **12198533**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

F PART NO: **12184963**
DESCRIPTION: Connector 12M (Clip Slot)
SIZE: 44.0L x 24.0H x 17.4W
COLOR: Green
MATERIAL: PA6
TERMINALS: See Page 203

Downloaded from Arrow.com.



Total Mated Length: 47.0mm

A PART NO: **12185081**
DESCRIPTION: Connector 15F
SIZE: 23.2L x 27.4H x 26.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 202

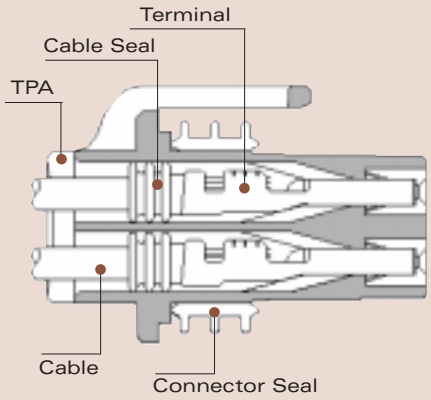
B PART NO: **12185080**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF

C PART NO: **12184934**
DESCRIPTION: Connector 15M
SIZE: 38.0L x 27.3H x 28.2W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 203

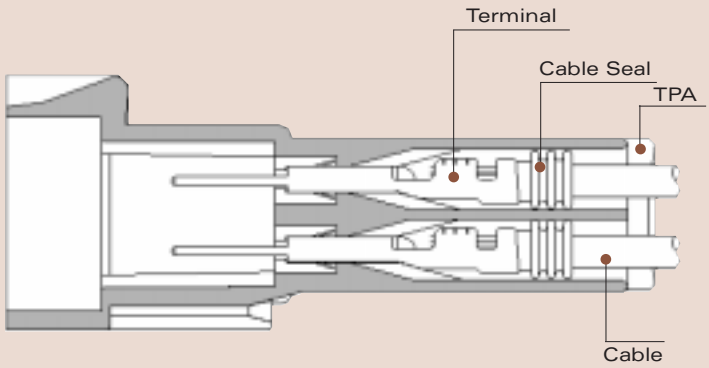
D PART NO: **12184935**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF

Downloaded from Arrow.com.

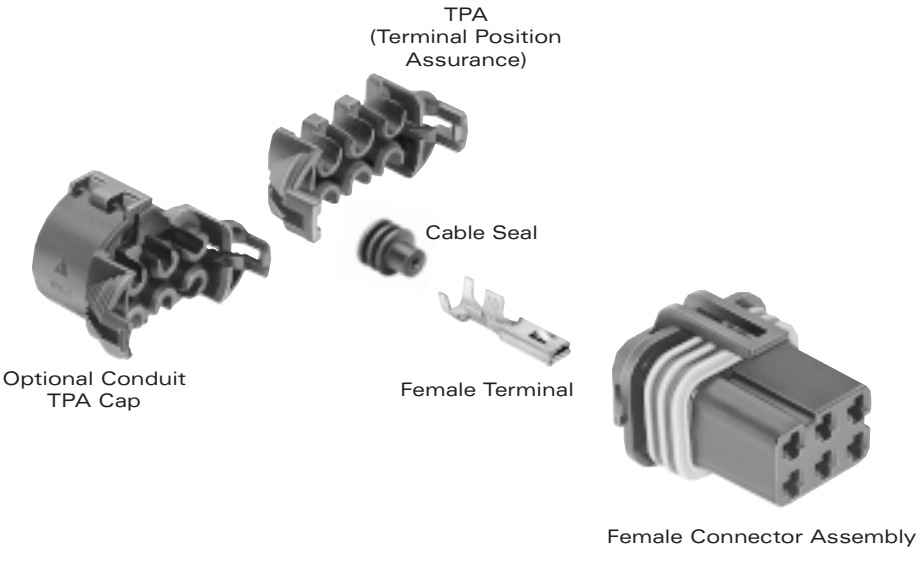
Cross Sectional View



Female Connector Assembly



Male Connector



2.8 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12158098	1.5-0.5	Copper Nickel Silicon Alloy	Tin
12185008	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 DUCON CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12089442	12048087	2.00-1.20	Silicone	Blue
10720769	15363981	2.40-1.60	Silicone	White
15363992	12048086	2.90-2.00	Silicone	Dk. Red

2.8 FEMALE CONNECTOR ASSEMBLY SEALED

# Cavities	Connector	Color	Material	TPA
6	15344052	Black	PA6	12185000
Optional Conduit	TPA Cap	Black	PA6	10717815

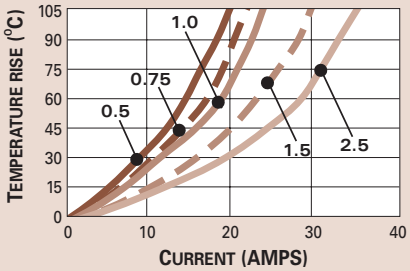
Downloaded from Arrow.com.

Sealed System Application Information

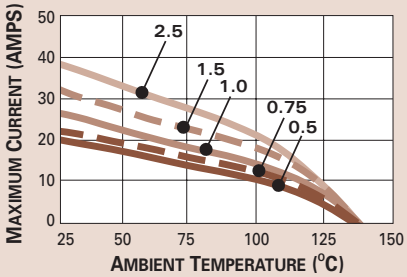
CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 33
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 6.0
BLADE WIDTH (mm): 2.8

2.8 SERIES TERMINALS–Tin Plated

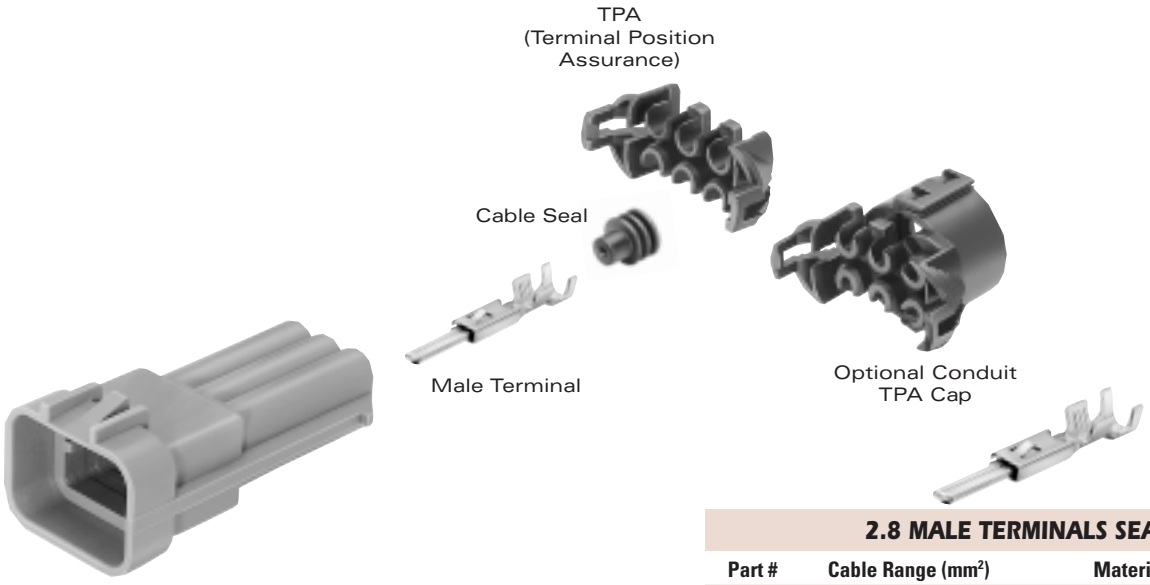
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



2.8 MALE CONNECTOR SEALED

# Cavities	Connector	Color	Material	TPA
6	12185126	Gray	PA6	12185000
Optional Conduit	TPA Cap	Black	PA6	10717815

2.8 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12185129	1.5-0.5	Copper Nickel Silicon Alloy	Tin
12185237	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 DUCON CAVITY PLUGS*

Part #	Cavity Inside Diameter	Material	Color
15337197	5.2mm	Silicone	White
10730124	5.2mm	Silicone	Green

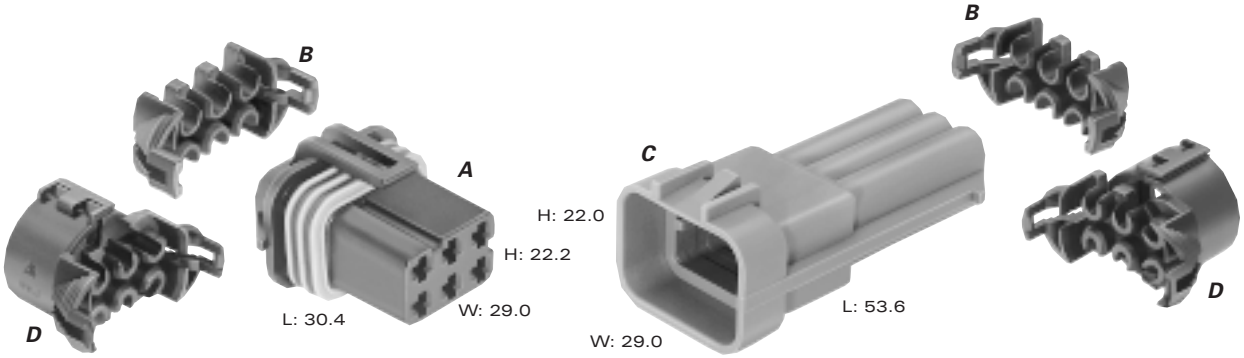
*Cavity plugs seal unused female and male cavitites.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Ducon Connection Systems have been validated using DIN Cable Standards.

Downloaded from Arrow.com.



Total Mated Length: 67.0mm

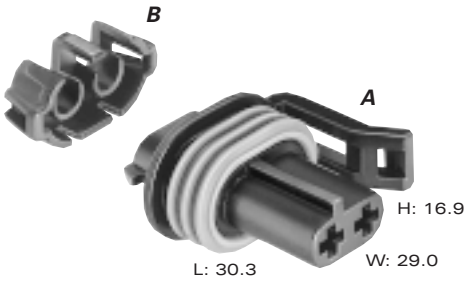
A PART NO: **15344052**
DESCRIPTION: Connector Assembly 6F
SIZE: 30.4L x 22.2H x 29.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 206

B PART NO: **12185000**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

C PART NO: **12185126**
DESCRIPTION: Connector 6M (Clip Slot)
SIZE: 53.6L x 22.0H x 29.0W
COLOR: Gray
MATERIAL: PA6
TERMINALS: See Page 207

D PART NO: **10717815 (Optional)**
DESCRIPTION: Conduit TPA Cap
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

Downloaded from Arrow.com.



A PART NO: **12185026*(Black)**
15344040*(Blue)
15344042*(White)

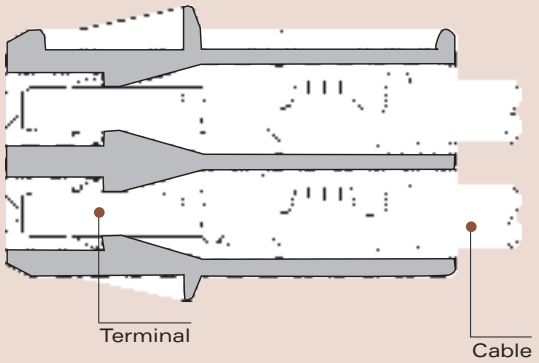
DESCRIPTION: Connector 2F
SIZE: 30.3L x 16.9H x 29.0W
MATERIAL: PA6
TERMINALS: See Page 206
*DIFFERENT INDEXING FEATURES.

B PART NO: **12185027**

DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

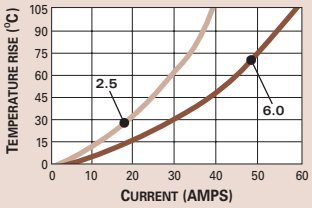
Downloaded from Arrow.com.

Unsealed System Application Information

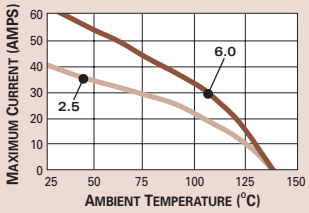


4.8 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.5-6.0
CURRENT RANGE (AMPS): 45
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 6.8
BLADE WIDTH (mm): 4.8

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Secondary Lock

Female Terminal

Female Connector

4.8 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12185227	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147596	2.5-1.5	Copper Nickel Silicon Alloy	Tin
12147597	6.0-4.0	Copper Nickel Silicon Alloy	Tin

4.8 FEMALE CONNECTORS UNSEALED

# Cavities	Connector	Color	Material	Secondary Lock
5	12147099	Black	PA6	12147098
6	15344072	Black	PA6	10717827
9	10740403	Black	PA6	10740404
12	10717711	Black	PA6	10717826

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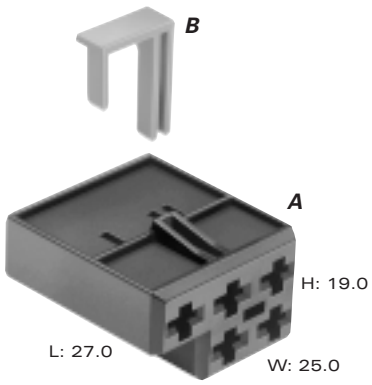
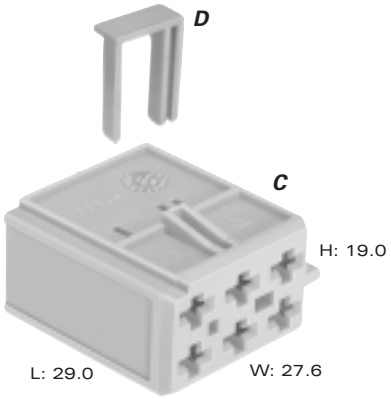


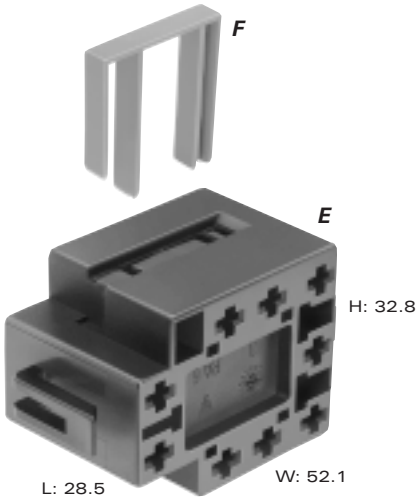
A PART NO: **12147099**
DESCRIPTION: Connector 5F
SIZE: 27.0L x 19.0H x 25.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 210
TYPICAL APP: Blower Switch, Heater

B PART NO: **12147098**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF



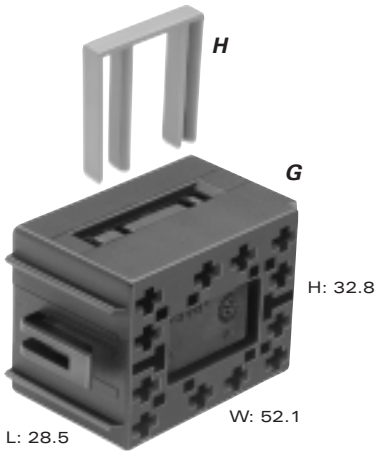
C PART NO: **15344072**
DESCRIPTION: Connector 6F
SIZE: 29.0L x 19.0H x 27.6W
COLOR: Blue
MATERIAL: PA6
TERMINALS: See Page 210
TYPICAL APP: Blower Switch, Heater

D PART NO: **10717827**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF



E PART NO: **10740403**
DESCRIPTION: Connector 9F
SIZE: 28.5L x 32.8H x 52.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 210
TYPICAL APP: Blower Switch

F PART NO: **10740404**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF



G PART NO: **10717711**
DESCRIPTION: Connector 12F
SIZE: 28.5L x 32.8H x 52.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 210
TYPICAL APP: Blower Switch

H PART NO: **10717826**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF

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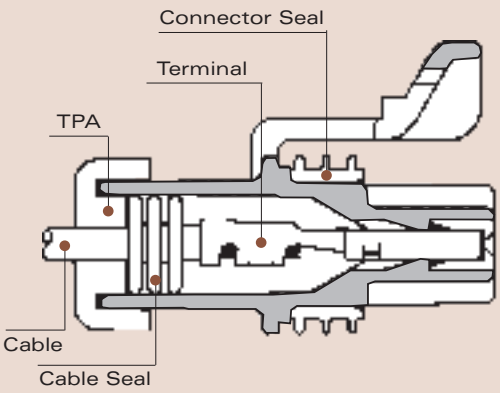
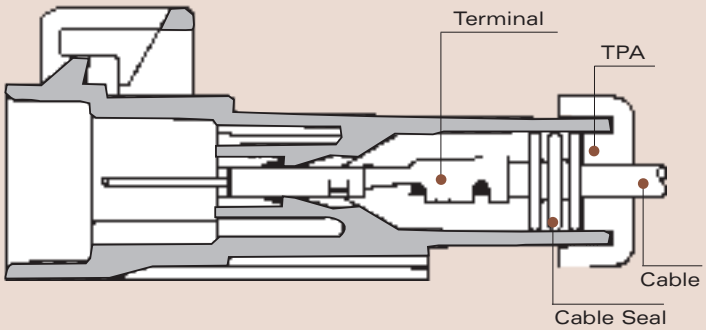
Cross Sectional View



Female Connector Assembly



Male Connector

TPA
(Terminal Position Assurance)

Female Terminal

Female Connector

6.3 FEMALE TERMINALS SEALED

Part #	Cable Range (mm^2)	Material	Plating
12147473	2.5-1.5	Copper Nickel Silicon Alloy	Tin
12147474	6.0-4.0	Copper Nickel Silicon Alloy	Tin

6.3 DUCON CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
10730240	10720847	2.40-1.60	Silicone	Lt. Brown
12059259	10720844	2.90-2.00	Silicone	Dk. Red
10730241	10738785	3.80-2.80	Silicone	Gray
15344032	10738786	4.50-3.60	Silicone	Blue

6.3 FEMALE CONNECTOR ASSEMBLY SEALED

# Cavities	Connector	Color	Material	TPA
2	12147067	Gray	PA66	12147060

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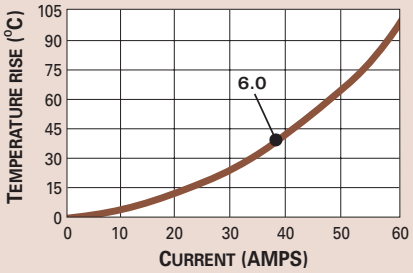
Sealed System Application Information

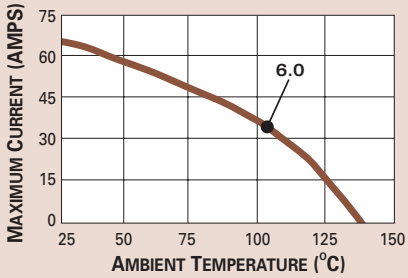
CABLE RANGE (mm²): 1.5-6.0
CURRENT RANGE (AMPS): 55
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 10.8
BLADE WIDTH (mm): 6.3

6.3 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

Male Connector

Male Terminal

TPA
(Terminal Position Assurance)

6.3 MALE CONNECTOR SEALED

# Cavities	Connector	Color	Material	TPA
2	15344054	Black	PA66	12147060

6.3 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15344632	2.5-1.5	Copper Nickel Silicon Alloy	Tin
15344631	6.0-4.0	Copper Nickel Silicon Alloy	Tin

6.3 DUCON CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12059255	9.8mm	Silicone	Green

*Cavity plugs seal unused female and male cavitites.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Ducon Connection Systems have been validated using DIN Cable Standards.

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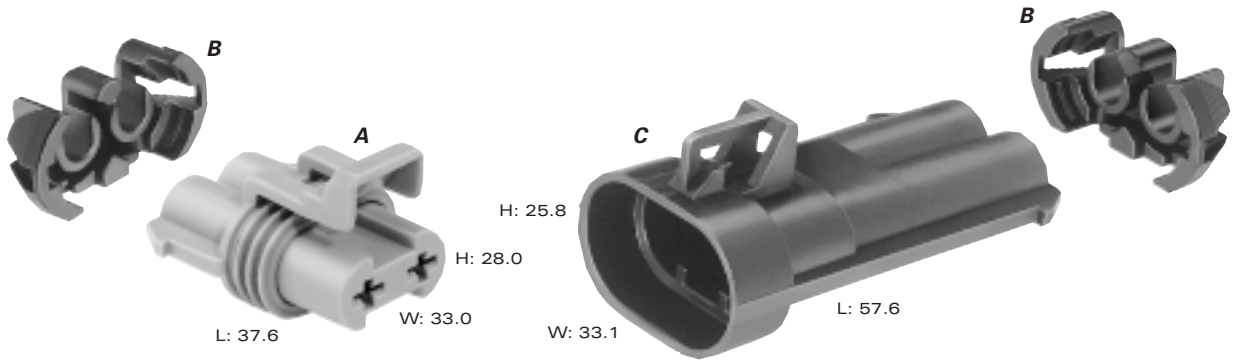

Total Mated Length: 80.0mm

A PART NO: **12147067**
DESCRIPTION: Connector 2F Assembly
SIZE: 37.6L x 28.0H x 33.0W
COLOR: Gray
MATERIAL: PA66
TERMINALS: See Page 212

B PART NO: **12147060**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6

C PART NO: **15344054**
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 57.6L x 25.8H x 33.1W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 213

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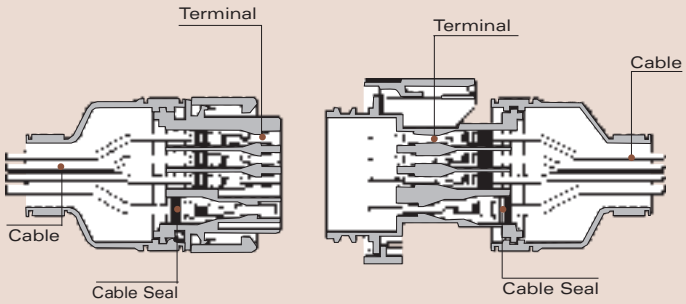
Downloaded from Arrow.com.

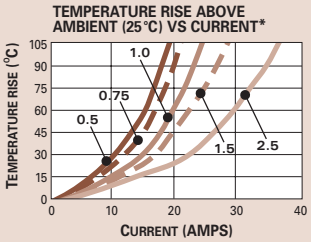
Sealed System Application Information

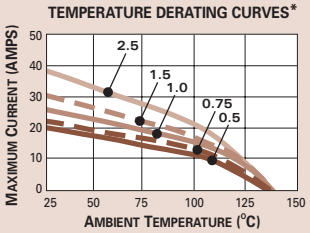


Female Connector Assembly

Male Connector

1.5 SERIES TERMINALS–Tin Plated





CABLE RANGE (mm²): 0.5-1.0
CURRENT RANGE (AMPS): 25
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

1.5 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12158097	1.0-0.5	Copper Nickel Silicon Alloy	Tin
10717964	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 FEMALE TERMINALS SEALED

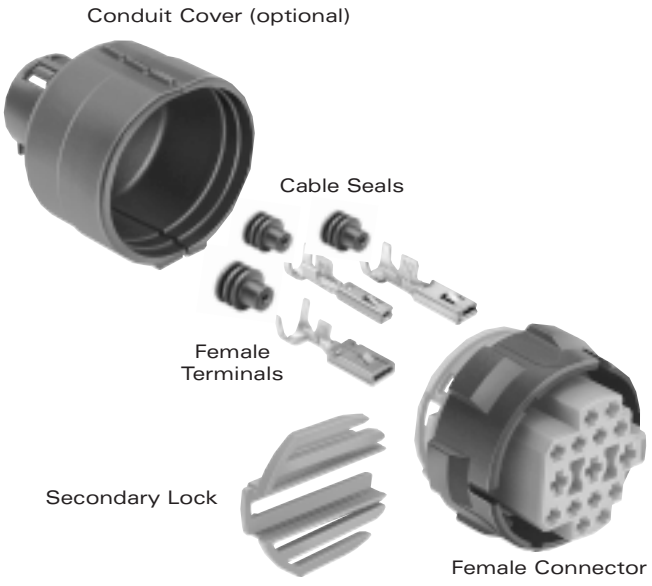
Part #	Cable Range (mm²)	Material	Plating
12158098	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12185008	2.5-1.5	Copper Nickel Silicon Alloy	Tin

4.8 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12185009	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12185550	2.5-1.5	Copper Nickel Silicon Alloy	Tin
10717927	6.0-4.0	Copper Nickel Silicon Alloy	Tin

1.5 & 2.8 DUCON CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12089442	12048087	2.00-1.20	Silicone	Blue
10720769	15363981	2.40-1.60	Silicone	White
15363992	12048086	2.90-2.00	Silicone	Dk. Red



MIXED FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector	Color	Material	Secondary Lock
15	15344069	Orange	PA66	12185005
20	12158095	Blue	PA66	12158096

4.8 DUCON CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12052931	12052930	2.00-1.20	Silicone	Yellow
12048433	12048441	2.90-2.00	Silicone	White
12052452	12048442	3.80-2.80	Silicone	Red
12052453	12048443	4.50-3.80	Silicone	Violet

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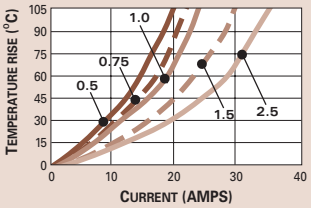
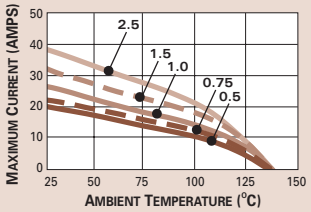
Sealed System Application Information

2.8 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*

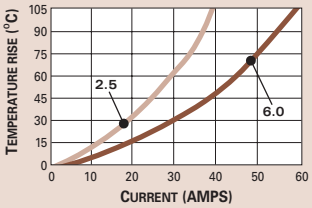


CABLE RANGE (mm²): 0.5-1.0
CURRENT RANGE (AMPS): 33
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV

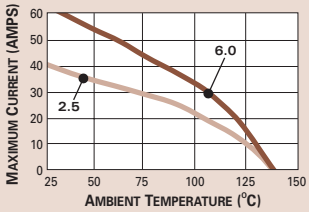
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

4.8 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



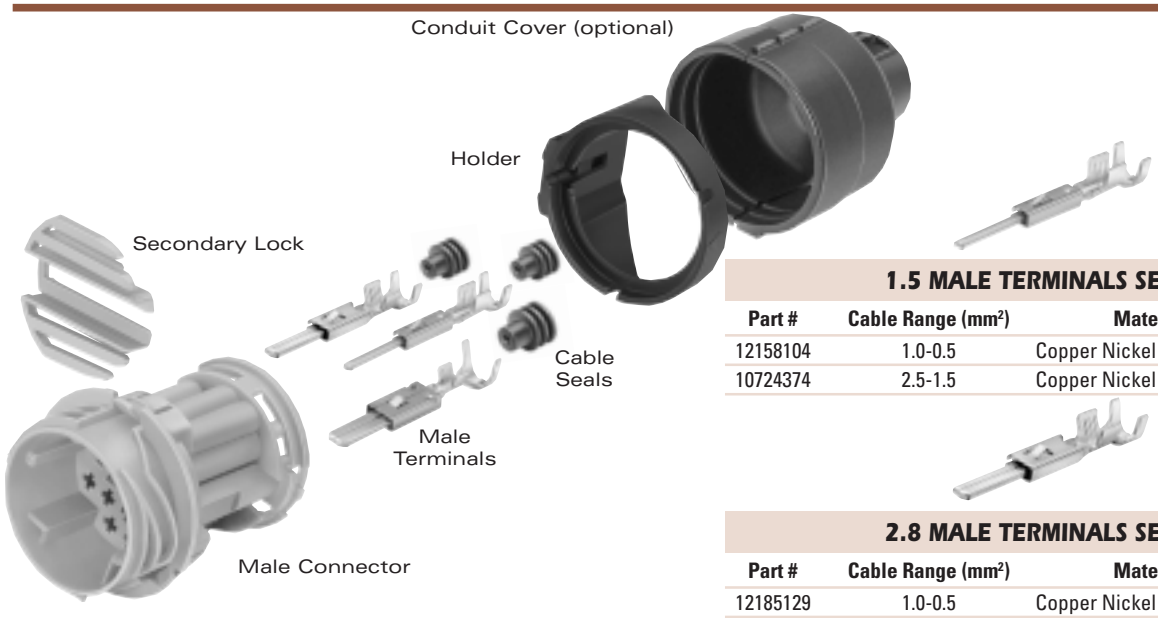
TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 45
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 4.8

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



MIXED MALE CONNECTORS SEALED

# Cavities	Connector	Color	Material	Secondary Lock
15	10740396	Orange	PA66	12185005
20	10717689	Blue	PA66	12158096

1.5 & 2.8

4.8

1.5 & 2.8 DUCON CAVITY PLUGS*

Part #	Cavity Inside Diameter	Material	Color
15337197	5.2mm	Silicone	White
10730124	5.2mm	Silicone	Green

4.8 DUCON CAVITY PLUG*

12066082	8.5mm	Silicone	Green

*Cavity plugs seal unused female and male cavitites.

1.5 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12158104	1.0-0.5	Copper Nickel Silicon Alloy	Tin
10724374	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12185129	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12185237	2.5-1.5	Copper Nickel Silicon Alloy	Tin

4.8 MALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12185235	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12185236	2.5-1.5	Copper Nickel Silicon Alloy	Tin
10724435	6.0-4.0	Copper Nickel Silicon Alloy	Tin

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Ducon Connection Systems have been validated using DIN Cable Standards.

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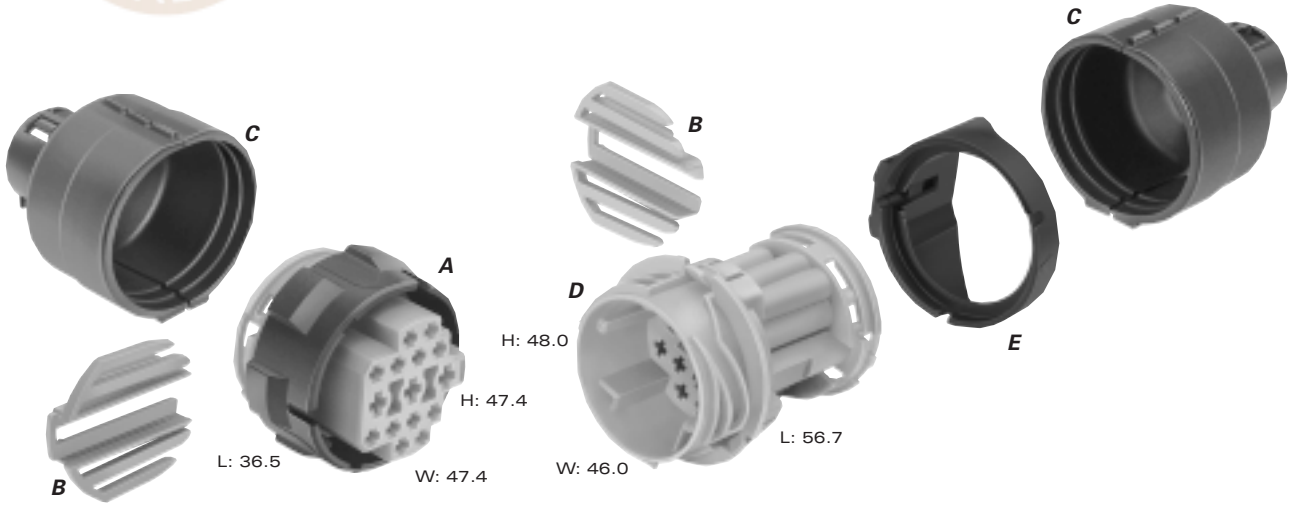


Total Mated Length: 148.0mm

A
PART NO: **15344069 (Orange)**
DESCRIPTION: Connector 15F
PART NO: **12185004 (Green)**
DESCRIPTION: Connector 11F
PART NO: **15344061 (Brown)**
DESCRIPTION: Connector 6F
SIZE: 36.5L x 47.4H x 47.4W
MATERIAL: PA66
TERMINALS: See Page 216
SEALS/PLUGS: See Page 216

B
PART NO: **12185005**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

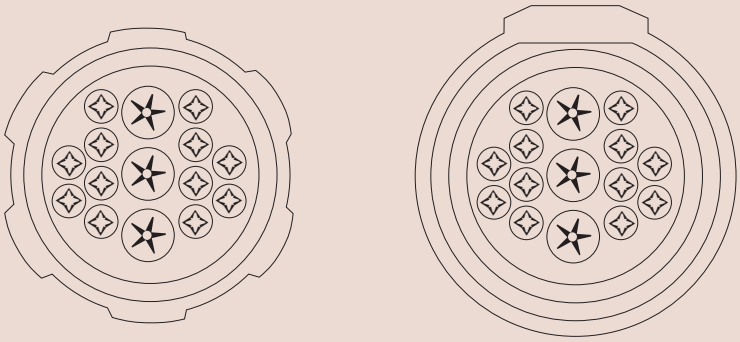
C
PART NO: **12197134 (Optional)**
DESCRIPTION: Cover
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6
NOTE: Optional 90° Cover Available.

D
PART NO: **10740396 (Orange)**
DESCRIPTION: Connector 15M
PART NO: **12185278 (Green)**
DESCRIPTION: Connector 11M
PART NO: **15344060 (Brown)**
DESCRIPTION: Connector 6M
SIZE: 56.7L x 48.0H x 46.0W
MATERIAL: PA66
TERMINALS: See Page 217

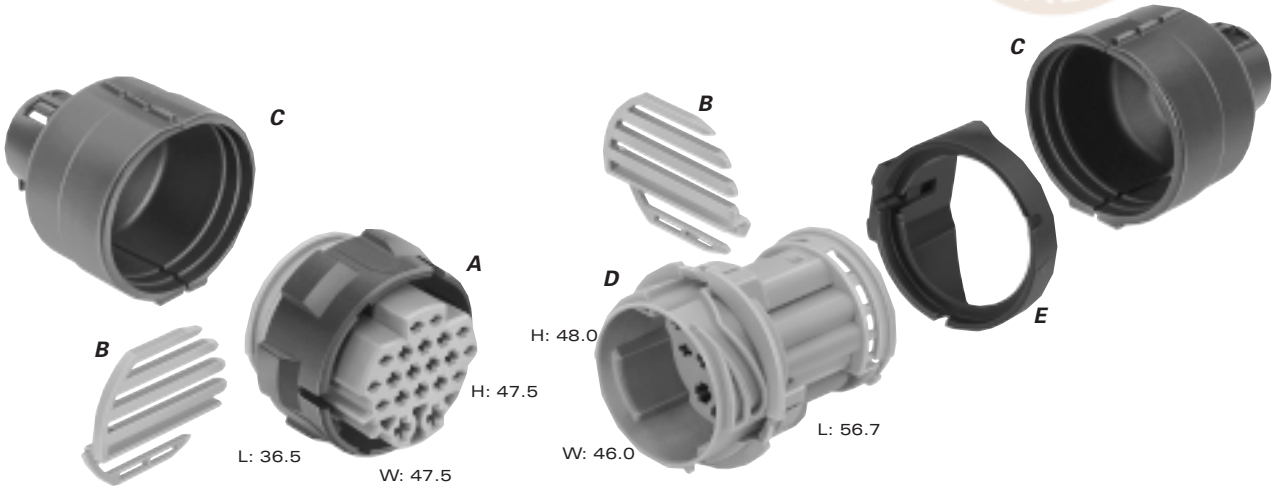
E
PART NO: **12185277 (Optional)**
DESCRIPTION: Holder
COLOR: Black
MATERIAL: PA6 15% GF
NOTE: Other holders available.

KEY:
✧ 2.8 SERIES
✲ 4.8 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



Downloaded from Arrow.com.



Total Mated Length: 148.0mm

A
PART NO: 12158095
DESCRIPTION: Connector 20F
SIZE: 36.5L x 47.5H x 47.5W
COLOR: Blue
MATERIAL: PA66
TERMINALS: See Page 216
SEALS/PLUGS: See Page 216

B
PART NO: 12158096
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

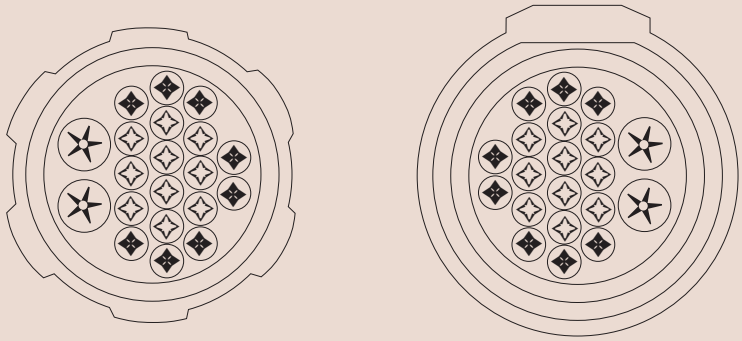
C
PART NO: 12197134 (Optional)
DESCRIPTION: Cover
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6
NOTE: Optional 90˚ Cover Available.

D
PART NO: 10717689
DESCRIPTION: Connector 20M
SIZE: 56.7L x 48.0H x 46.0W
COLOR: Blue
MATERIAL: PA66
TERMINALS: See Page 217
SEALS/PLUGS: See Page 217

E
PART NO: 12185277 (Optional)
DESCRIPTION: Holder
COLOR: Black
MATERIAL: PA6 15% GF
NOTE: Other holders available.

KEY:
- ◆ 1.5 SERIES
- ✧ 2.8 SERIES
- ✳ 4.8 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



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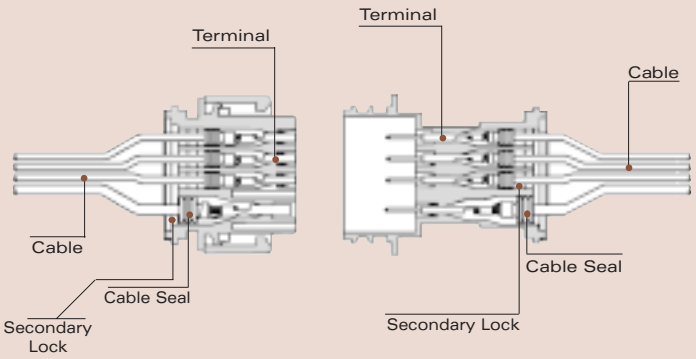
• DOOR CONNECTIONS

Door connectors provide environmental sealing in two ways:
1. Using sealed terminal systems.
2. Using unsealed terminal systems and protective grommets.

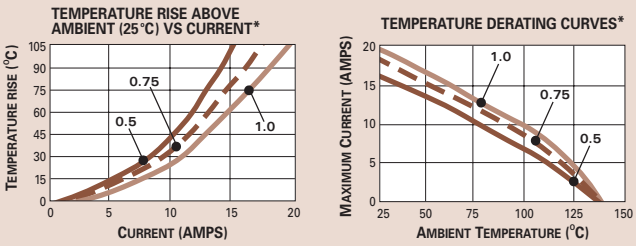
Contact your regional support representative for assistance in choosing the proper design for your application.

Sealed System Application Information



Female Connector Assembly | **Male Connector**

0.8 SERIES TERMINALS–Tin Plated



CABLE RANGE (mm²): 0.5-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 3.0
BLADE WIDTH (mm): 0.8

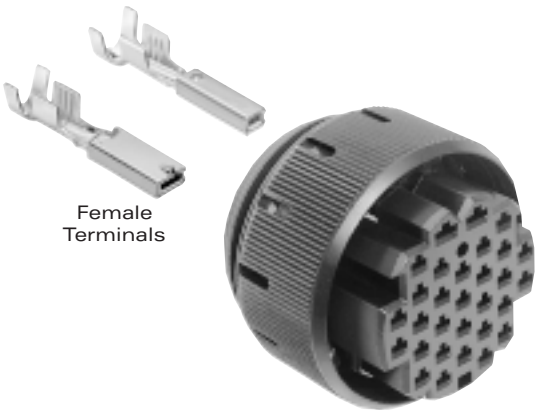
*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.

0.8 FEMALE TERMINAL UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12131423	1.0-0.5	Copper Nickel Silicon Alloy	Tin

0.8 FEMALE TERMINAL SEALED

Part #	Cable Range (mm²)	Material	Plating
10717928	1.0-0.5	Copper Nickel Silicon Alloy	Tin



Female Terminals

Female Connector

1.5 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12147302	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147303	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12147451	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147451	2.5-1.5	Copper Nickel Silicon Alloy	Tin

0.8 DUCON CABLE SEAL

Part #	Cable Range (mm²)	Material	Color
15344324	2.1-1.2	Silicon	Dk. Red

MIXED FEMALE CONNECTORS SEALED

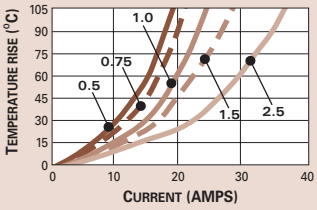
# Cavities	Connector	Color	Material
30	12147161	Black	PA66
40	15327160	Black	PA66 15% GF

Downloaded from Arrow.com.

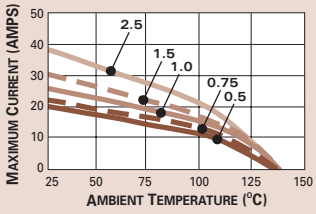
Sealed System Application Information

1.5 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



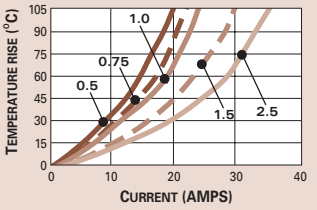
TEMPERATURE DERATING CURVES*



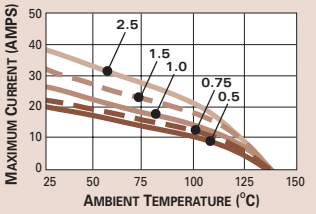
CABLE RANGE (mm²): 0.5-1.0
CURRENT RANGE (AMPS): 25
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 1.5

2.8 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 33
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): .....
..... Connector Dependent
BLADE WIDTH (mm): 2.8

*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representatives at the number listed below.

Male Connector

Male Terminals

0.8 MALE TERMINAL UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15327159	1.0-0.5	Copper Nickel Silicon Alloy	Tin

0.8 MALE TERMINAL SEALED

Part #	Cable Range (mm²)	Material	Plating
10724459	1.0-0.5	Copper Nickel Silicon Alloy	Tin

1.5 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12147299	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147300	2.5-1.5	Copper Nickel Silicon Alloy	Tin

2.8 MALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12147400	1.0-0.5	Copper Nickel Silicon Alloy	Tin
12147301	2.5-1.5	Copper Nickel Silicon Alloy	Tin

MIXED MALE CONNECTORS SEALED

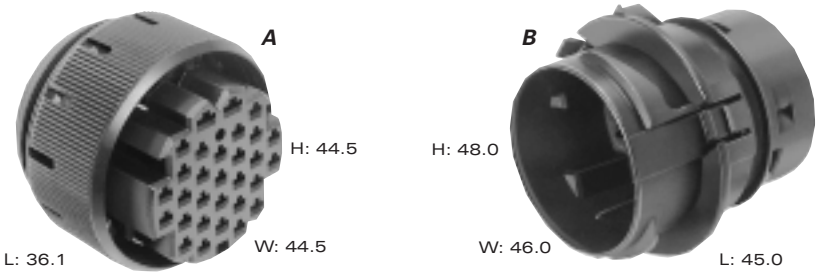
# Cavities	Connector	Color	Material
30	12147066	Black	PA66
40	10730244	Black	PA66 15% GF

0.8 DUCON CABLE SEAL

Part #	Cable Range (mm²)	Material	Color
15344324	2.1-1.2	Silicon	Dk. Red

Downloaded from Arrow.com.

• DOOR CONNECTIONS



Total Mated Length: 59.6mm

A
PART NO: **12147161**
DESCRIPTION: 1.5/2.8 Connector 30F
SIZE: 36.1L x 44.5H x 44.5W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 220

B
PART NO: **12147066**
DESCRIPTION: 1.5/2.8 Connector 30M
SIZE: 45.0L x 48.0H x 46.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 221

SECTION NOTES:

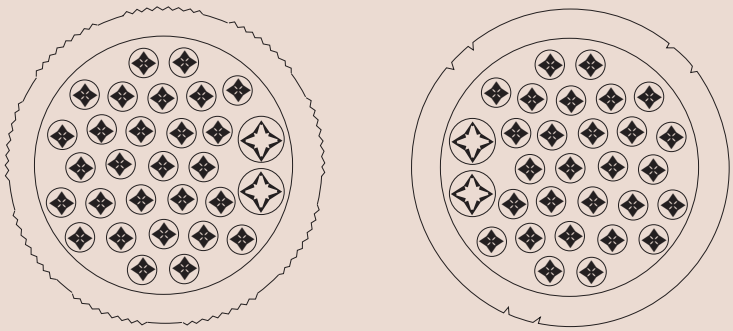
Contact your regional support representative at the number listed below.

- Door grommets available from manufacturer.

KEY:

- ✦ 1.5 SERIES
- ✧ 2.8 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



http://delphi.com/products/connect

North American Region	European Region	Asia Pacific Region	South American Region
1-800-PACKARD	49-202-291-2000	65-730-9900	55-12-378-2002

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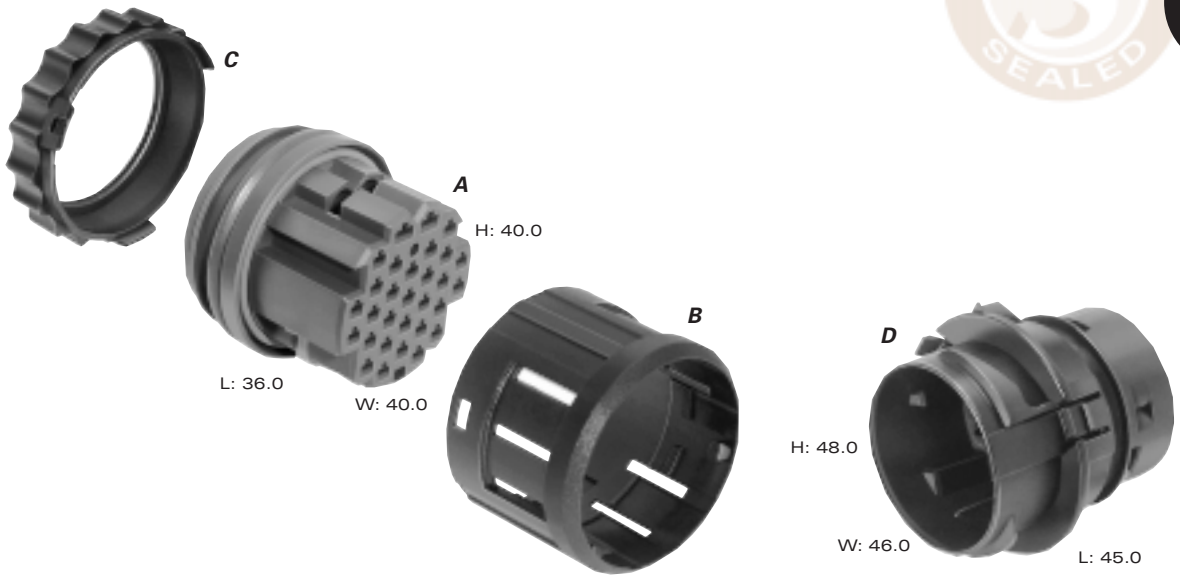


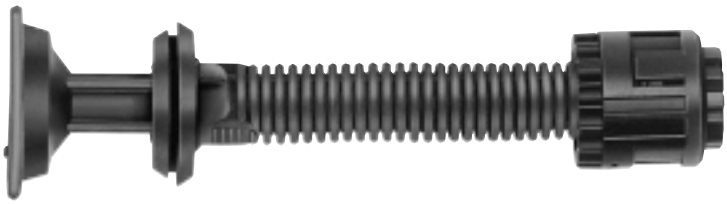
Total Mated Length: 71.6mm

A PART NO: **12185088**
DESCRIPTION: 1.5/2.8 Connector 30F
SIZE: 36.0L x 40.0H x 40.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 220

B PART NO: **12185079**
DESCRIPTION: Ring
COLOR: Black
MATERIAL: PA6 15% GF

C PART NO: **12185082**
DESCRIPTION: Connector Ring
COLOR: Black
MATERIAL: PA6 15% GF

D PART NO: **12147066**
DESCRIPTION: 1.5/2.8 Connector 30M
SIZE: 45.0L x 48.0H x 46.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 221



SECTION NOTES:

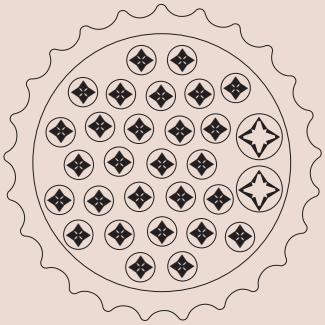
Contact your regional support representative at the number listed below.

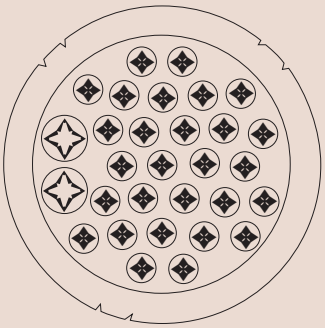
- Door grommets available from manufacturer.

KEY:

- ◆ 1.5 SERIES
- ◇ 2.8 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.





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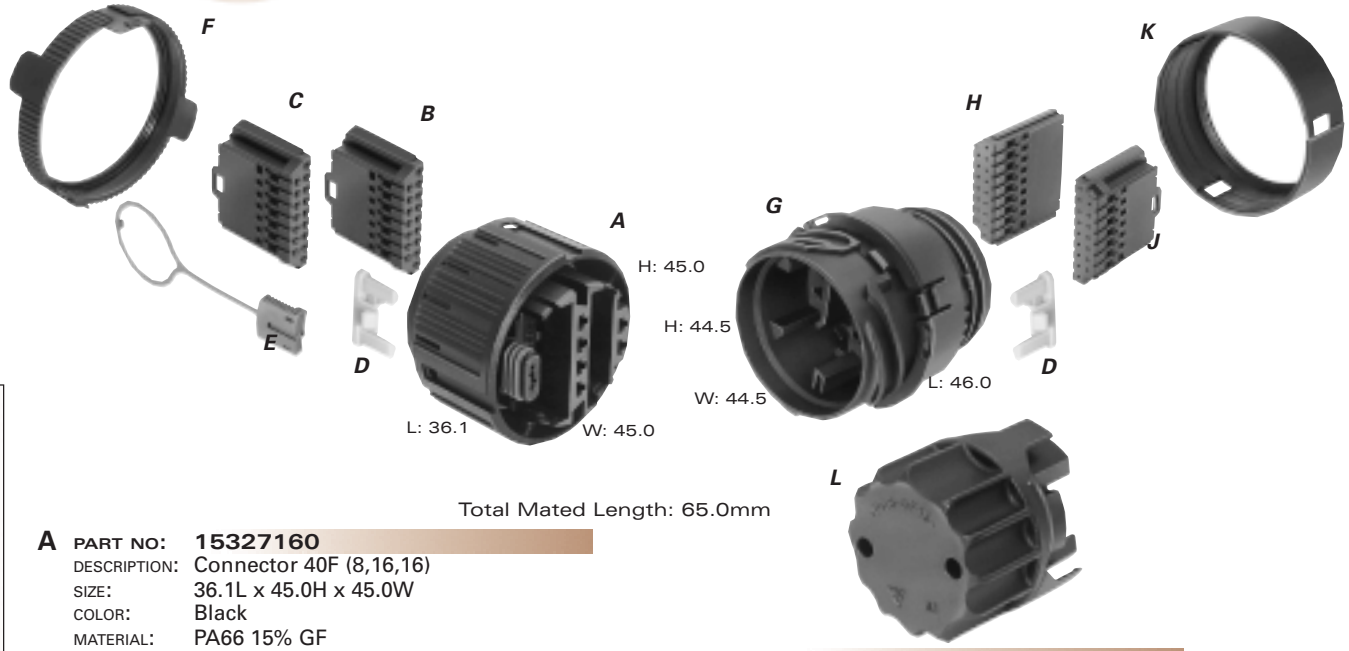
• DOOR CONNECTIONS



Total Mated Length: 65.0mm

A PART NO: **15327160**
DESCRIPTION: Connector 40F (8,16,16)
SIZE: 36.1L x 45.0H x 45.0W
COLOR: Black
MATERIAL: PA66 15% GF
TERMINALS: .8F, 2.8F, See Page 220
SEALS: See Page 220

B PART NO: **15327654**
DESCRIPTION: Connector Module1 16F
COLOR: Black
MATERIAL: PA66

C PART NO: **15327655**
DESCRIPTION: Connector Module2 16F
COLOR: Black
MATERIAL: PA66

D PART NO: **10717849**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Yellow
MATERIAL: PA66

E PART NO: **10717837**
DESCRIPTION: CPA
COLOR: Red
MATERIAL: PA66

F PART NO: **15327164**
DESCRIPTION: Connector Ring
COLOR: Black
MATERIAL: PA66 15% GF

G PART NO: **10730244**
DESCRIPTION: Connector 40M (8,16,16)
SIZE: 46.0L x 44.5H x 44.5W
COLOR: Black
MATERIAL: PA66 15% GF
TERMINALS: .8M, 2.8M, See Page 221
SEALS: See Page 221

H PART NO: **15327154**
DESCRIPTION: Connector Module1 16M
COLOR: Black
MATERIAL: PA66

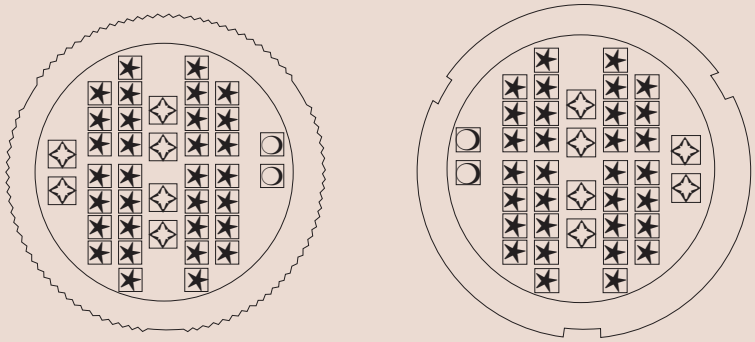
J PART NO: **15327155**
DESCRIPTION: Connector Module2 16M
COLOR: Black
MATERIAL: PA66

K PART NO: **15327153**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: PA66 15% GF

L PART NO: **10728148**
DESCRIPTION: TMS Cover
COLOR: Black
MATERIAL: PA66 15% GF

KEY: ❍ 0.8 SERIES(Sealed)
✶ 0.8 SERIES(Unsealed)
✧ 2.8 SERIES

Mixed connectors feature a combination of different terminal cavities, as indicated by the key.



http://delphi.com/products/connect

North American Region	European Region	Asia Pacific Region	South American Region
1-800-PACKARD	49-202-291-2000	65-730-9900	55-12-378-2002

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Special Products

Lamp Sockets, Splice Savers, Weather-Pack, VF Connections & DS Connections

Lamp Socket Features

- Advanced bulb to terminal interface technology
- Accomodates a wide variety of bulbs—B1, C2 bayonet,W2, W3 wedge, H4 and H7 with GT280 interface
- Available sealed or unsealed systems
- Multiple focal lengths
- Right angle or axial mounting features with easy assembly and release provisions

Weather-Pack Features

- **C**onnector **P**osition **A**ssurance (**CPA**)
- **T**erminal **P**osition **A**ssurance (**TPA**)
- 20 Amps continuous maximum current rating
- Sealed system
- Pin and Sleeve configuration
- Dual locking tabs on terminals
- Low energy, low voltage capability
- -40˚C to 125˚C temperature range

VF Series Features

- Accomodates a wide variety of devices
- Small overall dimensions
- **T**erminal **P**osition **A**ssurance (**TPA**)
- **C**onnector **P**osition **A**ssurance (**CPA**)

DS Series Features

- Fuel injector applications
- High sealing protection
- Reliable electrical interface
- Secure locking mechanism

Splice Saver Features

- Eliminates the need for solder
- Flexible configuration
- Uses 280 Metri-Pack or 150 GT terminals
- Uses ISO or SAE compatible terminals
- Low profile connector with cap lock
- Available in sealed/unsealed and grounded/non-grounded versions

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• LAMP SOCKETS

Lamp Sockets are a comprehensive and diverse product line featuring sophisticated connection systems technology. Available connection systems accomodate virtually every size and type of light bulb, as well as all varieties of bulb mounting features.

Wedge Base

Insert

LAMP SOCKET APPLICATION GUIDELINES

Primary Use	Application	Socket Style	Bulb Base Type	Bulb Size	Typical Lamp Number	Part Number(s)	Page Number	Description
Stop, Turn, Backup and Cornering Lights	Sealed	Right Angle	W-3 Wedge	S-8	3156	12160393	200	Single Filament
Stop/Tail, Park/Turn, Backup Lights and Cornering Lights	Sealed	Right Angle	W-3 Wedge	S-8	3057	12160394, 12160395	200	Dual Filament
Stop/Tail, Park/Turn, Backup Lights and Cornering Lights	Sealed	Axial	W-3 Wedge	S-8	3057	12191243, 12092379	201	Dual Filament
Glove Box, Ash Tray Instrument Illumination and Courtesy Lights	Unsealed	Axial	W-2 Wedge	T-3 1/4	194	12162223, 12059952	202	Single Filament
Side Marker Lamps, Backup and Center High Mounted Stop Lights	Sealed Sealed	Axial Axial	W-2 Wedge W-2 Wedge	T-3 1/4 T5	168 912	15317651, 12110053 12110053	203	Single Filament Single Filament
Side Marker Lamps, Backup and Center High Mounted Stop Lights	Sealed	Right Angle	W-2 Wedge	T-3 1/4	168	12146418	203	Single Filament
Stop, Turn, Backup and Cornering Lights	Sealed	Right Angle	B-1 Bayonet	S-8	1156	12160386	204	Single Filament
Stop/Tail, Park/Turn, Backup Lights and Cornering Lights	Sealed	Right Angle	C-2 Bayonet	S-8	2057	12160390, 12160392	204	Dual Filament

LAMP SOCKET BASES

Part Number	Application	Description	Color	Material	TPA	Insert	Seal
12160393	Sealed	W-3 Right Angle Wedge Base	Lt. Gray	PA66 HS IM	–	12177161	12129909
12160394	Sealed	W-3 Right Angle Wedge Base	Natural	PA66 HS IM	–	12177163	12129909
12160395	Sealed	W-3 Right Angle Wedge Base	Md. Gray	PA66 HS IM	–	12177163	12129909
12191243	Sealed	W-3 Axial Wedge Base	Dk. Gray	PA66 HS IM 14% GF	15305473	–	12129909 12020720
12092379	Sealed	W-3 Axial Wedge Base	Natural	PA66 MF HS	15305473	–	12129909 12020720
12162223	Unsealed	W-2 Axial Wedge Base	Clear	PC	12052490	–	–
12059952	Unsealed	W-2 Axial Wedge Base	Black	PA6	15324722	–	–
12110053	Sealed	W-2 Axial Wedge Base	Lt. Gray	PA66 HS 33% GF	12110054	–	–
15317651	Sealed	W-2 Axial Wedge Base	Lt. Gray	PA66 HS 33% GF	12191522	–	15317652
12146418	Sealed	W-2 Right Angle Wedge Base	Lt. Gray	PA66 HS IM	–	12146419	12146398
12160386	Sealed	B-1 Right Angle Bayonet Base	Lt. Gray	PA66 HS IM	12129057	–	12129909
12160390	Sealed	C-2 Right Angle Bayonet Base	Natural	PA66 HS IM	12129051	–	12129909
12160392	Sealed	C-2 Right Angle Bayonet Base	Md. Gray	PA66 HS IM	12129051	–	12129909

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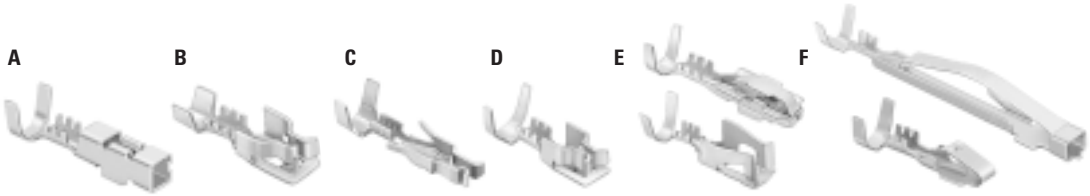

LAMP SOCKET TERMINALS

Series	Type	Application	Cable Seal Series	Terminal Part #	Cable Range	Material	Plating
A							
W-2, W-3 Right Angle	–	Sealed	280	12066639	2.0-1.0	Tin Brass	Tin
W-2, W-3 Right Angle	–	Sealed	280	12066638	0.80-0.50	Tin Brass	Tin
W-2, W-3 Right Angle	–	Sealed	280	12186320	0.35	Tin Brass	Tin
B							
W-2 Axial	–	Unsealed	–	12089139	0.80-0.50	Brass	Copper/Tin
W-2 Axial	–	Unsealed	–	12089137	1.0 (2 Req'd.) 0.80 (2 Req'd.)	Brass	Copper/Tin
C							
W-2 Axial	–	Sealed	280	12176852	0.80	Brass	Tin
W-2 Axial	–	Sealed	280	12176853	0.50-0.35	Brass	Tin
D							
W-2 Axial	–	Sealed	480	12124471	1.0-0.80	Brass	Copper/Tin
W-2 Axial	–	Sealed	480	12124598	0.50	Brass	Copper/Tin
E							
W-3 Axial	Contact	Sealed	280	12092058	0.80-0.50	Tin Brass	Tin
W-3 Axial	Contact	Sealed	280	12088187	0.50-0.35	Tin Brass	Tin
W-3 Axial	Ground	Sealed	630	12092030	0.80-0.50	Tin Brass	Tin
F							
B-1, C-2	Contact	Sealed	280	12129052	1.0-0.80	Stainless Steel	Tin
B-1, C-2	Contact	Sealed	280	15304622	0.50-0.35	Stainless Steel	Tin
B-1, C-2	Ground	Sealed	280	12129053	1.0-0.80	Tin Brass	Tin
B-1, C-2	Ground	Sealed	280	15304621	0.50-0.35	Tin Brass	Tin

METRI-PACK CABLE SEAL CHART

Series	Reel Part #	Loose Part #	Cable Diameter	Material	Color
280	12015284	12015323	2.85-2.03	Silicone	Green
280	12034365	12015899	1.70-1.29	Silicone	Dk. Red
280	12041352	12041351	2.42-2.03	Silicone	Tan
280	12089444	12089679	2.15-1.60	Silicone	Purple
480	12048433	12048441	2.85-2.01	Silicone	White
480	12052931	12052930	2.15-1.60	Silicone	Yellow
630	12077760	12077759	2.15-1.65	Silicone	Tan

SECTION NOTES:

Contact your regional support representative at the number listed below.

- When an unsealed application is required use 12020720 gasket in place of seal 12129909.

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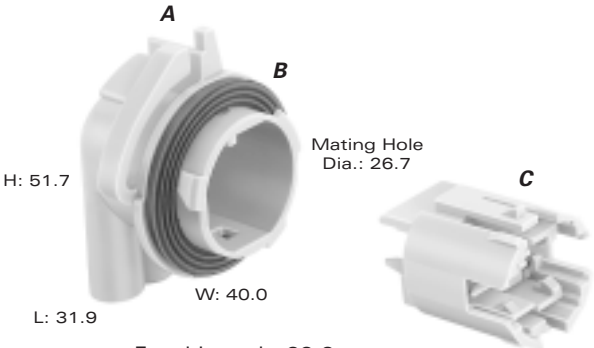
A PART NO: **12160393 (Lt. Gray)**
15326290 (Lt. Green)
15326291* (Natural)

DESCRIPTION: W-3 Right Angle Wedge Base
SIZE: 26.7 Hole Dia. x 31.9L x 51.7H x 40.0W
MATERIAL: PA66 HS IM
TERMINALS: See A, Page 229
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #3156
*NOTE: Focal Length: 29.1mm.

B PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

C PART NO: **12177161**
DESCRIPTION: Insert with Terminals
COLOR: Lt. Gray
MATERIAL: PA66 HS IM

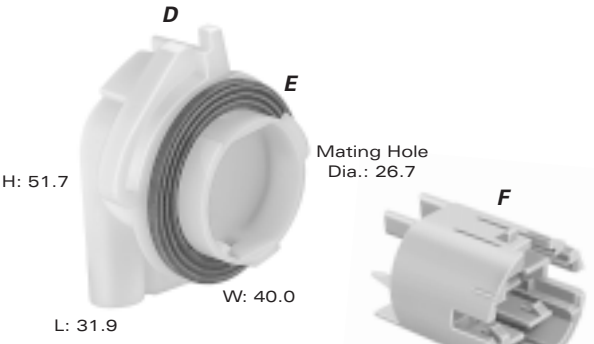


Focal Length: 22.2mm
*29.1mm

D PART NO: **12160394**
DESCRIPTION: W-3 Right Angle Wedge Base
SIZE: 26.7 Hole Dia. x 31.9L x 51.7H x 40.0W
COLOR: Natural
MATERIAL: PA66 HS IM
TERMINALS: See A, Page 229
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #3057

E PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

F PART NO: **12177163**
DESCRIPTION: Insert with Terminals
COLOR: Beige
MATERIAL: PA66 HS IM

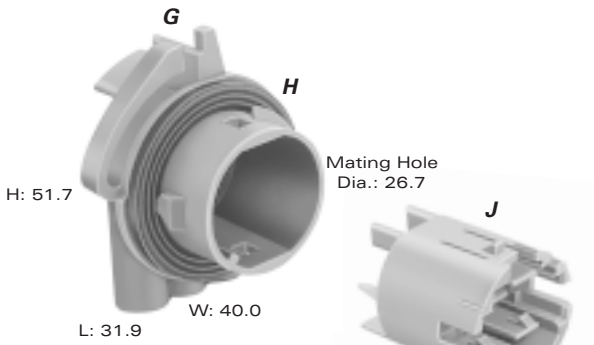


Focal Length: 22.2mm

G PART NO: **12160395**
DESCRIPTION: W-3 Right Angle Wedge Base
SIZE: 26.7 Hole Dia. x 31.9L x 51.7H x 40.0W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See A, Page 229
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #3057

H PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

J PART NO: **12177163**
DESCRIPTION: Insert
COLOR: Beige
MATERIAL: PA66 HS IM



Focal Length: 29.1mm

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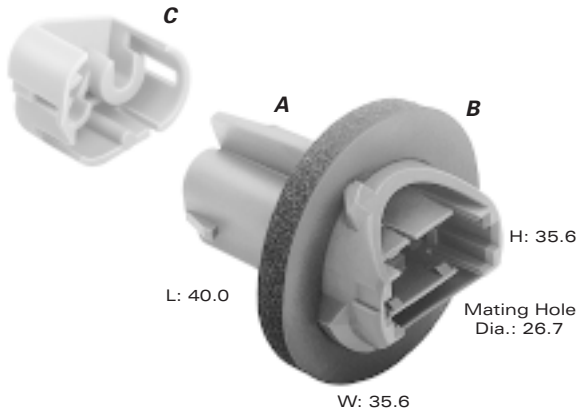
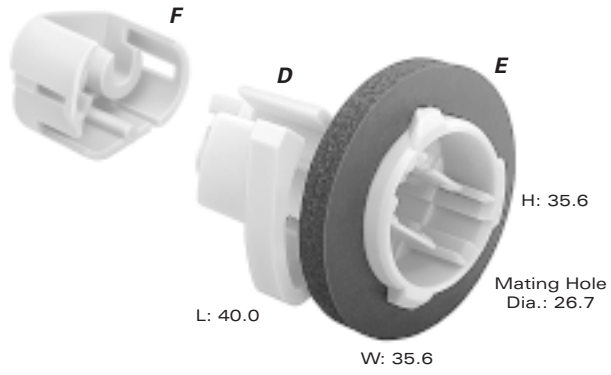


Focal Length: 29.1mm

A PART NO: **12191243**
DESCRIPTION: W-3 Axial Wedge Base
SIZE: 26.7 Hole Dia. x 40.0L x 35.6H x 35.6W
COLOR: Dk. Gray
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See E, Page 229 (2 Contacts, 1 Ground)
SEALS: 280 and 630 Metri-Pack Cable Seals
TYPICAL LAMP: #3057

B PART NO: **12020720**
DESCRIPTION: Gasket
COLOR: Black
MATERIAL: EPDM (Foam)

C PART NO: **15305473**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6



Focal Length: 22.2mm

D PART NO: **12092379 (Natural)**
12186065 (Black)
DESCRIPTION: W-3 Axial Wedge Base
SIZE: 26.7 Hole Dia. x 40.0L x 35.6H x 35.6W
MATERIAL: PA66 MF HS
TERMINALS: See E, Page 229 (2 Contacts, 1 Ground)
SEALS: 280 and 630 Metri-Pack Cable Seals
TYPICAL LAMP: #3057

E PART NO: **12020720**
DESCRIPTION: Gasket
COLOR: Black
MATERIAL: EPDM (Foam)

F PART NO: **15305473**
DESCRIPTION: TPA
COLOR: Lt. Gray
MATERIAL: PA6

SECTION NOTES:

Contact your regional support representative at the number listed below.

- When an unsealed application is required use 12020720 gasket in place of seal 12129909.

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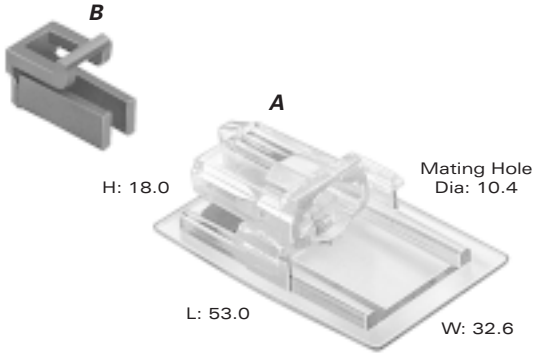
A PART NO: **12162223 (Clear)**
12162222 (White)

DESCRIPTION: W-2 Axial Wedge Base
SIZE: 10.4 Hole Dia. x 53.0L x 18.0H x 32.6W
MATERIAL: PC
TERMINALS: See B, Page 229
TYPICAL LAMP: #194

B PART NO: **12052490**

DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA6

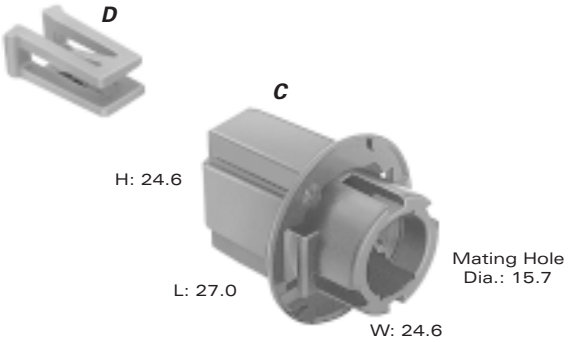


C PART NO: **12059952**

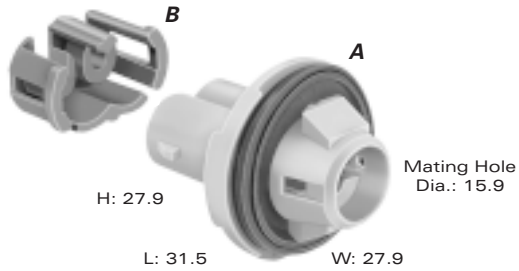
DESCRIPTION: W-2 Axial Wedge Base
SIZE: 15.7 Hole Dia. x 27.0L x 24.6H x 24.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See B, Page 229
TYPICAL LAMP: #194

D PART NO: **15324722**

DESCRIPTION: TPA
COLOR: Red
MATERIAL: PBT HS IM



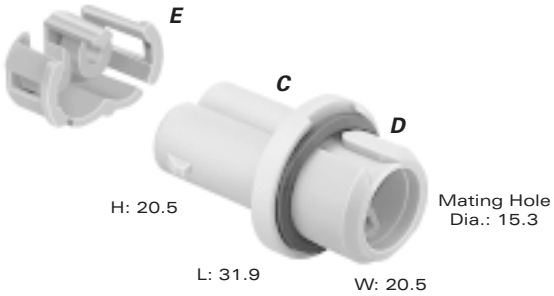
Downloaded from Arrow.com.



Focal Length: 15.5mm

A PART NO: **12110053**
DESCRIPTION: W-2 Axial Wedge Base
SIZE: 15.9 Hole Dia. x 31.5L x 27.9H x 27.9W
COLOR: Lt. Gray
MATERIAL: PA66 HS 33% GF
TERMINALS: See D, Page 229
SEALS: 480 Metri-Pack Cable Seals
TYPICAL LAMP: #168 or #912

B PART NO: **12110054**
DESCRIPTION: TPA
COLOR: Black
MATERIAL: PA66 HS IM

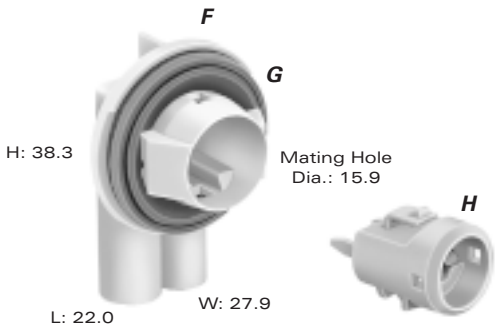


Focal Length: 15.5mm

C PART NO: **15317651**
DESCRIPTION: W-2 Axial Wedge Base
SIZE: 15.3 Hole Dia. x 31.9L x 20.5H x 20.5W
COLOR: Lt. Gray
MATERIAL: PA66 HS 33% GF
TERMINALS: See C, Page 229
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #194

D PART NO: **15317652**
DESCRIPTION: O-Ring
COLOR: Black
MATERIAL: EPDM

E PART NO: **12191522**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA66 HS IM



Focal Length: 15.5mm

F PART NO: **12146418**
DESCRIPTION: W-2 Right Angle Wedge Base
SIZE: 15.9 Hole Dia. x 22.0L x 38.3H x 27.9W
COLOR: Lt. Gray
MATERIAL: PA66 HS IM
TERMINALS: See A, Page 229
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #168

G PART NO: **12146398**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: Santoprene

H PART NO: **12146419**
DESCRIPTION: Insert
COLOR: Lt. Gray
MATERIAL: PA66

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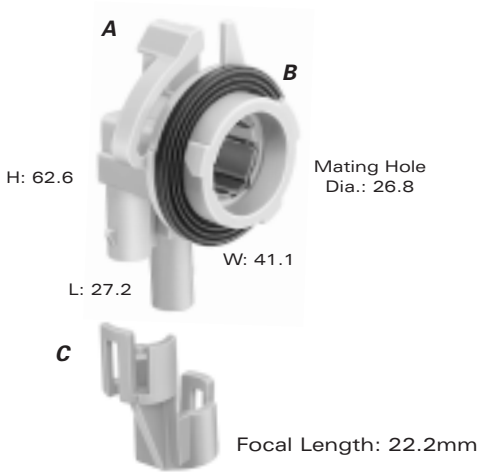
• LAMP SOCKETS

A PART NO: **12160386**
DESCRIPTION: B-1 Right Angle Bayonet Base
SIZE: 26.8 Hole Dia. x 27.2L x 62.6H x 41.1W
COLOR: Lt. Gray
MATERIAL: PA66 HS IM
TERMINALS: See F, Page 229 (1 Contact, 1 Ground)
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #1156

B PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

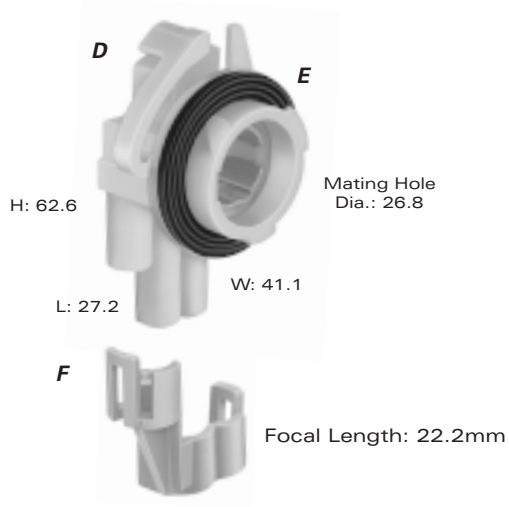
C PART NO: **12129057**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6



D PART NO: **12160390**
DESCRIPTION: C-2 Right Angle Bayonet Base
SIZE: 26.8 Hole Dia. x 27.2L x 62.6H x 41.1W
COLOR: Natural
MATERIAL: PA66 HS IM
TERMINALS: See F, Page 229 (2 Contacts, 1 Ground)
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #2057

E PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

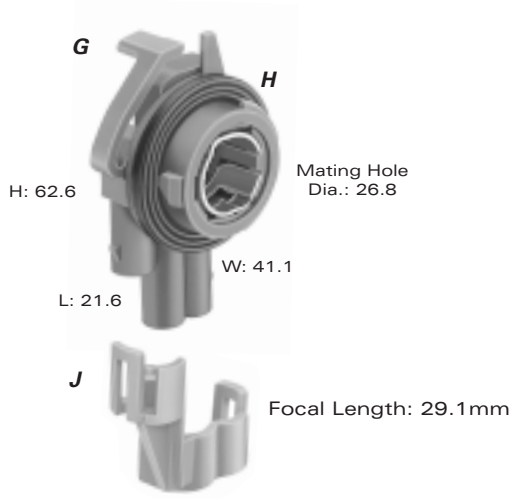
F PART NO: **12129051**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6



G PART NO: **12160392**
DESCRIPTION: C-2 Right Angle Bayonet Base
SIZE: 26.8 Hole Dia. x 21.6L x 62.6H x 41.1W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See F, Page 229 (2 Contacts, 1 Ground)
SEALS: 280 Metri-Pack Cable Seals
TYPICAL LAMP: #2057

H PART NO: **12129909**
DESCRIPTION: Seal
COLOR: Black
MATERIAL: EPDM

J PART NO: **12129051**
DESCRIPTION: TPA
COLOR: Blue
MATERIAL: PA6



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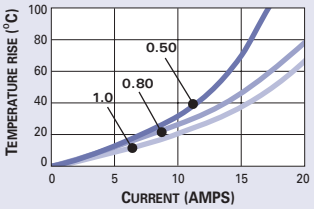
• SPLICE SAVERS

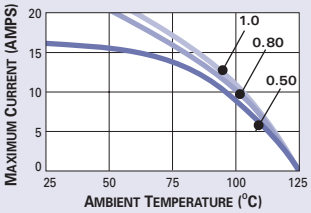
Unsealed System Application Information

GT 150 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*

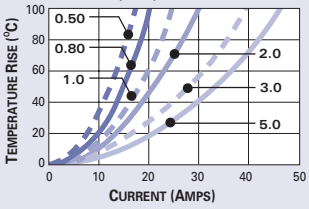


CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

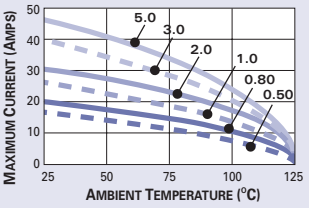
VOLTAGE DROP: .... <10.0mV/amp
CENTERLINE SPACING (mm): 3.4
BLADE WIDTH (mm): 1.5

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*

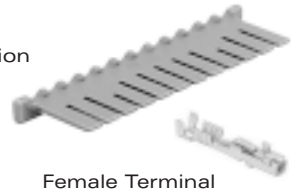


CABLE RANGE (mm²): 0.35-5.0
CURRENT RANGE (AMPS): 0-30
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV

VOLTAGE DROP: ..... <5.0mV/amp
CENTERLINE SPACING (mm): . 5.0/6.3
BLADE WIDTH (mm): 2.8

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representtive at the number listed below.

TPA
(Terminal Position Assurance)



Female Terminal

Female Connector

Cap Assembly

TANGLESS

GT 150 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12191811	0.50 - 0.35	Tin Brass	Tin
12191812	1.0 - 0.80	Tin Brass	Tin

280 M/P TANGLESS FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12110842	3.0 - 2.0	Tin Brass	Tin
12110844	1.0 - 0.80	Tin Brass	Tin
12110843	0.50 - 0.35	Tin Brass	Tin
12129061	0.35 (2 Req'd.)	Tin Brass	Tin

SPLICE SAVER CONNECTIONS UNSEALED

Cavity Description	Part #	Color	Material	TPA	Cap Assembly	Splice Configuration
12Way GT 150	12191216	Lt. Gray	PA66 HS IM	12176462	12191217	1-12 Way
12Way GT 150	12176460	Black	PA66 HS IM	12176462	12176469	2-12 Way
12Way 280 Metri-Pack Large Cavity	12176473	Black	PA66 HS IM	12176475	12176478	3-4 Ways
12Way 280 Metri-Pack	15305288	Black	PA66 HS IM	12176513	15305289	2-6 Ways
12Way 280 Metri-Pack	15305291	Black	PA66 HS IM	12176513	15305292	1-12 Way
12Way 280 Metri-Pack	15305294	Black	PA66 HS IM	12176513	15305295 w/M6 Hole	1-12 Way
12Way 280 Metri-Pack	15305297	Black	PA66 HS IM	12176513	15305298 w/M10 Hole	1-12 Way
12Way 280 Metri-Pack	15305294	Black	PA66 HS IM	12176513	15305300 w/M6 Hole & Bolt	1-12 Way

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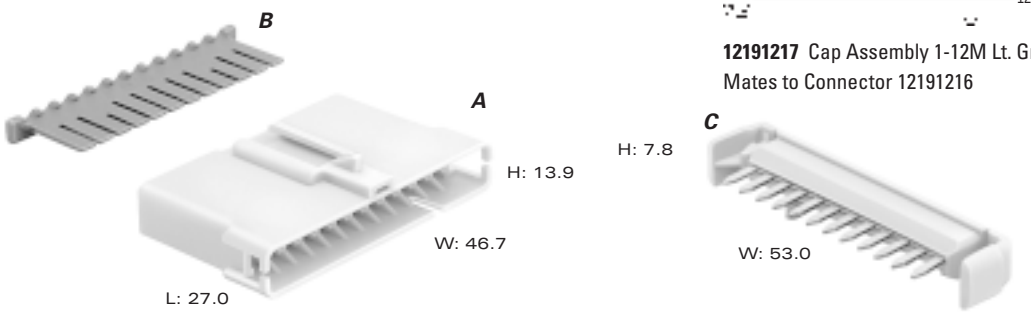
SPLICE SAVERS

Splice Saver connectors are capable of providing one or several splices within a single connection assembly. Splicing is accomplished within the male cap assembly using a segmented bus blade.

12176469 Cap Assembly 2-6M Gray
Mates to Connector 12176460

12191217 Cap Assembly 1-12M Lt. Gray
Mates to Connector 12191216

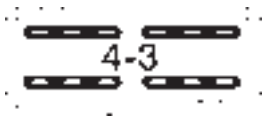


Total Mated Length: 30.6mm

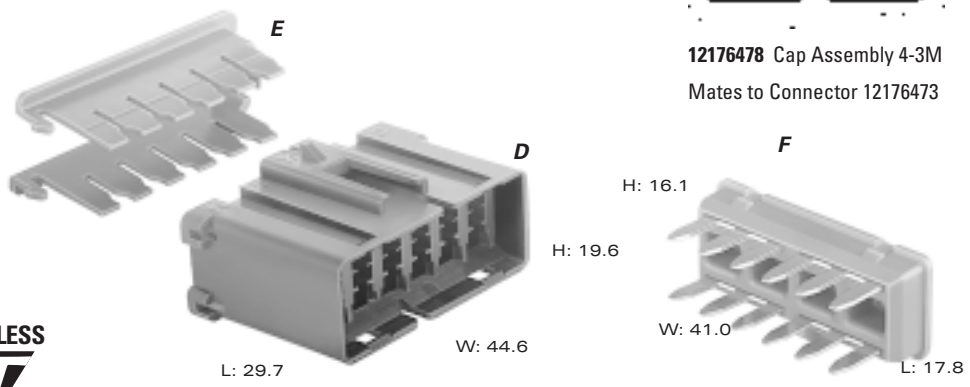
A PART NO: **12191216 (Lt. Gray)**
12176460 (Black)
DESCRIPTION: Connector GT 150 12F
SIZE: 27.0L x 13.9H x 46.7W
MATERIAL: PA66 HS IM
TERMINALS: See Page 236, GT 150

B PART NO: **12176462**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12191217**
DESCRIPTION: Cap Assembly 1-12M
SIZE: 15.0L x 7.8H x 53.0W
COLOR: Lt. Gray
MATERIAL: PA66 HS IM



12176478 Cap Assembly 4-3M
Mates to Connector 12176473



TANGLESS

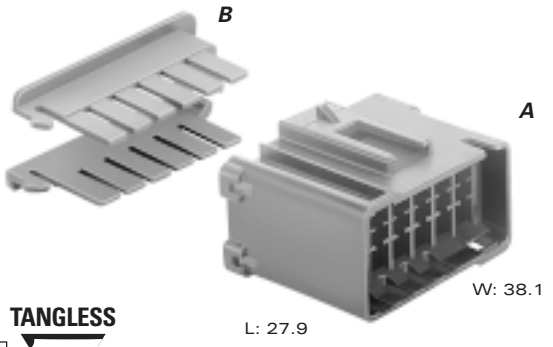
Total Mated Length: 34.0mm

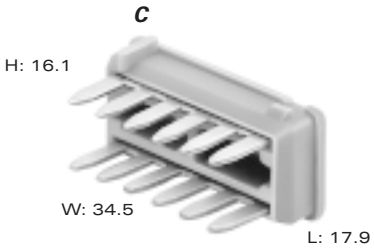
D PART NO: **12176473**
DESCRIPTION: Connector Metri-Pack 280 12F (Large Cavity)
SIZE: 29.7L x 19.6H x 44.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 236, 280 Metri-Pack Tangless

E PART NO: **12176475**
DESCRIPTION: TPA
COLOR: Gray
MATERIAL: PA66 HS IM

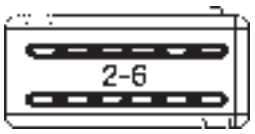
F PART NO: **12176478**
DESCRIPTION: Cap Assembly 4-3M
SIZE: 17.8L x 16.1H x 41.0W
COLOR: Brown
MATERIAL: PA66 HS IM

Downloaded from Arrow.com.

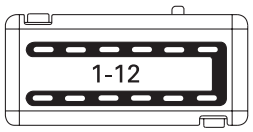




Total Mated Length: 34.0mm



15305289 Cap Assembly 2-6M
Mates to Connector 15305288



15305292 Cap Assembly 1-12M
Mates to Connector 15305291

A PART NO: **15305288**
15305291

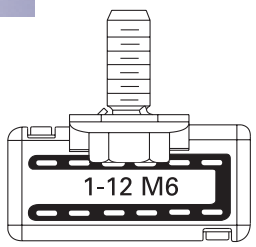
DESCRIPTION: Connector 280 Metri-Pack 12F
SIZE: 27.9L x 21.1H x 38.1W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 236, 280 Metri-Pack Tangless

B PART NO: **12176513**

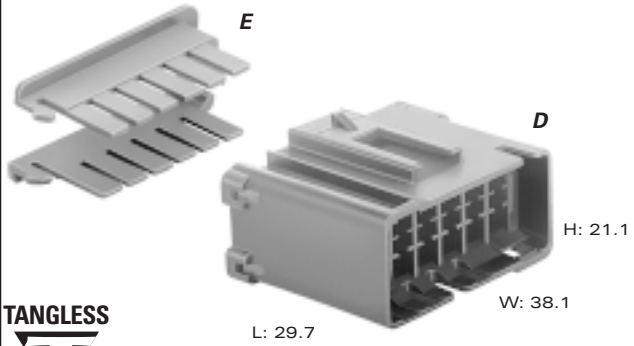
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

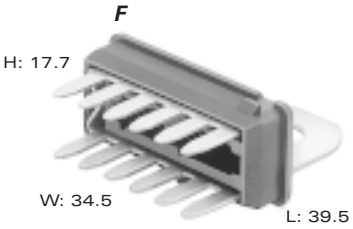
C PART NO: **15305289 (Green 2-6M)**
15305292 (Cream 1-12M)

DESCRIPTION: Cap Assembly
SIZE: 17.9L x 16.1H x 34.5W
MATERIAL: PA66 HS IM

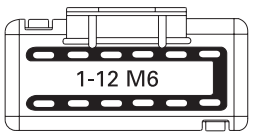


15305300 Cap Assembly 1-12M
with Bolt
15354635 Cap Assembly 1-12M
with Bolt/Retainer
Mates to Connector 15305294





Total Mated Length: 56.7mm



15305295 Cap Assembly 1-12M
Mates to Connector 15305294

D PART NO: **15305294**
15305294
15305297

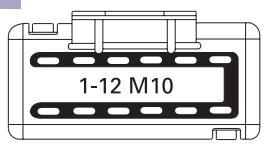
DESCRIPTION: Connector 280 Metri-Pack 12F
SIZE: 29.7L x 21.1H x 38.1W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 236, 280 Metri-Pack Tangless

E PART NO: **12176513**

DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

F PART NO: **15305300 (Black M6 Bolt Included)**
15305295 (Black M6 Hole)
15305298 (Beige M10 Hole)

DESCRIPTION: Cap Assembly 1-12M
SIZE: 39.5L x 17.7H x 34.5W
MATERIAL: PA66 HS IM



15305298 Cap Assembly 1-12M
Mates to Connector 15305297

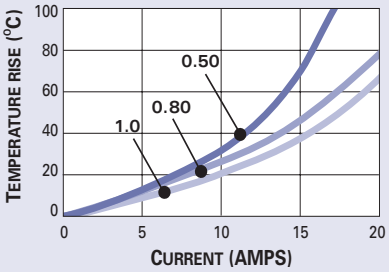
Downloaded from Arrow.com.

Sealed System Application Information

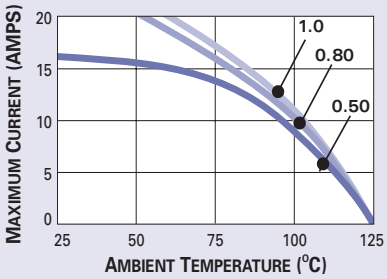
CABLE RANGE (mm²): 0.35-1.0
CURRENT RANGE (AMPS): 0-15
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <10.0mV/amp
CENTERLINE SPACING (mm): 4.5
BLADE WIDTH (mm): 1.5

GT 150 SERIES TERMINALS–Tin Plated

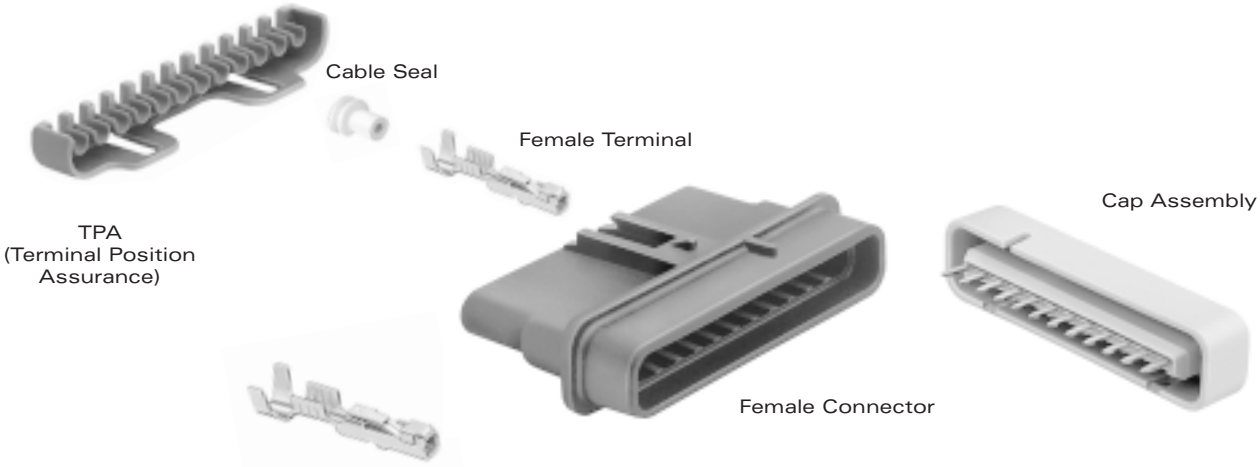
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



GT 150 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12191818	0.50 - 0.35	Tin Brass	Tin
12191819	1.0 - 0.80	Tin Brass	Tin

150 GT CABLE SEALS

Reel Part #	Loose Part #	Cable Range (mm²)	Material	Color
12191152	12191226	1.20 - 1.85	Silicone	White
12191153	12191227	1.86 - 2.25	Silicone	Blue

150 GT CAVITY PLUG*

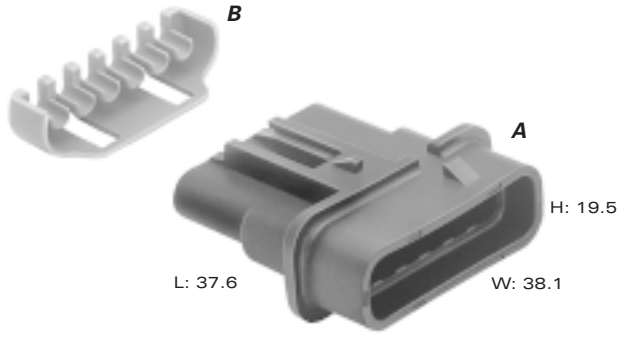
Part Number	Cavity Diameter	Material	Color
15305171	4.0 mm	Silicone	Green

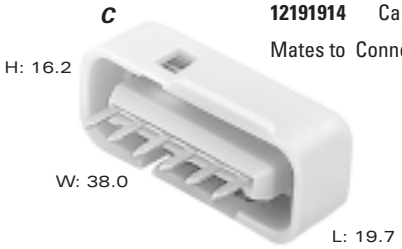
*Cavity plugs seal unused female and male cavitites.

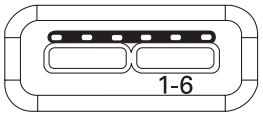
SPLICE SAVER CONNECTIONS SEALED

Cavity Description	Part #	Color	Material	TPA	Cap Assembly	Splice Configuration
6Way GT 150	12191910	Black	PA66 HS IM 14% GF	12191911	12191914 w/Seal	1-6 Way
12Way GT 150	12191900	Black	PA66 HS IM14% GF	12191901	12191904 w/Seal	1-12 Way
12Way GT 150	12191905	Black	PA66 HS IM14% GF	12191901	12191908 w/Seal	3-4 Ways

Downloaded from Arrow.com.







12191914 Cap Assembly 1-6M
Mates to Connector 12191910

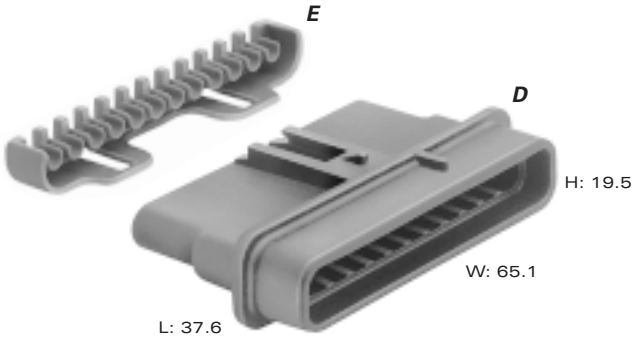
Total Mated Length: 41.8mm

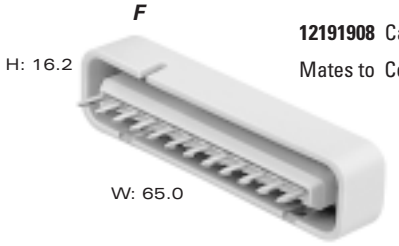
A PART NO: **12191910**
DESCRIPTION: Connector 150 GT 6F
SIZE: 37.6L x 19.5H x 38.1W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 239
SEALS/PLUGS: See Page 239

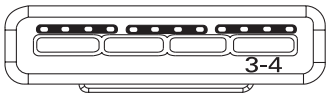
C PART NO: **12191914**
DESCRIPTION: Cap Assembly 1-6M (w/Seal)
SIZE: 19.7L x 16.2H x 38.0W
COLOR: Lt. Green
MATERIAL: PA66 HS IM

B PART NO: **12191911**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

12191904 Cap Assembly 1-12M w/Seal
Mates to Connector 12191900







12191908 Cap Assembly 3-4M w/Seal
Mates to Connector 12191905

Total Mated Length: 41.5mm

D PART NO: **12191900**
12191905
DESCRIPTION: Connector 150 GT 12F
SIZE: 37.6L x 19.5H x 65.1W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 239
SEALS/PLUGS: See Page 239

F PART NO: **12191904 (Cream 1-12M w/Seal)**
12191908 (Blue 3-4M w/Seal)
DESCRIPTION: Cap Assembly 12M
SIZE: 19.7L x 16.2H x 65.0W
MATERIAL: PA66 HS IM

E PART NO: **12191901**
DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

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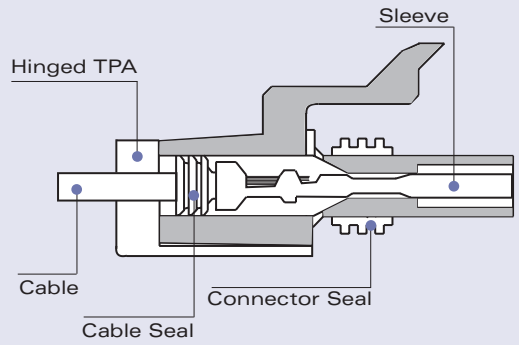
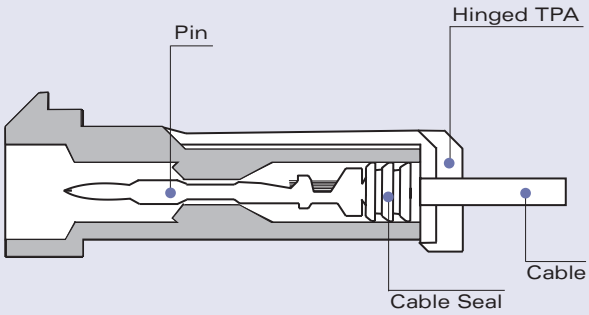
Cross Sectional View



Female Connector Assembly



Male Connector

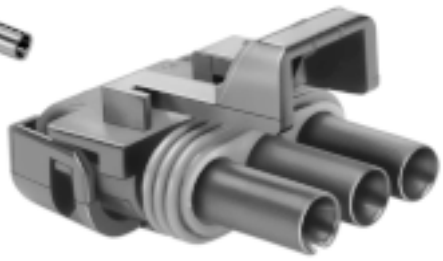
Cable Seal

Female Terminal (Sleeve)

WEATHER-PACK FEMALE TERMINALS (SLEEVE) SEALED*

Sleeve Part #	Cable Range (mm²)	Material	Plating
12124581	3.0	Tin Brass	Tin
12124580	2.0-1.0	Tin Brass	Tin
15408312	0.80-0.50	Tin Brass	Tin
12020801	0.35	Tin Brass	Tin

*Use of the Weather-Pack 6060 gage as a process control aid is recommended for Weather-Pack terminals. See page 327 in the Application Tooling section for details.



Female Connector Assembly

WEATHER-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

WEATHER-PACK FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector Assembly	Color	Material
1	12015791	Black	PA6
2	12015792	Black	PA6
3	12020829	Black	PA6
4	12015798	Black	PA6
4	12020832	Black	PA6
6	12020926	Black	PA6
22	12020991	Black	PA6

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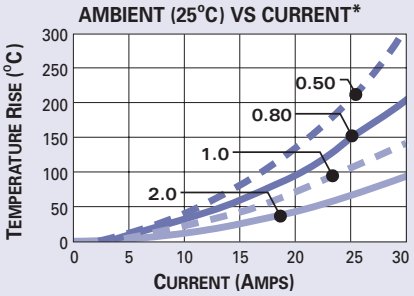
Sealed System Application Information

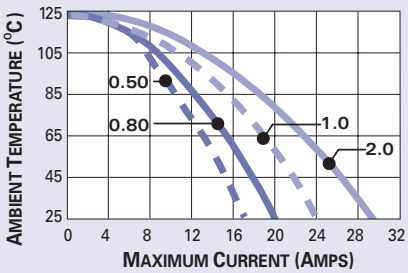
CABLE RANGE (mm²): 0.35-3.0
CURRENT RANGE (AMPS): 0-20
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <3.0mV/amp
CENTERLINE SPACING (mm): 7.7
BLADE WIDTH (mm): ... Pin and Sleeve

WEATHER-PACK TERMINALS–Tin Plated

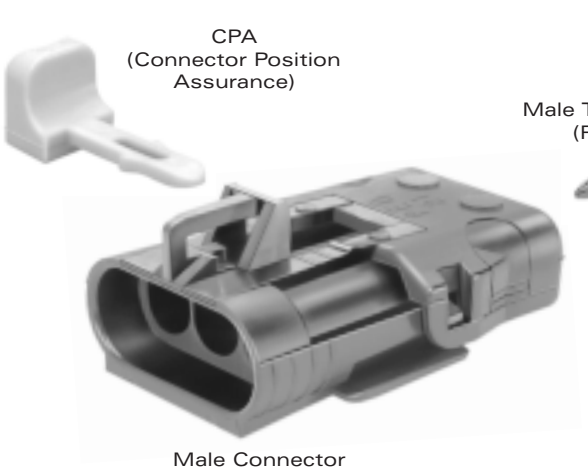
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



WEATHER-PACK MALE TERMINALS (PIN) SEALED*

Pin Part #	Cable Range (mm²)	Material	Plating
12124587	3.0	Tin Brass	Tin
12124582	2.0-1.0	Tin Brass	Tin
12089040	0.80-0.50	Tin Brass	Tin
12089307	0.35	Tin Brass	Tin

* Use of the Weather-Pack 6060 gage as a process control aid is recommended for Weather-Pack terminals. See page 327 in the Application Tooling section for details.

WEATHER-PACK MALE CONNECTORS SEALED

# Cavities	Connector	Color	Material
1	12010996	Black	PA66 HS IM
2	12010973	Black	PA6
3	12020827	Black	PA6
4	12015024	Black	PA6
4	12020830	Black	PA6
6	12020786	Black	PA6
22	12020005	Black	PA6

WEATHER-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

* Cavity plugs seal unused female and male cavities.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Due to rigid tolerances of connector cavities, it is critical to meet all crimp dimensions as specified.
- Different color and connector indexing features are also available.

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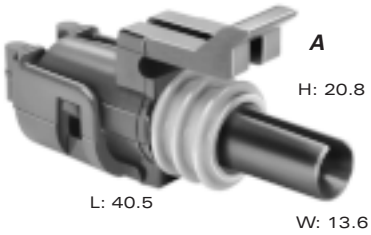
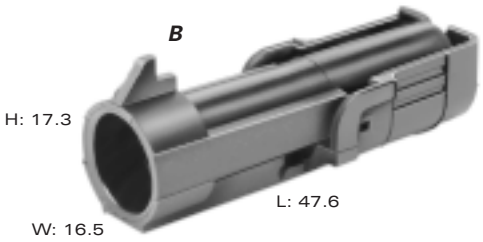
• WEATHER-PACK

An environmentally sealed connection system that utilizes triple-rib peripheral silicone rubber seals and individual towers to provide terminal isolation for connector alignment. Weather-Pack sealed systems are ideally suited for critical applications that require protection from environmental hazards.

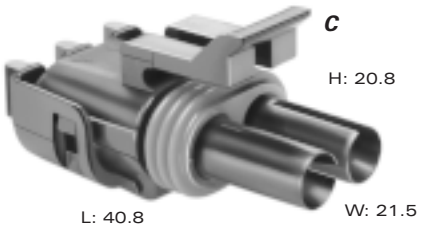


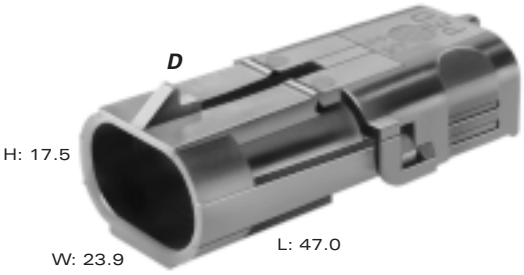


Total Mated Length: 64.5mm

A PART NO: **12015791**
DESCRIPTION: Connector Assembly 1F
SIZE: 40.5L x 20.8H x 13.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

B PART NO: **12010996**
DESCRIPTION: Connector 1M
SIZE: 47.6L x 17.3H x 16.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243





Total Mated Length: 68.3mm

C PART NO: **12015792 (Black)**
12103784 (Gray)
DESCRIPTION: Connector Assembly 2F
SIZE: 40.8L x 20.8H x 21.5W
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

D PART NO: **12010973 (Black)**
12034074 (Gray)
DESCRIPTION: Connector 2M (Clip Slot)
SIZE: 47.0L x 17.5H x 23.9W
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243

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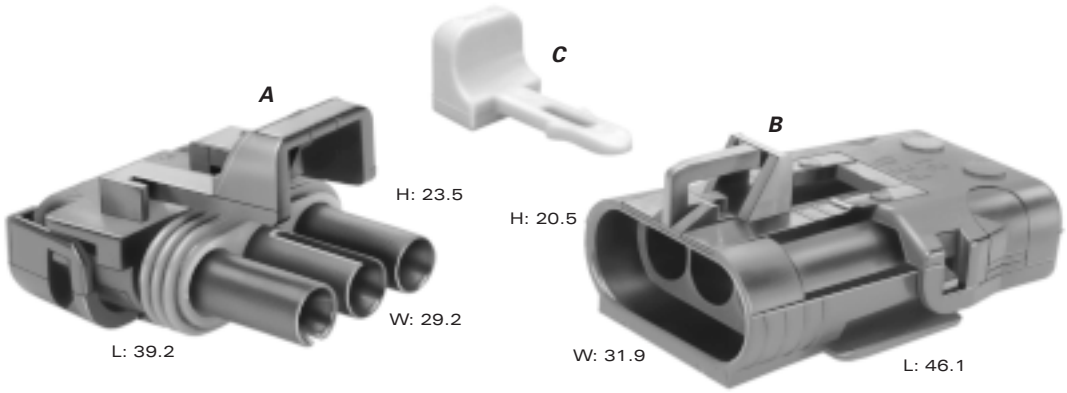
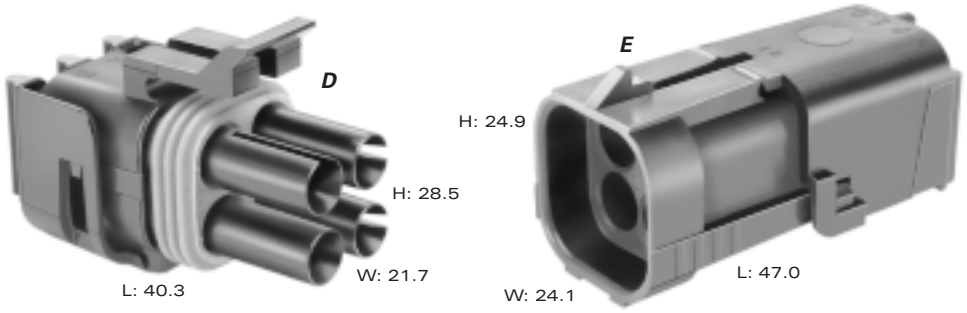


Total Mated Length: 65.8mm

A PART NO: **12020829**
DESCRIPTION: Connector Assembly 3F
SIZE: 39.2L x 23.5H x 29.2W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

B PART NO: **12020827**
DESCRIPTION: Connector 3M (Clip Slot)
SIZE: 46.1L x 20.5H x 31.9W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243

C PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



Total Mated Length: 68.3mm

D PART NO: **12015798**
DESCRIPTION: Connector Assembly 4F
SIZE: 40.3L x 28.5H x 21.7W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

E PART NO: **12015024**
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 47.0L x 24.9H x 24.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243

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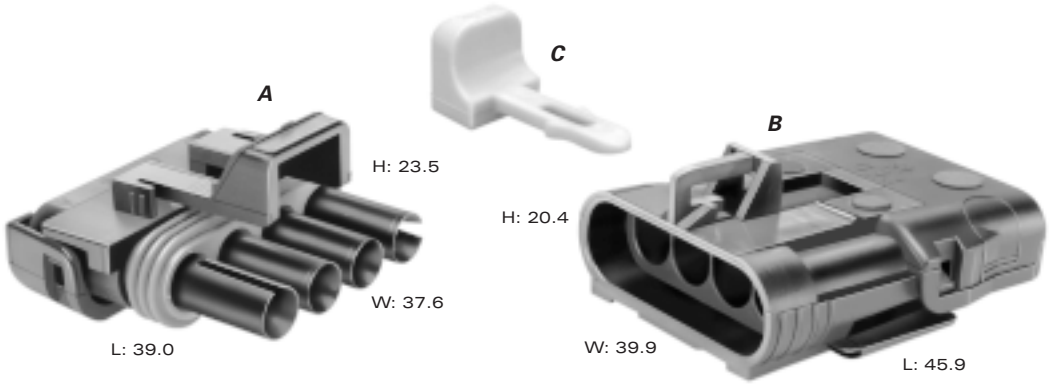
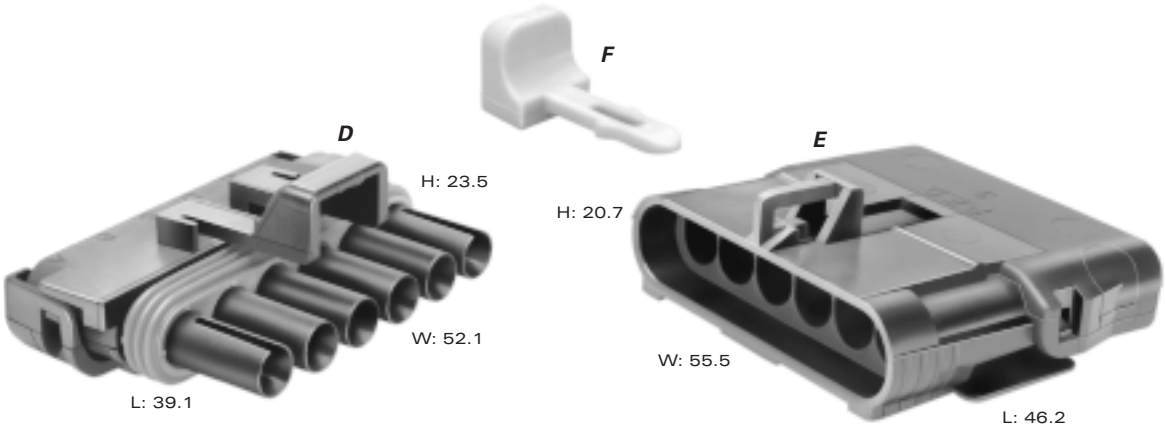


Total Mated Length: 65.8mm

A PART NO: **12020832**
DESCRIPTION: Connector Assembly 4F
SIZE: 39.0L x 23.5H x 37.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

B PART NO: **12020830**
DESCRIPTION: Connector 4M (Clip Slot)
SIZE: 45.9L x 20.4H x 39.9W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243

C PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT



Total Mated Length: 66.4mm

D PART NO: **12020926**
DESCRIPTION: Connector Assembly 6F
SIZE: 39.1L x 23.5H x 52.1W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243

E PART NO: **12020786**
DESCRIPTION: Connector 6M (Clip Slot)
SIZE: 46.2L x 20.7H x 55.5W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243

F PART NO: **12020833**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PBT

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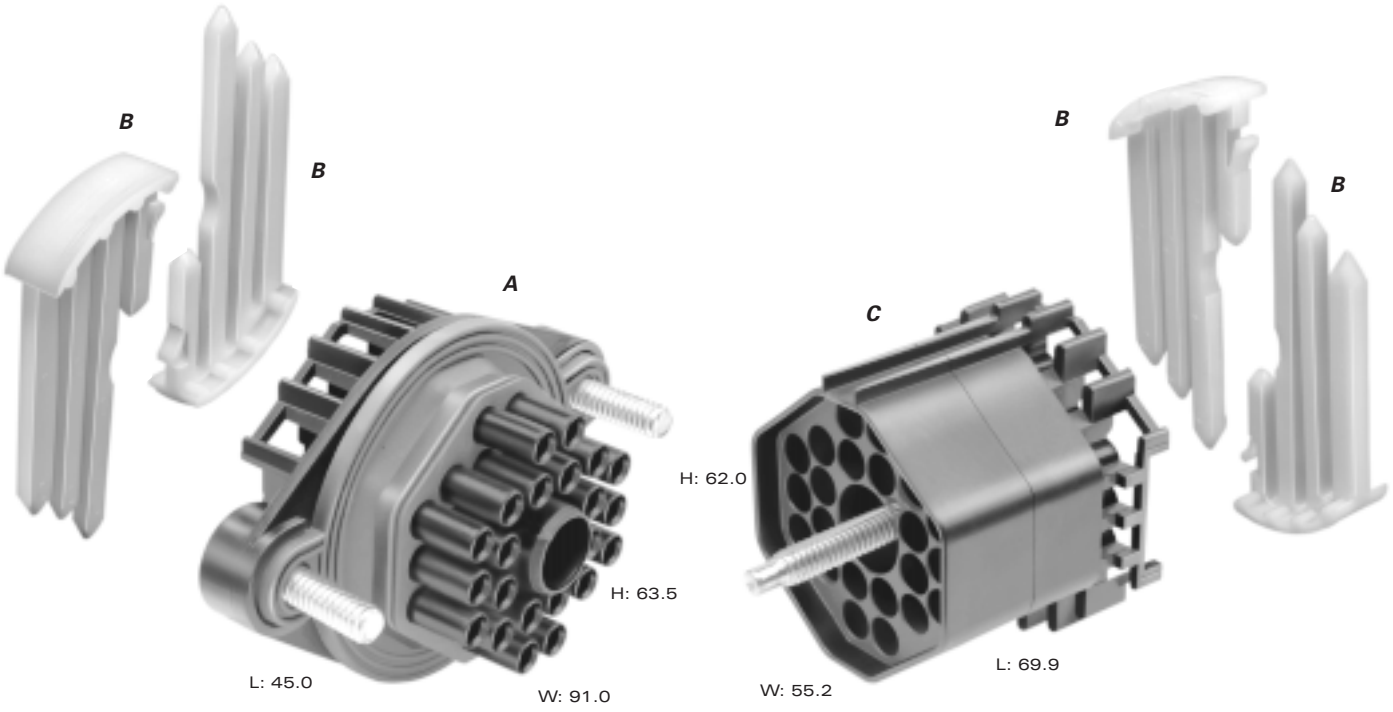

Total Mated Length: 77.3mm

A
PART NO: 12020991
DESCRIPTION: Connector Assembly 22F
SIZE: 45.0L x 63.5H x 91.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 242
SEALS/PLUGS: See Page 242, 243
APPLICATION: Pass-Through

B
PART NO: 12010852
DESCRIPTION: Secondary Lock
NUMBER REQ: 4
COLOR: Natural
MATERIAL: PA6

C
PART NO: 12020005
DESCRIPTION: Connector Assembly 22M
SIZE: 69.9L x 62.0H x 55.2W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 243
SEALS/PLUGS: See Page 242, 243
APPLICATION: Pass-Through

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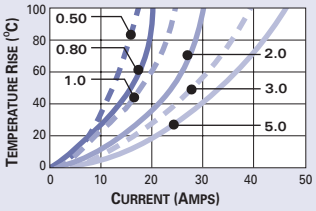
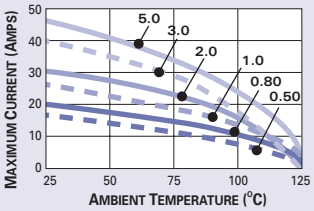
Unsealed System Application Information

280 SERIES TERMINALS – Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



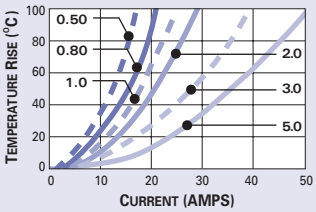
TEMPERATURE DERATING CURVES*



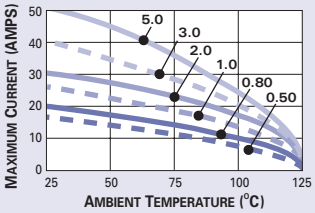
CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 19
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 5.0
BLADE WIDTH (mm): 2.8

630 SERIES TERMINALS–Tin Plated

TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*

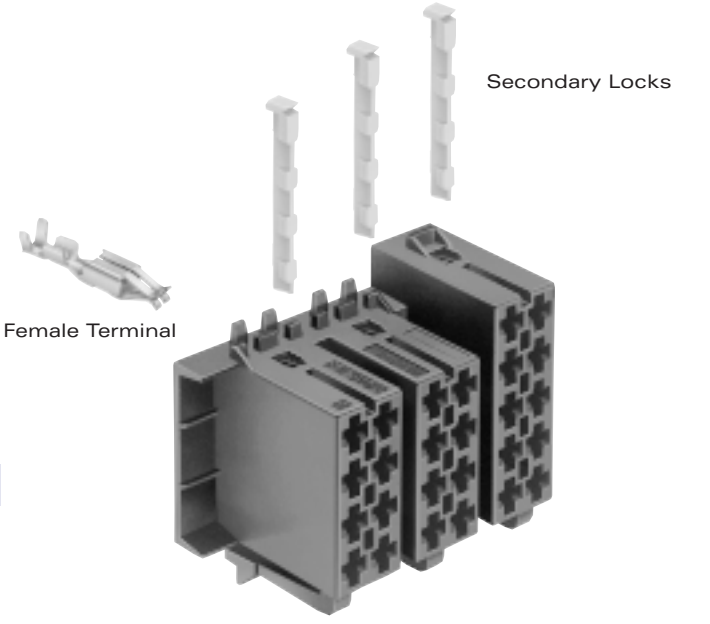


TEMPERATURE DERATING CURVES*



CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 33
TEMP RANGE °C: ..... -40 to 135
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 8.0
BLADE WIDTH (mm): ..... 4.8 (6.3 ALSO POSSIBLE)

* The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.



VF 280 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12157735	1.0-0.50	Brass	Tin
12197559	2.5-1.0	Brass	Tin
12198151	1.0-0.50	Bronze	Tin
12157736	2.5-1.0	Bronze	Tin

VF 630 FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
15327398	1.0-0.50	Bronze	Tin
15327399	1.0-0.50	STOL 76	Tin
15327400	2.5-1.0	STOL 76	Tin

VF FEMALE CONNECTOR ASSEMBLIES UNSEALED

# Cavities	Connector Assembly	Color	Material
9	12198409	Black	PA66 15% GF
12	15327221	Black	PA66 HS IM
16	15363852	Black	PA66
25	15363846	Yellow	PA66
26	15327416	Black	PA66

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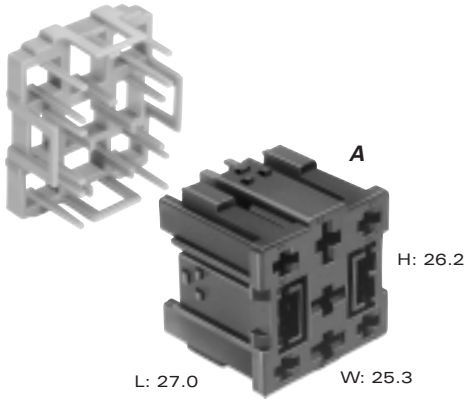
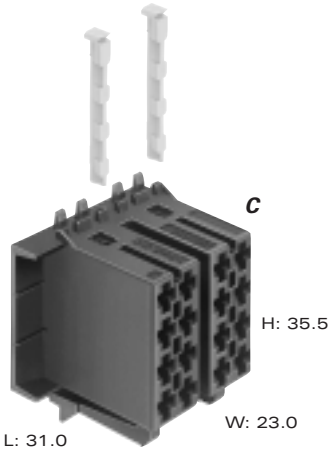
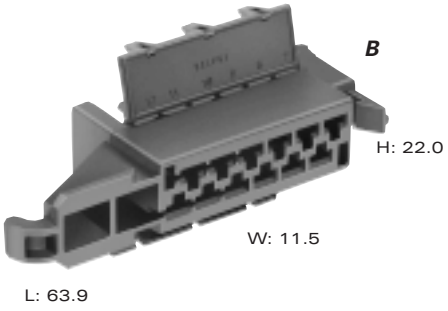


A PART NO: **12198409**
DESCRIPTION: Connector Assembly 9F
SIZE: 27.0L x 26.2H x 25.3W
COLOR: Black
MATERIAL: PA66 15% GF
TERMINALS: See Page 248
TYPICAL APP: Relay Base



C PART NO: **15363852**
DESCRIPTION: Connector Assembly 16F
SIZE: 31.0L x 35.5H x 23.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: Radio



B PART NO: **15327221**
DESCRIPTION: Connector Assembly 12F
SIZE: 63.9L x 22.0H x 11.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 248
TYPICAL APP: Turn Lights

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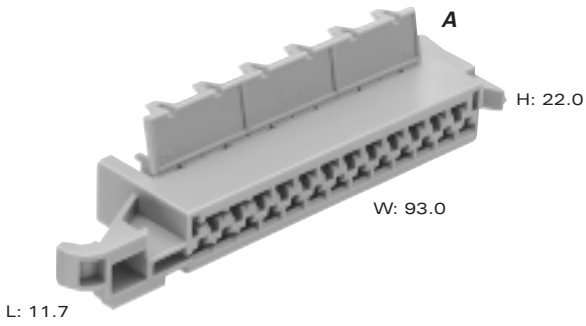
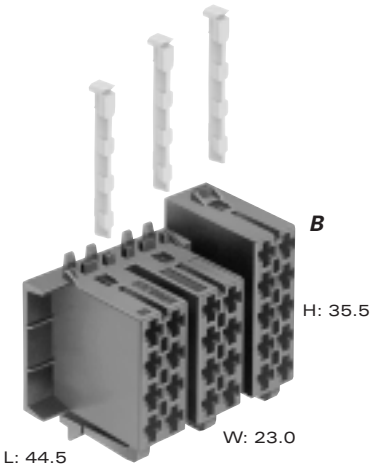
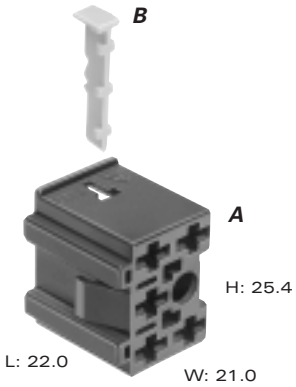


A PART NO: **15363846**
DESCRIPTION: Connector 25F
SIZE: 93.0L x 22.0H x 11.7W
COLOR: Yellow
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: Alarm



B PART NO: **15327416**
DESCRIPTION: Connector Assembly 26F
SIZE: 44.5L x 35.5H x 23.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: Radio

Downloaded from Arrow.com.

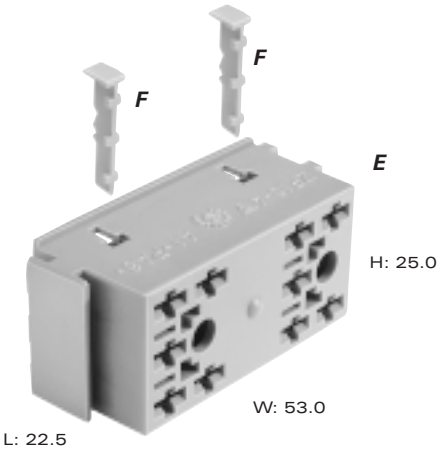


A PART NO: **15344630**
DESCRIPTION: Connector 5F
SIZE: 22.0L x 25.4H x 21.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: 5-Way Switch

B PART NO: **12147500**
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF

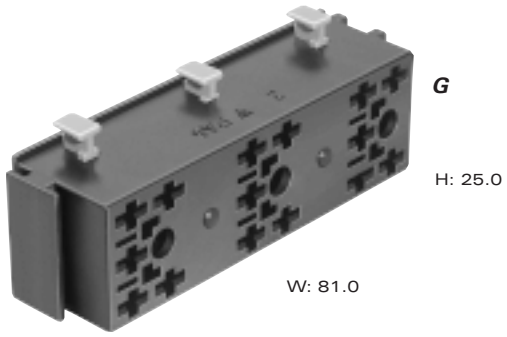
C PART NO: **12147496**
DESCRIPTION: Connector Assembly 10F
SIZE: 24.2L x 25.2H x 59.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: Double 5-Way Switch

D PART NO: **12147497**
DESCRIPTION: Connector Assembly15F
SIZE: 23.0L x 25.4H x 68.7W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 248
TYPICAL APP: Triple 5-Way Switch



E PART NO: **12185521**
DESCRIPTION: Connector 10F
SIZE: 22.5L x 25.0H x 53.0W
COLOR: Blue
MATERIAL: PA6
TERMINALS: See Page 248
TYPICAL APP: Double 5-Way Switch

F PART NO: **12185243**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF



G PART NO: **10740413**
DESCRIPTION: Connector Assembly 15F
SIZE: 23.5L x 25.0H x 81.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 248
TYPICAL APP: Triple 5-Way Switch

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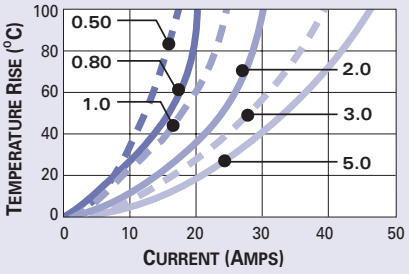
Sealed System Application Information

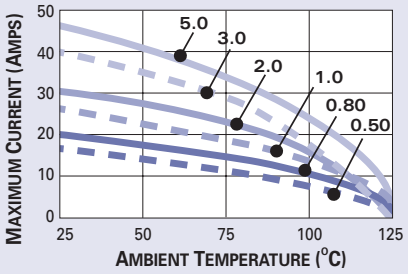
CABLE RANGE (mm²): 0.5-2.5
CURRENT RANGE (AMPS): 19
TEMP RANGE °C: ..... -40 to 125
RESISTANCE: ..... <10mΩ@20mV
VOLTAGE DROP: ..... <4.0mV/amp
CENTERLINE SPACING (mm): 5.0
BLADE WIDTH (mm): 2.8

280 SERIES TERMINALS – Tin Plated

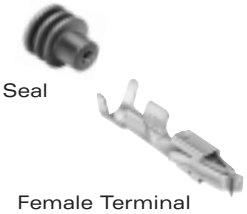
TEMPERATURE RISE ABOVE AMBIENT (25°C) VS CURRENT*



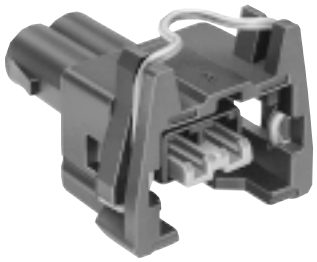
TEMPERATURE DERATING CURVES*



*The test data are based on single circuits in free space and were generated using a "Lumped Resistance" model. This model does not account for all of the variables that would be present in an actual application. For actual product performance, contact your regional support representative at the number listed below.


Cable Seal

Female Terminal


Female Connector Assembly

DS 280 FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12157739	1.0-0.50	Bronze	Tin
12157740	2.5-1.0	Bronze	Tin
12198102	1.0-0.50	Bronze	Tin
12198103	2.5-1.0	Bronze	Tin

DS 280 CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	10720851	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

DS FEMALE CONNECTOR ASSEMBLIES SEALED

# Cavities	Connector Assembly	Color	Material
2	12196895	Black	PA66 30% GF
2	15364309	Black	PA66 30% GF
3	12158456	Black	PA66 30% GF
3	15364318	Yellow	PA66 30% GF
5	12158457	Black	PA66 30% GF

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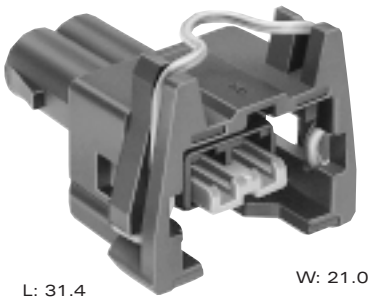
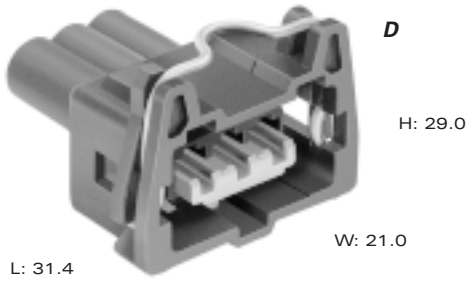
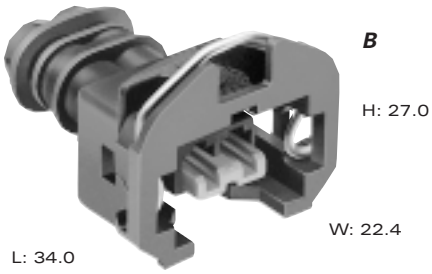


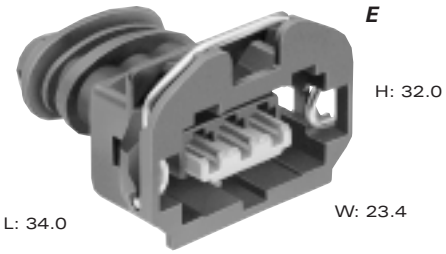
A PART NO: **12196895**
DESCRIPTION: Connector Assembly 2F
SIZE: 31.4L x 24.0H x 21.0W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
SEALS: See Page 252
TYPICAL APP: Injector



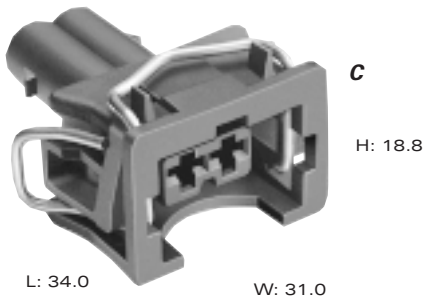
D PART NO: **12158456**
DESCRIPTION: Connector Assembly 3F
SIZE: 31.4L x 29.0H x 21.0W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
SEALS: See Page 252
TYPICAL APP: Fuel Pump



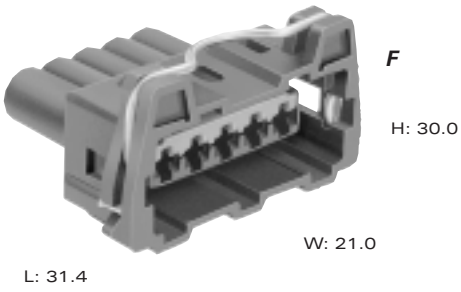
B PART NO: **15364309**
DESCRIPTION: Connector Assembly 2F
SIZE: 34.0L x 27.0H x 22.4W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
SEALS: See Page 252
TYPICAL APP: Injector



E PART NO: **15364318**
DESCRIPTION: Connector Assembly 3F
SIZE: 34.0L x 32.0H x 23.4W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
SEALS: See Page 252
TYPICAL APP: Fuel Pump



C PART NO: **12084126**
DESCRIPTION: Connector Assembly 2F
SIZE: 34.0L x 18.8H x 31.0W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
TYPICAL APP: Injector



F PART NO: **12158457**
DESCRIPTION: Connector Assembly 5F
SIZE: 31.4L x 39.0H x 21.0W
COLOR: Black
MATERIAL: PA66 30% GF
TERMINALS: See Page 252
SEALS: See Page 252
TYPICAL APP: Ignition System

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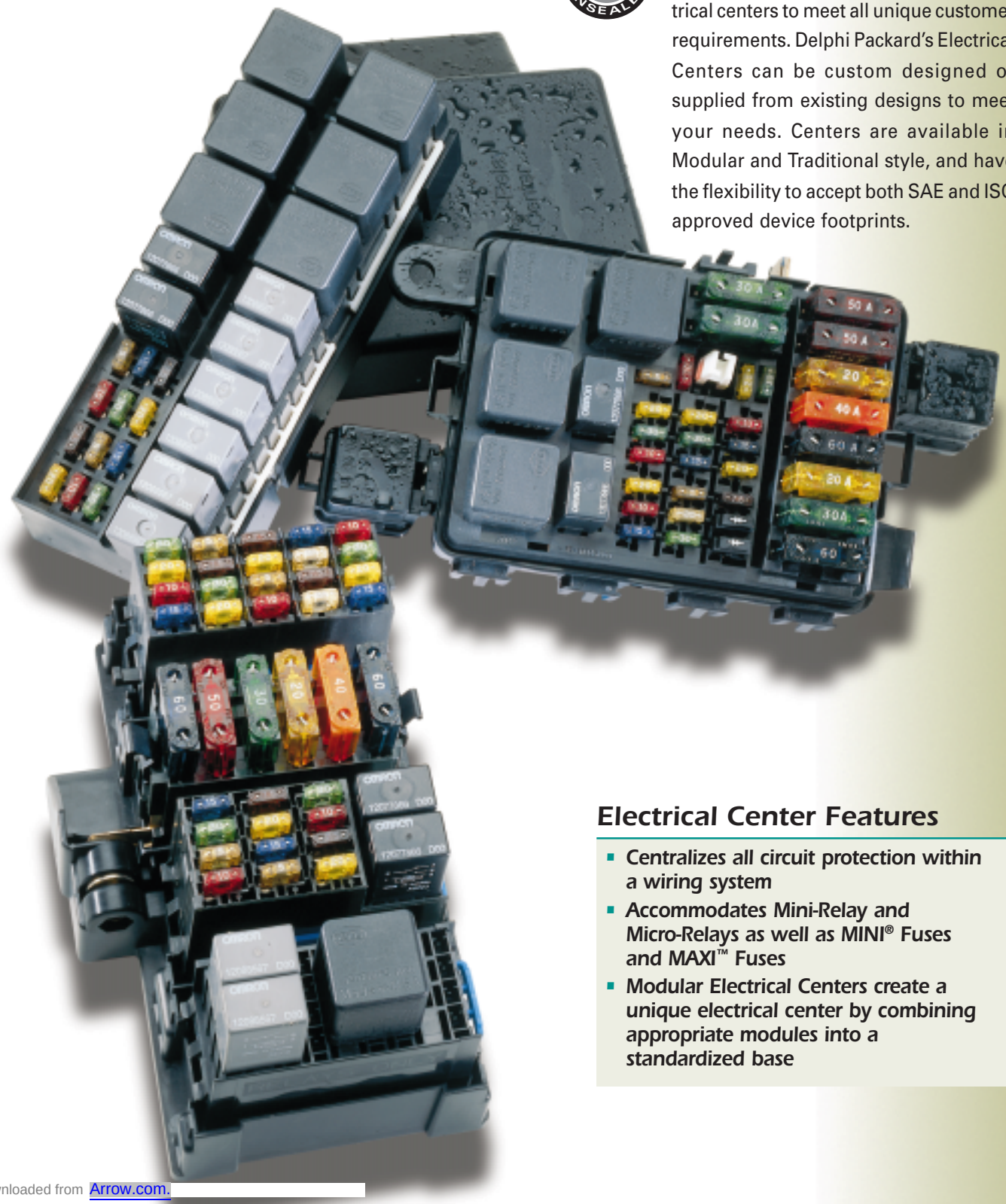
Electrical Centers

Modular & Traditional

ELECTRICAL CENTERS

Delphi Connection Systems designs and manufactures various types of electrical centers to meet all unique customer requirements. Delphi Packard's Electrical Centers can be custom designed or supplied from existing designs to meet your needs. Centers are available in Modular and Traditional style, and have the flexibility to accept both SAE and ISO approved device footprints.



Electrical Center Features

- Centralizes all circuit protection within a wiring system
- Accommodates Mini-Relay and Micro-Relays as well as MINI® Fuses and MAXI™ Fuses
- Modular Electrical Centers create a unique electrical center by combining appropriate modules into a standardized base

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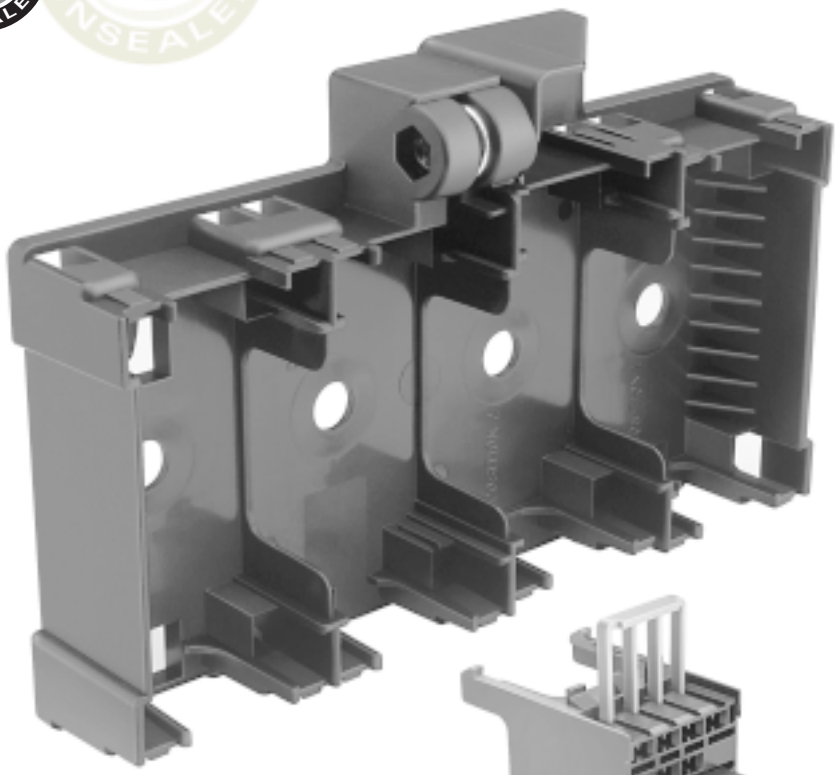
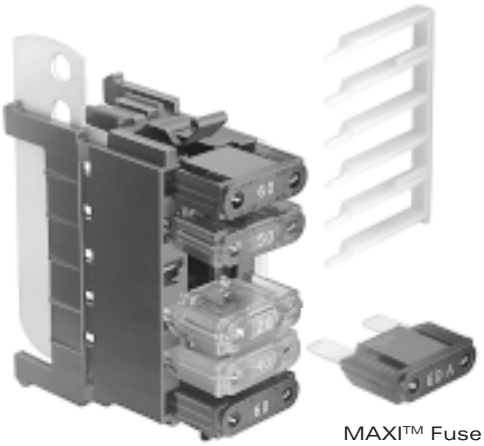


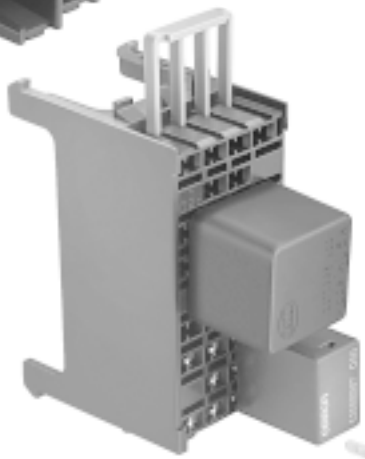
Electrical Center Base

Secondary Lock



MAXI™ Fuse

MaxiFuse Module

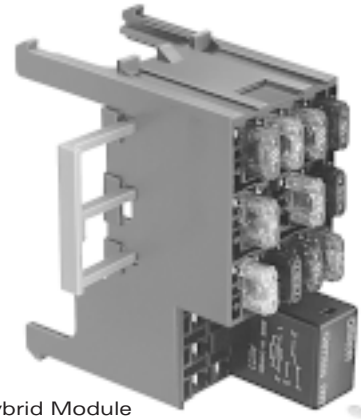


Mini-Relay

Relay Module

Micro-Relay

Cover



Hybrid Module

MINI® Fuse

Micro-Relay

Secondary Lock

Cover

SECTION NOTES:

Contact your regional support representative at the number listed below for assistance in selecting the appropriate Electrical Center to meet your need.

- Diodes and Fuses may be purchased directly from the manufacturer.

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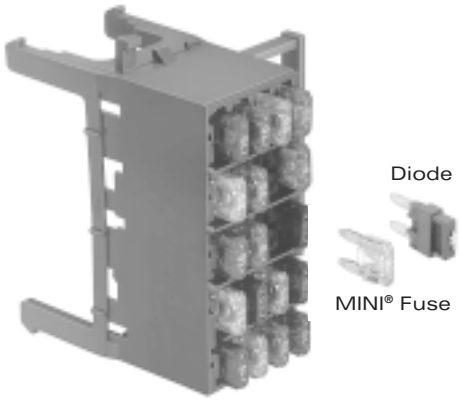

MiniFuse Module

MINIFUSE MODULES

Part#	Application	Color	Material	Secondary Lock	Cover	Latch
12191544	20 MINI® Fuses	Black	PA66 HS IM 14% GF	12146947	15324032	–
12177145	28 MINI® Fuses	Black	PA66 HS IM 14% GF	12092507	12110043	12077530

MAXIFUSE MODULES

Part#	Application	Color	Material	Secondary Lock	Cover	Latch
12110129	6 MAXI™ Fuses RT Battery Feed	Black	PA66 HS 33% GF	12077563	–	–
12077569	6 MAXI™ Fuses LT Battery Feed	Black	PA66 HS 33% GF	12077563	–	–
12092231	8 MAXI™ Fuses RT Battery Feed	Black	PA66 HS 33% GF	12077532	12077538	12077530
12092220	8 MAXI™ Fuses LT Battery Feed	Black	PA66 HS 33% GF	12077532	12077538	12077530

Cover

RELAY MODULES

Part#	Application	Color	Material	Secondary Lock	Cover	Latch
12077571	6 Micro-Relays	Black	PA66 HS IM	12077572	12160897	12077530
12077574	2 Mini-Relays	Black	PA66 HS IM	12033872	12160897	12077530
12146836	1 Mini/2 Micro-Relays	Black	PA66 HS IM	12146835	15324032	–

HYBRID MODULES (Combination of Fuse and Relay Cavities)

Part#	Application	Color	Material	Secondary Lock	Cover	Latch
12160504	MINI® Fuse, Mini-Relay, Micro-Relay	Black	PA66 HS IM 14% GF	12160541	12160897	12077530
12110594	6 MINI® Fuses 4 Micro-Relays	Black	PA66 HS IM 14% GF	12110595	12110602	12077530
12146815	12 MINI® Fuses, 1 Mini-Relay or 2 Micro-Relays	Black	PA66 HS IM 14% GF	12146816 12146817	15324032	–
12191848	MINI® Fuse, MAXI™ Fuse, Mini-Relay, Micro-Relay	Black	PA66 HS IM 14% GF	12191849	15305152	12077530

ELECTRICAL CENTER BASES

Part#	Application	Color	Material
12084910	1 Module	Black	PA6
12092741	3 Modules	Black	PA6
12092328	3 Modules w/Battery Feed	Black	PA6
12129121	4 Modules w/Battery Feed	Black	PA6
12110041	4 Modules	Black	PA6
12191497	1 Module	Black	PA6
12077534	1 Module w/Battery Feed	Black	PA6

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UNSEALED

280 METRI-PACK BUS BAR FEMALE TERMINALS UNSEALED 15.0mm CENTERLINE SPACING

Base Part # to Order	Type	Cable Range (mm²)	Part # After Termination	Material	Plating
12160635	1Way	5.0	12160643	Beryllium Copper	Tin
12160636	1Way	3.0 - 2.0	12160644	Beryllium Copper	Tin
12160637	1Way	1.0 - 0.80	12160645	Beryllium Copper	Tin
12160638	1Way	0.50 - 0.35	12160646	Beryllium Copper	Tin
12160641	1Way	1.0 - 0.80 (2 Req'd.)	12160665	Beryllium Copper	Tin
12160640	1Way	0.50 (2 Req'd.)	12160663	Beryllium Copper	Tin
12160642	1Way	0.35 (2 Req'd.)	12160667	Beryllium Copper	Tin
12160635	2Way	5.0	12160648	Beryllium Copper	Tin
12160636	2Way	3.0 - 2.0	12160649	Beryllium Copper	Tin
12160637	2Way	1.0 - 0.80	12160650	Beryllium Copper	Tin
12160641	2Way	1.0 - 0.80 (2 Req'd.)	12160666	Beryllium Copper	Tin
12160635	3Way	5.0	12160652	Beryllium Copper	Tin
12160636	3Way	3.0 - 2.0	12160653	Beryllium Copper	Tin
12160637	3Way	1.0 - 0.80	12160654	Beryllium Copper	Tin
12160638	3Way	0.50 - 0.35	12160655	Beryllium Copper	Tin
12160640	3Way	0.50 (2 Req'd.)	12160664	Beryllium Copper	Tin
12160635	4Way	5.0	12160657	Beryllium Copper	Tin
12160636	4Way	3.0 - 2.0	12160658	Beryllium Copper	Tin
12160635	5Way	5.0	12160660	Beryllium Copper	Tin
12160636	5Way	3.0 - 2.0	12160661	Beryllium Copper	Tin
12160635	6Way	5.0	12160662	Beryllium Copper	Tin

280 METRI-PACK BUS BAR FEMALE TERMINALS UNSEALED 16.2mm CENTERLINE SPACING

Base Part # to Order	Type	Cable Range (mm²)	Part # After Termination	Material	Plating
12110710	2Way	5.0	12110717	Beryllium Copper	Tin
12110709	2Way	3.0 - 2.0	12110713	Beryllium Copper	Tin
12110708	2Way	1.0 - 0.80	12110711	Beryllium Copper	Tin
12110710	3Way	5.0	12110718	Beryllium Copper	Tin
12110709	3Way	3.0 - 2.0	12110714	Beryllium Copper	Tin
12110708	3Way	1.0 - 0.80	12110712	Beryllium Copper	Tin
12110710	4Way	5.0	12110719	Beryllium Copper	Tin
12110709	4Way	3.0- 2.0	12110715	Beryllium Copper	Tin
12110710	5Way	5.0	12110720	Beryllium Copper	Tin
12110709	5Way	3.0 - 2.0	12110716	Beryllium Copper	Tin

280 METRI-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12015858	5.0	Tin Brass	Tin
12129494	3.0 - 2.0	Tin Brass	Tin
12066214	2.0 - 1.0	Tin Brass	Tin
12034046	1.0 - 0.80	Tin Brass	Tin
12052217	0.50 - 0.35	Tin Brass	Tin

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TANGLESS

280 METRI-PACK BUS BAR TANGLESS FEMALE TERMINALS UNSEALED 16.2mm CENTERLINE SPACING

Base Part # to Order	Type	Cable Range (mm²)	Part # After Termination	Material	Plating
12110647	1Way	5.0	12110657	Beryllium Copper	Tin
12110646	1Way	3.0 - 2.0	12110652	Beryllium Copper	Tin
12110645	1Way	1.0 - 0.80	12110649	Beryllium Copper	Tin
12110644	1Way	0.50 - 0.35	12110648	Beryllium Copper	Tin
12110662	1Way	1.0 - 0.80 (2 Req'd.)	12110663	Beryllium Copper	Tin
12110664	1Way	0.35 (2 Req'd.)	12110665	Beryllium Copper	Tin
12110685	1Way	0.50 (2 Req'd.)	12110686	Beryllium Copper	Tin
12110647	2Way	5.0	12110658	Beryllium Copper	Tin
12110646	2Way	3.0 - 2.0	12110653	Beryllium Copper	Tin
12110645	2Way	1.0 - 0.80	12110650	Beryllium Copper	Tin
12110647	3Way	5.0	12110659	Beryllium Copper	Tin
12110646	3Way	3.0 - 2.0	12110654	Beryllium Copper	Tin
12110645	3Way	1.0 - 0.80	12110651	Beryllium Copper	Tin
12110647	4Way	5.0	12110660	Beryllium Copper	Tin
12110646	4Way	3.0 - 2.0	12110655	Beryllium Copper	Tin
12110647	5Way	5.0	12110661	Beryllium Copper	Tin
12110646	5Way	3.0 - 2.0	12110656	Beryllium Copper	Tin

TANGLESS

280 METRI-PACK TANGLESS FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12129425	5.0	Tin Brass	Tin
12129663	3.0	Tin Brass	Tin
12129424	2.0 - 1.0	Tin Brass	Tin
12110844	0.80	Tin Brass	Tin
12110843	0.50 - 0.35	Tin Brass	Tin
12129061	0.50 - 0.35 (2 Req'd.)	Tin Brass	Tin

480 METRI-PACK RELAY FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12065892	3.0 - 2.0	Silicon Bronze	Tin
12065894	1.0 - 0.80	Silicon Bronze	Tin
12065893	0.50 - 0.35	Silicon Bronze	Tin
12103948	1.0 - 0.80 (2 Req'd.)	Silicon Bronze	Tin
12089236	0.35 (2 Req'd.)	Silicon Bronze	Tin

630 METRI-PACK RELAY FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084588	5.0	Tin Brass	Tin
12052227	3.0	Tin Brass	Tin
12015865	2.0 - 1.0	Tin Brass	Tin
12015864	1.0 - 0.80	Tin Brass	Tin
12052225	0.50 - 0.35	Tin Brass	Tin
12124559	0.80 - 0.50 (2 Req'd.)	Tin Brass	Tin

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UNSEALED

630 METRI-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12084590	5.0	Tin Brass	Tin
12052224	3.0	Tin Brass	Tin
12084596	3.0 (2 Req'd.)	Tin Brass	Tin
12015870	2.0 - 1.0	Tin Brass	Tin
12015869	1.0 - 0.80	Tin Brass	Tin
12020035	0.80 - 0.50 (2 Req'd.)	Tin Brass	Tin
12052222	0.50 - 0.35	Tin Brass	Tin

800 MAXI-FUSE FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12110127	5.0	Tin Brass	Silver/Nickel
12092445	5.0 (2 Req'd.)	Tin Brass	Silver/Nickel
12065916	3.0 - 2.0	Tin Brass	Silver/Nickel
12092444	3.0 (2 Req'd.)	Tin Brass	Silver/Nickel
12110128	2.0 (2 Req'd.)	Tin Brass	Silver/Nickel
12065915	1.0 - 0.80	Tin Brass	Silver/Nickel
12065918	1.0 (2 Req'd.)	Tin Brass	Silver/Nickel

800 MAXI-FUSE BUS BAR FEMALE TERMINALS UNSEALED

Part #	Material	Plating
12146564	Copper Alloy/SST	Silver/Nickel
12065930	Copper Alloy/SST	Silver/Nickel

Both required for Electrical Center 12146281, page 275

RING TERMINALS

Stud Size	Hole Dia.	Part #	Cable Range (mm²)	Material	Plating
M6	6.70	12103965	8.0	Copper Alloy	Tin
M6	6.70	12103511	1.0 - 0.8 (2 Req'd.)	Copper Alloy	Tin
M6	6.70	12103512	5.0	Copper Alloy	Tin
M6	6.70	12103513	3.0 - 2.0	Copper Alloy	Tin
M6	6.70	12103514	1.0 - 0.80	Copper Alloy	Tin
M8	8.50	12103502	8.0	Copper Alloy	Tin
M8	8.50	12103504	5.0	Copper Alloy	Tin
M8	8.50	12103506	3.0 - 2.0	Copper Alloy	Tin
M8	8.50	12103508	1.0 - 0.80	Copper Alloy	Tin

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6.3 VF FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material	Plating
12185268	1.0-0.50	Copper Nickel Silicone	Tin
12185269	2.5 - 0.50	Copper Nickel Silicone	Tin
12157764	4.0	Copper Nickel Silicone	Tin

AF FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm²)	Material
12131456	1.0-0.50	CuZn 30
12131448	2.5-1.5	CuZn 30
12131455	6.0-4.0	CuZn 30

TANGLESS

280 METRI-PACK TANGLESS FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
12110853	5.0 - 3.0	Tin Brass	Tin
12129409	2.0	Tin Brass	Tin

630 METRI-PACK PULL-TO-SEAT FEMALE TERMINALS

Part #	Cable Range (mm²)	Material	Plating
12033997	3.0	Tin Brass	Tin
12066614	2.0 - 1.0	Tin Brass	Tin
12020156	0.80 - 0.50	Tin Brass	Tin

280 METRI-PACK CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12015360	12015193	4.30-3.45	Silicone	Blue
12015359	12010293	3.49-2.81	Silicone	Lt. Gray
12015284	12015323	2.85-2.03	Silicone	Green
12041352	12041351	2.42-2.03	Silicone	Tan
12089444	12089679	2.15-1.60	Silicone	Purple
12034365	12015899	1.70-1.29	Silicone	Dk. Red

280 METRI-PACK CAVITY PLUG*

Part #	Cavity Inside Diameter	Material	Color
12010300	6.7mm	Silicone	Green

*Cavity plugs seal unused female and male cavities.

PULL-TO-SEAT CABLE SEAL PLUGS*

Part #	Description	Material	Color	Cable Range (mm²)	Type
12065266	Seal Plug	PA6	Md. Gray	1.85-1.65	Machine Insertion
12034413	Seal Plug	PA66 HS IM	Black	1.85-1.10	Hand Insertion

*Cavity plugs seal unused female and male cavities.

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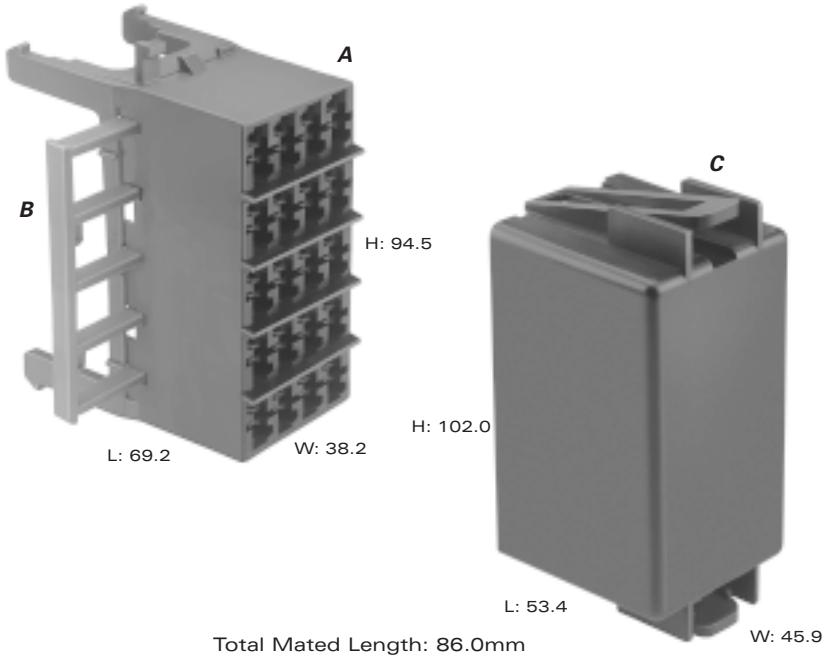
MiniFuse Modules

A PART NO: **12191544**
DESCRIPTION: MiniFuse Module
SIZE: 69.2L x 94.5H x 38.2W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 260 Bus Bar
15.0mm Centerline
APPLICATION: 20 MINI® Fuses

B PART NO: **12146947**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PA66 HS

C PART NO: **15324032**
DESCRIPTION: Cover
SIZE: 53.4L x 102.0H x 45.9W
COLOR: Black
MATERIAL: PA6



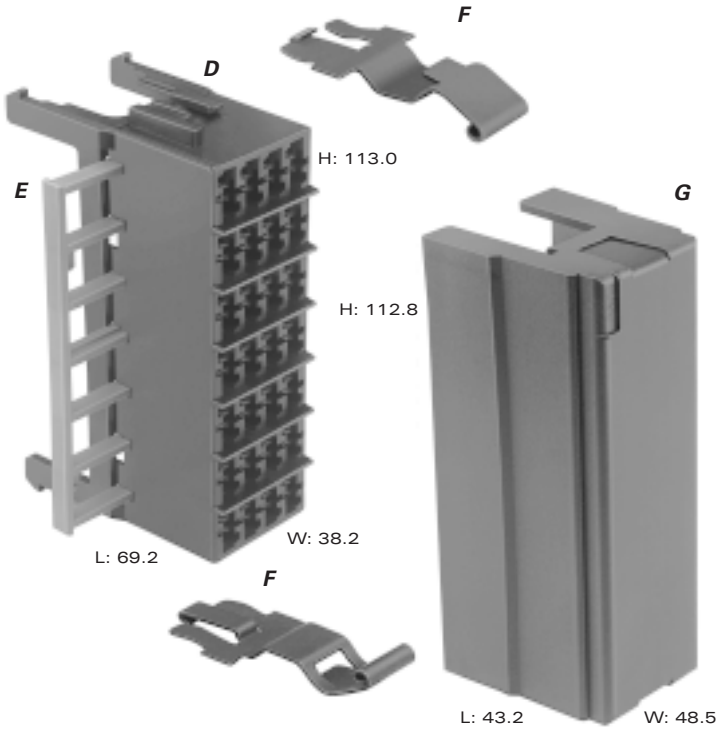
Total Mated Length: 86.0mm

D PART NO: **12177145**
DESCRIPTION: MiniFuse Module
SIZE: 69.2L x 113.0H x 38.2W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 260 Bus Bar
15.0mm Centerline
APPLICATION: 28 MINI® Fuses

E PART NO: **12092507**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PBT IM

F PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

G PART NO: **12110043**
DESCRIPTION: Cover
SIZE: 43.2L x 112.8H x 48.5W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF



Total Mated Length: 77.6mm

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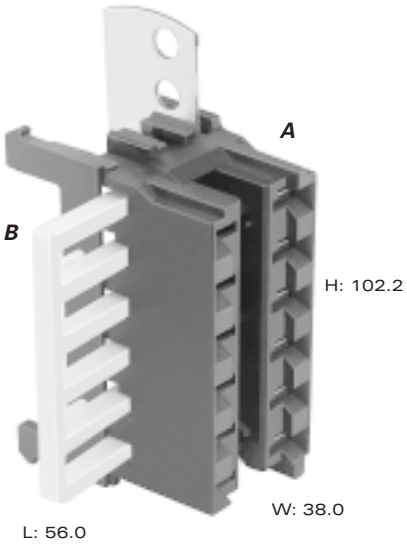
MaxiFuse Modules

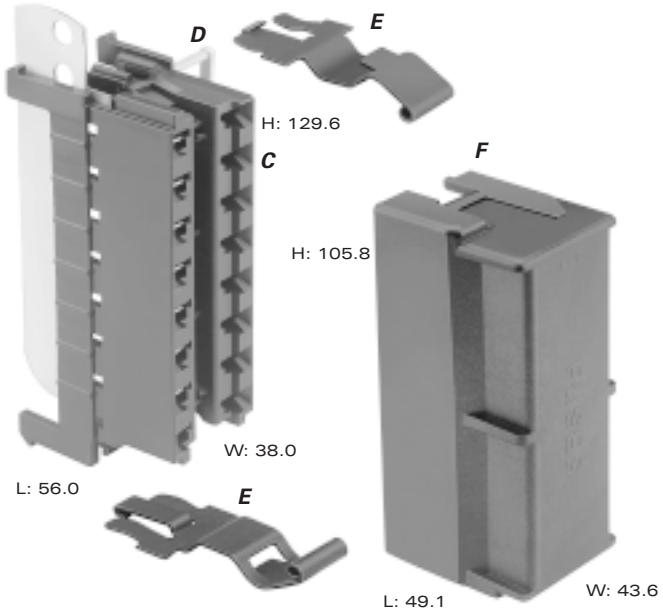


A PART NO: **12110129 (Right Battery Feed)**
12077569 (Left Battery Feed)
12160829 (w/o Bus Bar)

DESCRIPTION: MaxiFuse Assembly Module
SIZE: 56.0L x 102.2H x 38.0W
COLOR: Black
MATERIAL: PA66 HS 33% GF
TERMINALS: See Page 262, 800 MaxiFuse Female
APPLICATION: 6 MAXI™ Fuses

B PART NO: **12077563**

DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PA66 HS



Total Mated Length: 77.5mm

C PART NO: **12092231 (Right Battery Feed)**
12092220 (Left Battery Feed. Base Design Req'd.)
12110415 (w/o Bus Bar)

DESCRIPTION: MaxiFuse Assembly Module
SIZE: 56.0L x 129.6H x 38.0W
COLOR: Black
MATERIAL: PA66 HS 33% GF
TERMINALS: See Page 262, 800 MaxiFuse Female
APPLICATION: 8 MAXI™ Fuses

D PART NO: **12077532**

DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PA66 HS IM

E PART NO: **12077530**

DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

F PART NO: **12077538**

DESCRIPTION: Cover
SIZE: 49.1L x 105.8H x 43.6W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF

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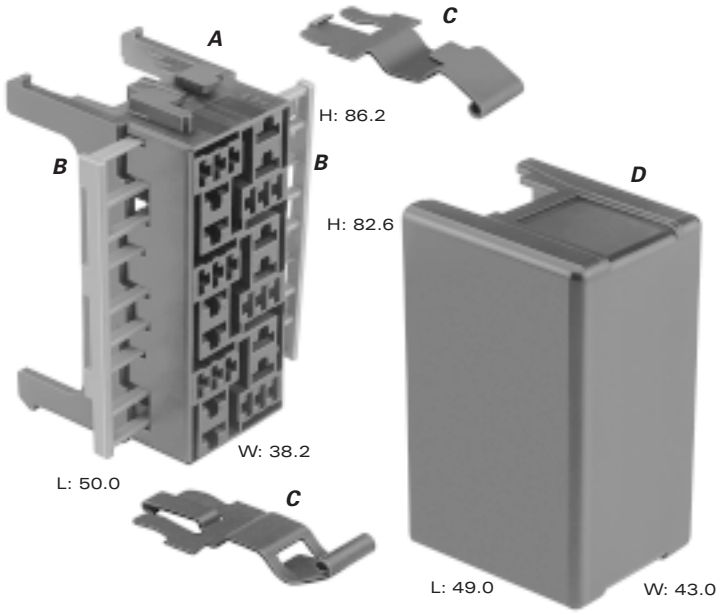
RELAY MODULES

A PART NO: **12077571**
DESCRIPTION: Relay Module
SIZE: 50.0L x 86.2H x 38.2W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 261, 262, 480 Metri-Pack Relay and 630 Metri-Pack Female
APPLICATION: 6 Micro-Relays (ISO)

B PART NO: **12077572**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Blue
MATERIAL: PBT HS IM

C PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

D PART NO: **12160897**
DESCRIPTION: Cover
SIZE: 49.0L x 82.6H x 43.0W
COLOR: Black
MATERIAL: PA6



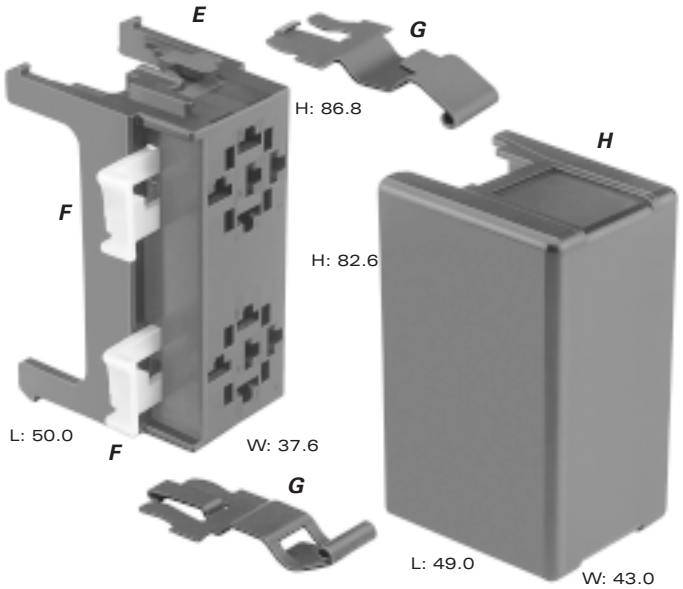
Total Mated Length: 78.2mm

E PART NO: **12077574**
DESCRIPTION: Relay Module
SIZE: 50.0L x 86.8H x 37.6W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 261, 630 Metri-Pack Relay
APPLICATION: 2 Mini-Relays (ISO)

F PART NO: **12033872**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Natural
MATERIAL: PA6

G PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

H PART NO: **12160897**
DESCRIPTION: Cover
SIZE: 49.0L x 82.6H x 43.0W
COLOR: Black
MATERIAL: PA6



Total Mated Length: 78.2mm

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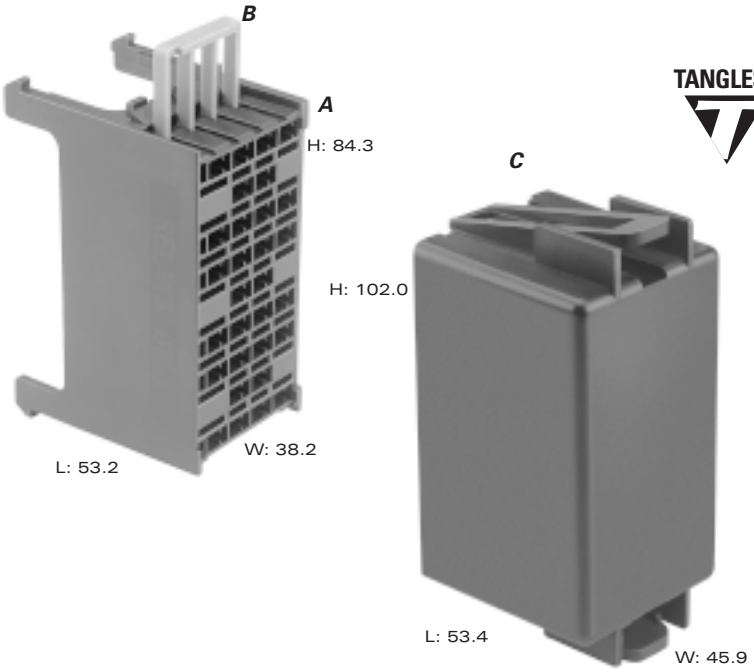
Relay Modules



Total Mated Length: 82.1mm

TANGLESS

A

PART NO:	**12146836**
DESCRIPTION:	Relay Module
SIZE:	53.2L x 84.3H x 38.2W
COLOR:	Black
MATERIAL:	PA66 HS IM
TERMINALS:	See Page 261, 280 Metri-Pack Tangless
APPLICATION:	1 Mini-Relay / 2 Micro-Relays

B

PART NO:	**12146835**
DESCRIPTION:	Secondary Lock
COLOR:	Blue
MATERIAL:	PA66 HS IM

C

PART NO:	**15324032**
DESCRIPTION:	Cover
SIZE:	53.4L x 102.0H x 45.9W
COLOR:	Black
MATERIAL:	PA6

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HYBRID MODULES

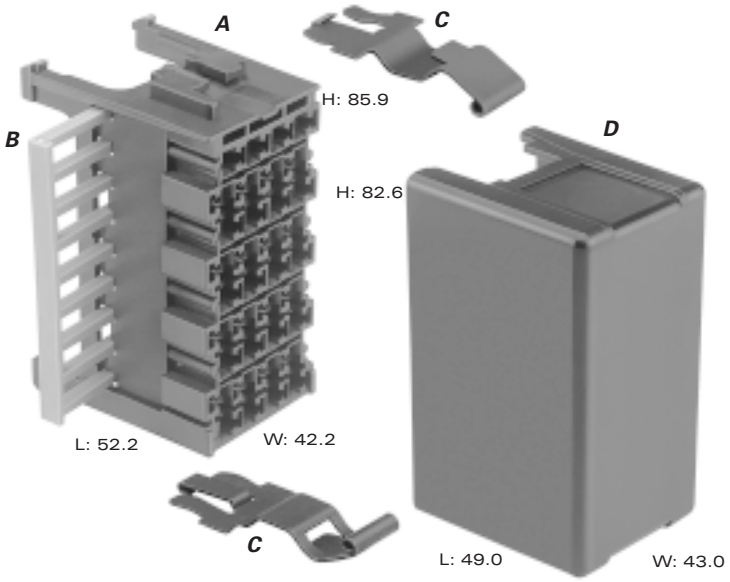
TANGLESS

A PART NO: **12160504**
DESCRIPTION: Hybrid Module
SIZE: 52.2L x 85.9H x 42.2W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 261, 280 Bus Bar 16.2mm Centerline Tangless
APPLICATION: MINI® Fuse, Mini-Relay, Micro-Relay
NOTE: Mylar overlays available upon request

B PART NO: **12160541**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PA66 HS IM

C PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

D PART NO: **12160897**
DESCRIPTION: Cover
SIZE: 49.0L x 82.6H x 43.0W
COLOR: Black
MATERIAL: PA6



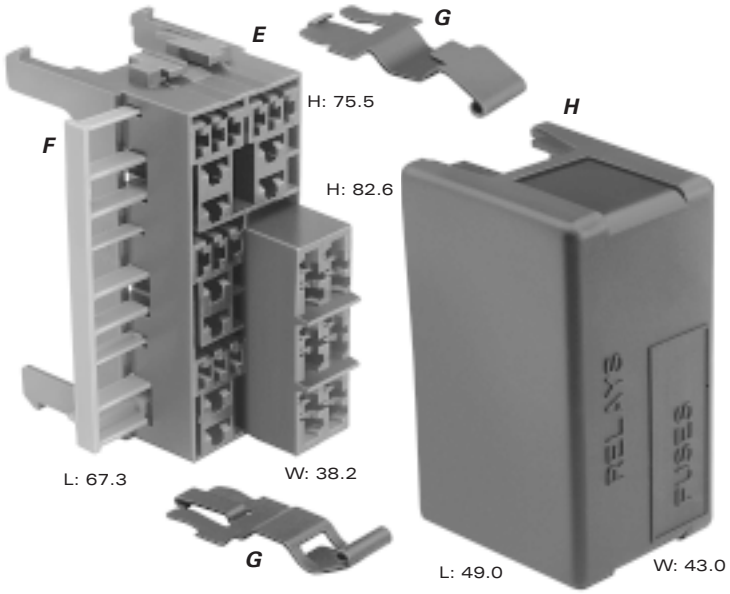
Total Mated Length: 80.4mm

E PART NO: **12110594**
DESCRIPTION: Hybrid Module
SIZE: 67.3L x 75.5H x 38.2W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 220-262, 280 Bus Bar 15.0mm Centerline, 480 Metri-Pack Relay and 630 Metri-Pack Female
APPLICATION: 6 MINI® Fuses / 4 Micro-Relays (ISO)

F PART NO: **12110595**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PA66 HS IM

G PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

H PART NO: **12110602**
DESCRIPTION: Cover
SIZE: 49.0L x 82.6H x 43.0W
COLOR: Black
MATERIAL: PA66 HS IM



Total Mated Length: 70.3mm

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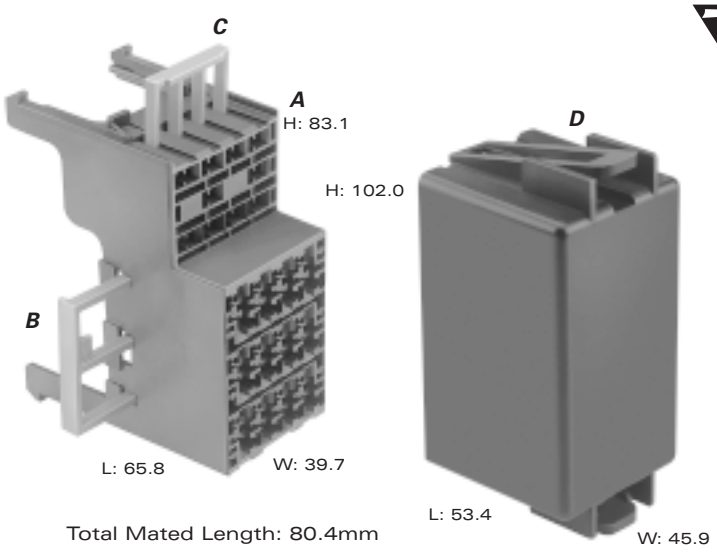
HYBRID MODULES



Total Mated Length: 80.4mm

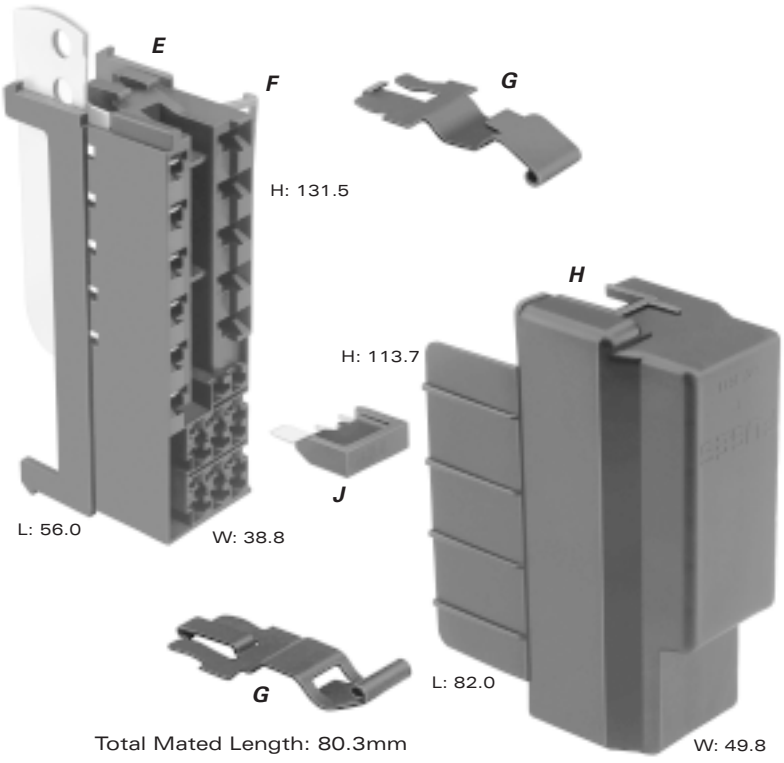
TANGLESS

A PART NO: **12146815**
DESCRIPTION: Hybrid Module
SIZE: 65.8L x 83.1H x 39.7W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 261, 280 Bus Bar 16.2mm Centerline Tangless and 280 Metri-Pack Tangless
APPLICATION: 12 MINI® Fuses / 1 Mini-Relay and 2 Micro-Relays

B PART NO: **12146816**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PA66 HS IM

C PART NO: **12146817**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PA66 HS IM

D PART NO: **15324032**
DESCRIPTION: Cover
SIZE: 53.4L x 102.0H x 45.9W
COLOR: Black
MATERIAL: PA6



Total Mated Length: 80.3mm

E PART NO: **12191848**
12191847 (w/o Bus Bar)
DESCRIPTION: Hybrid Assembly Module
SIZE: 56.0L x 131.5H x 38.8W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 260, 262, 280 Bus Bar 15.0mm Centerline and 800 MaxiFuse Female
APPLICATION: MINI® Fuse, MAXI™ Fuse, Mini-Relay, Micro-Relay

F PART NO: **12191849**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PBT

G PART NO: **12077530**
DESCRIPTION: Latch
NUMBER REQ: 2
COLOR: Black
MATERIAL: 1050 Steel Annealed

H PART NO: **15305152**
DESCRIPTION: Cover
SIZE: 82.0L x 113.7H x 49.8W
COLOR: Black
MATERIAL: PP

J PART NO: **12160674**
DESCRIPTION: Shunt
COLOR: Black
MATERIAL: PA66 HS IM
NOTE: Provides Bussing to MINI® Fuses from MAXI™ Fuses

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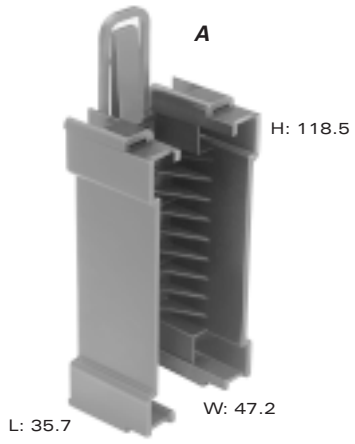
ELECTRICAL CENTER BASE APPLICATION GUIDE

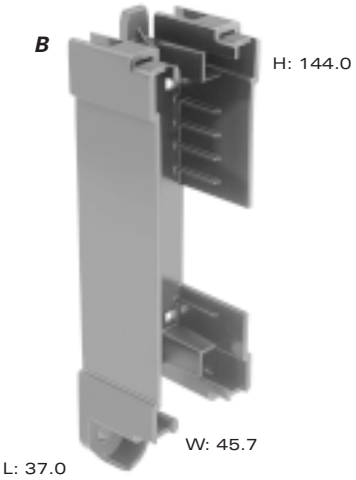
Use this guide to choose the proper base in combining your fuse, relay, and hybrid module assemblies.

BASE STYLE		FUSE MODULES				RELAY MODULES			HYBRID MODULES			
		MINIFUSE		MAXIFUSE					(FUSES & RELAYS)			
		12146946	12177145	12110129 12077569 12160829	12092231 12110415	12077571	12077574	12146836	12160504	12110594	12191847 12146815	12191848
		Page 264	Page 264	Page 265	Page 265	Page 266	Page 266	Page 267	Page 268	Page 268	Page 269	Page 269
A	12084910 (1 WAY)	■				■	■	■	■	■	■	
B	12191497 (1 WAY)		■									
C	12077534 (1 WAY W/ BATTERY FEED)				■							■
D	12092741 (3 WAY)	■				■	■	■	■	■	■	
E	12092328 (3 WAY W/ BATTERY FEED)	■		■		■	■	■	■	■	■	
F	12129121 (4 WAY W/ BATTERY FEED)	■		■		■	■	■	■	■	■	
G*	12110041 (4 WAY)	■	■			■	■	■	■	■	■	

*Note: 1 MiniFuse Module (12177145) and a combination of 3 other modules.



A PART NO: **12084910**
DESCRIPTION: 1 Way Electrical Center Base
SIZE: 35.7L x 118.5H x 47.2W
COLOR: Black
MATERIAL: PA6
APPLICATION: 1 Module



B PART NO: **12191497**
DESCRIPTION: 1 Way Electrical Center Base
SIZE: 37.0L x 144.0H x 45.7W
COLOR: Black
MATERIAL: PA6
APPLICATION: 1 Module

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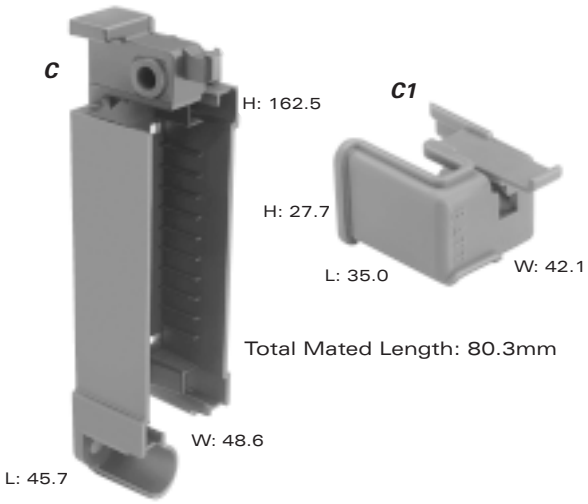
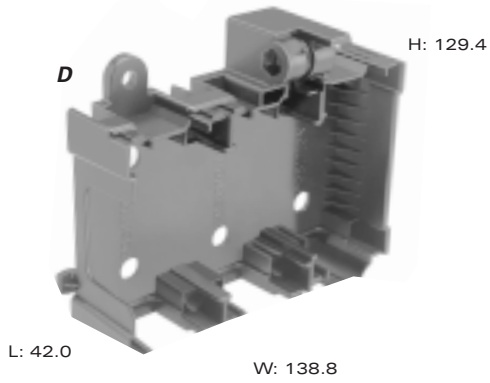


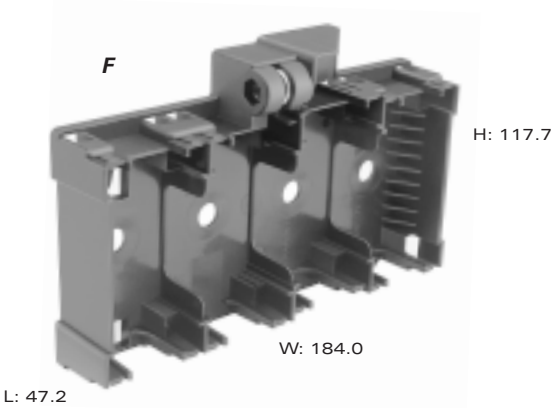
C PART NO: **12077534**
DESCRIPTION: 1 Way Electrical Center Base Assembly
SIZE: 45.7L x 162.5H x 48.6W
COLOR: Black
MATERIAL: PA6
APPLICATION: 1 Module (w/ Battery Feed)

C1 PART NO: **12092332 (Horizontal Wire Feed)**
12092669 (Vertical Wire Feed)
DESCRIPTION: Battery Terminal Cover
SIZE: 35.0L x 27.7H x 42.1W
COLOR: Red
MATERIAL: PA6

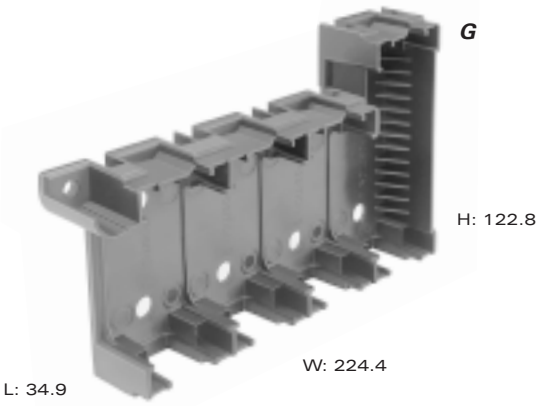


D PART NO: **12092741**
DESCRIPTION: 3 Way Electrical Center Base
SIZE: 42.0L x 129.4H x 138.8W
COLOR: Black
MATERIAL: PA6
APPLICATION: 3 Modules

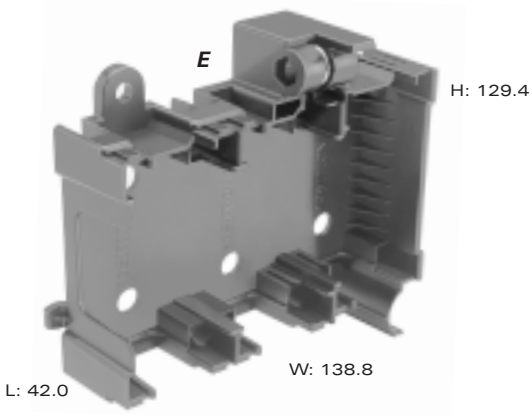
E PART NO: **12092328**
DESCRIPTION: 3 Way Electrical Center Base Assembly
SIZE: 42.0L x 129.4H x 138.8W
COLOR: Black
MATERIAL: PA6
APPLICATION: 3 Modules (w/ Battery Feed)



F PART NO: **12129121**
DESCRIPTION: 4 Way Electrical Center Base Assembly
SIZE: 47.2L x 117.7H x 184.0W
COLOR: Black
MATERIAL: PA6
APPLICATION: 4 Modules (w/ Battery Feed)



G PART NO: **12110041**
DESCRIPTION: 4 Way Electrical Center Base
SIZE: 34.9L x 122.8H x 224.4W
COLOR: Black
MATERIAL: PA6
APPLICATION: 1 MiniFuse Module (12177145) and a combination of 3 other modules



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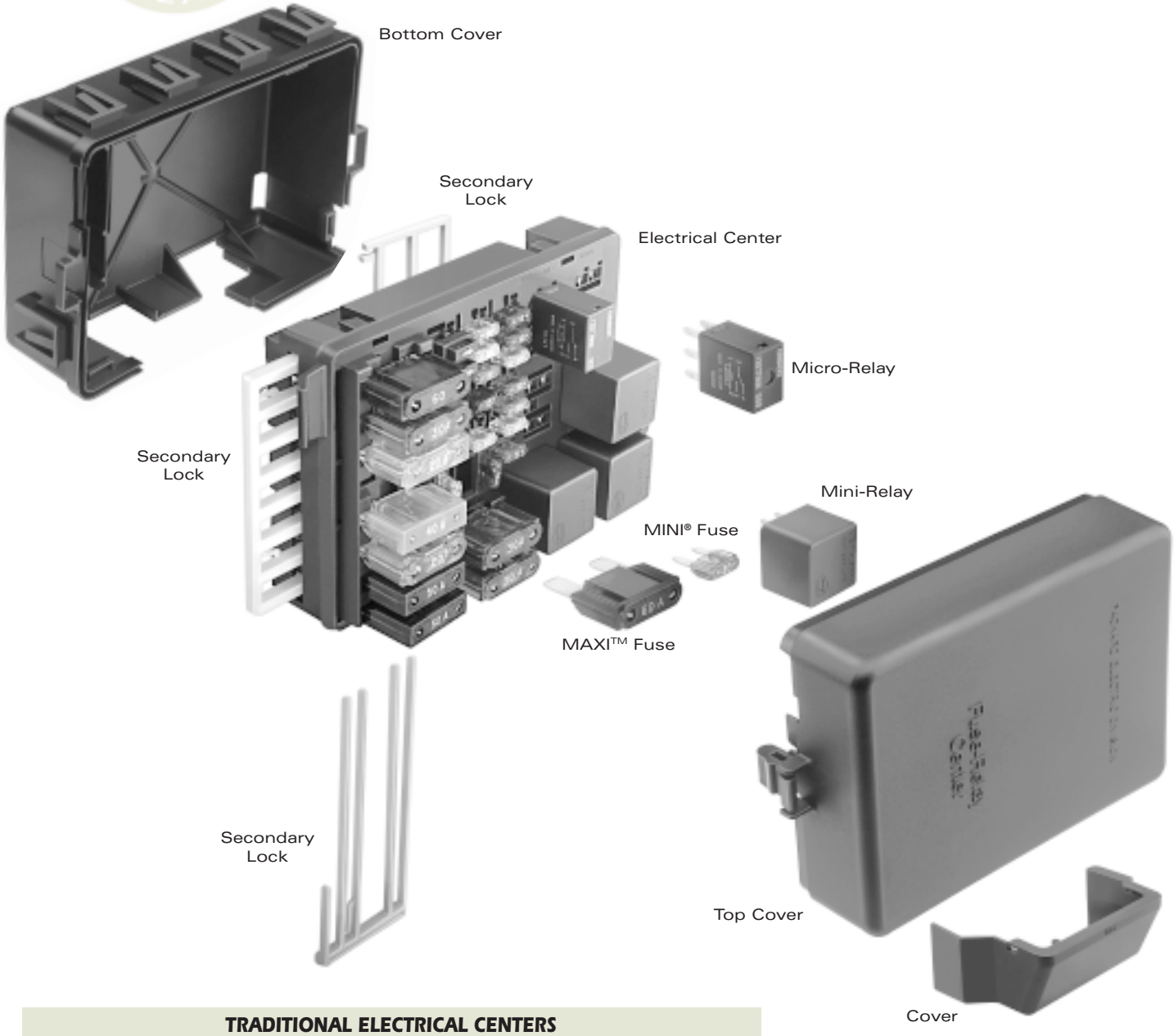

TRADITIONAL ELECTRICAL CENTERS

Part Number	Application	Color	Material	Secondary Lock	Cover	Retainer
12129833	12 MINI® Fuses, 14 Relays	Black	PA66 HS IM	12129835 12129834 12129836 12129837	12160906 12160277	
12177037	28 MINI® Fuses 1 Relay 2 Circuit Breakers	Black	PA66 HS IM 14%GF	12160677 12160678 12160679		12092748
12146281	10 MAXI™ Fuses 16 MINI® Fuses Micro-Relays Mini-Relays 2 Diodes	Black	PA66 HS IM	12146805 12146284 12077532 12146283	12146286 12162365 12160765	

SECTION NOTES:

Contact your regional support representative at the number listed below for assistance in selecting the appropriate Electrical Center to meet your need.

- Circuit breakers, fuses and diodes may be purchased directly from the manufacturer.

http://delphi.com/products/connect

North American Region 1-800-PACKARD
European Region 49-202-291-2000
Asia Pacific Region 65-730-9900
South American Region 55-12-378-2002

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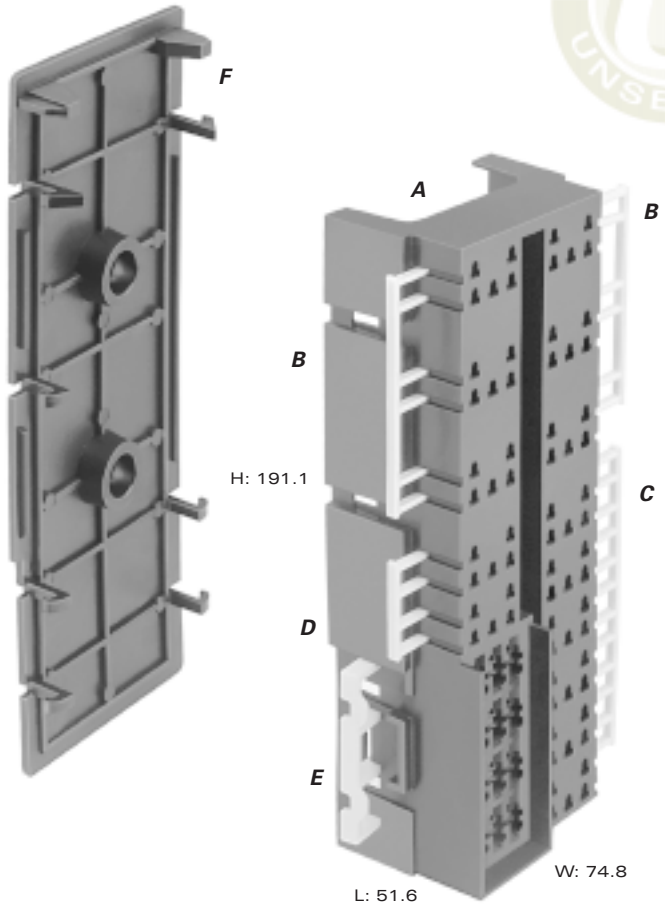


Total Mated Length: 54.3mm

A PART NO: **12129833**
DESCRIPTION: Convenience Center
SIZE: 51.6L x 191.1H x 74.8W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 260
APPLICATIONS: 12 MINI® Fuses, 14 Relays
NOTE: 12160277 Shipping Cover available.

B PART NO: **12129835**
DESCRIPTION: Secondary Lock
COLOR: Natural
NUMBER REQ: 2
MATERIAL: PBT

C PART NO: **12129834**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PBT

D PART NO: **12129836**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PBT

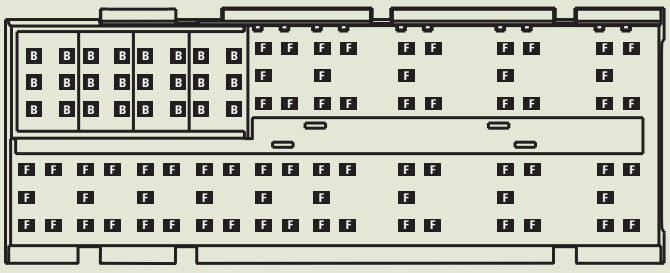
E PART NO: **12129837**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PBT

F PART NO: **12160906**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: PA66 HS IM

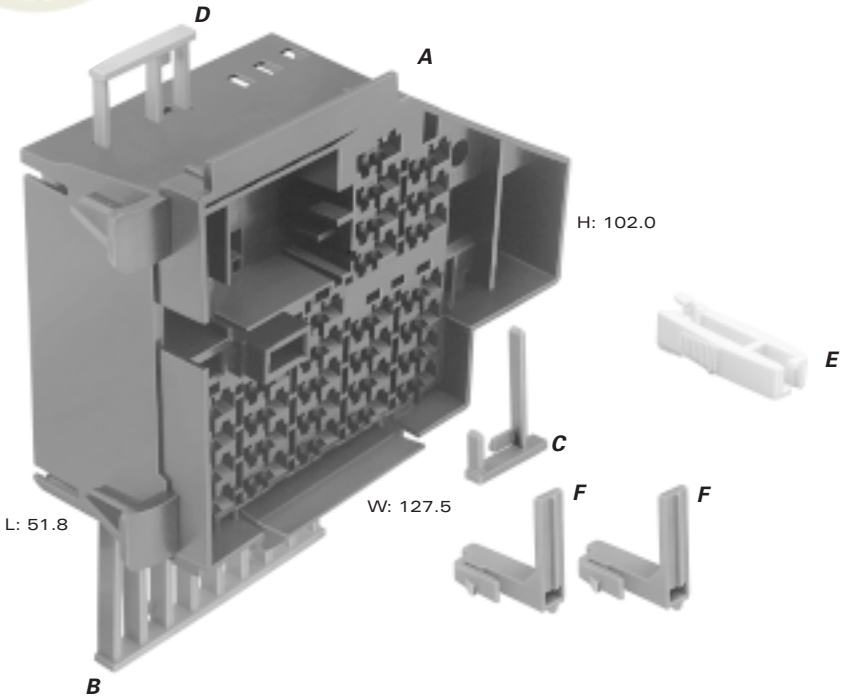
KEY:

B – 280 Metri-Pack Bus Bar 16.2mm Centerline
F – 280 Metri-Pack

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



Downloaded from Arrow.com.



Total Mated Length: 51.8mm

A PART NO: **12177037**
DESCRIPTION: Fuseblock
SIZE: 51.8L x 102.0H x 127.5W
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 260
APPLICATIONS: 28 MINI® Fuses, 1 Relay, 2 Circuit Breakers

B PART NO: **12160677**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PBT

C PART NO: **12160678**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PBT

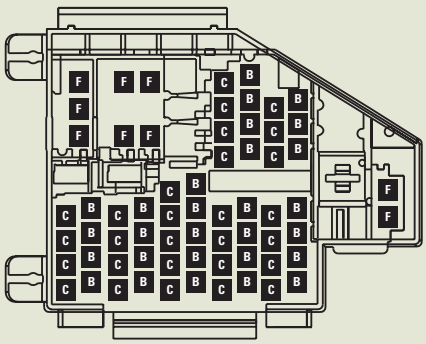
D PART NO: **12160679**
DESCRIPTION: Secondary Lock
COLOR: Blue
MATERIAL: PBT

E PART NO: **12084791**
DESCRIPTION: Fuse Extractor
COLOR: White
MATERIAL: PA66

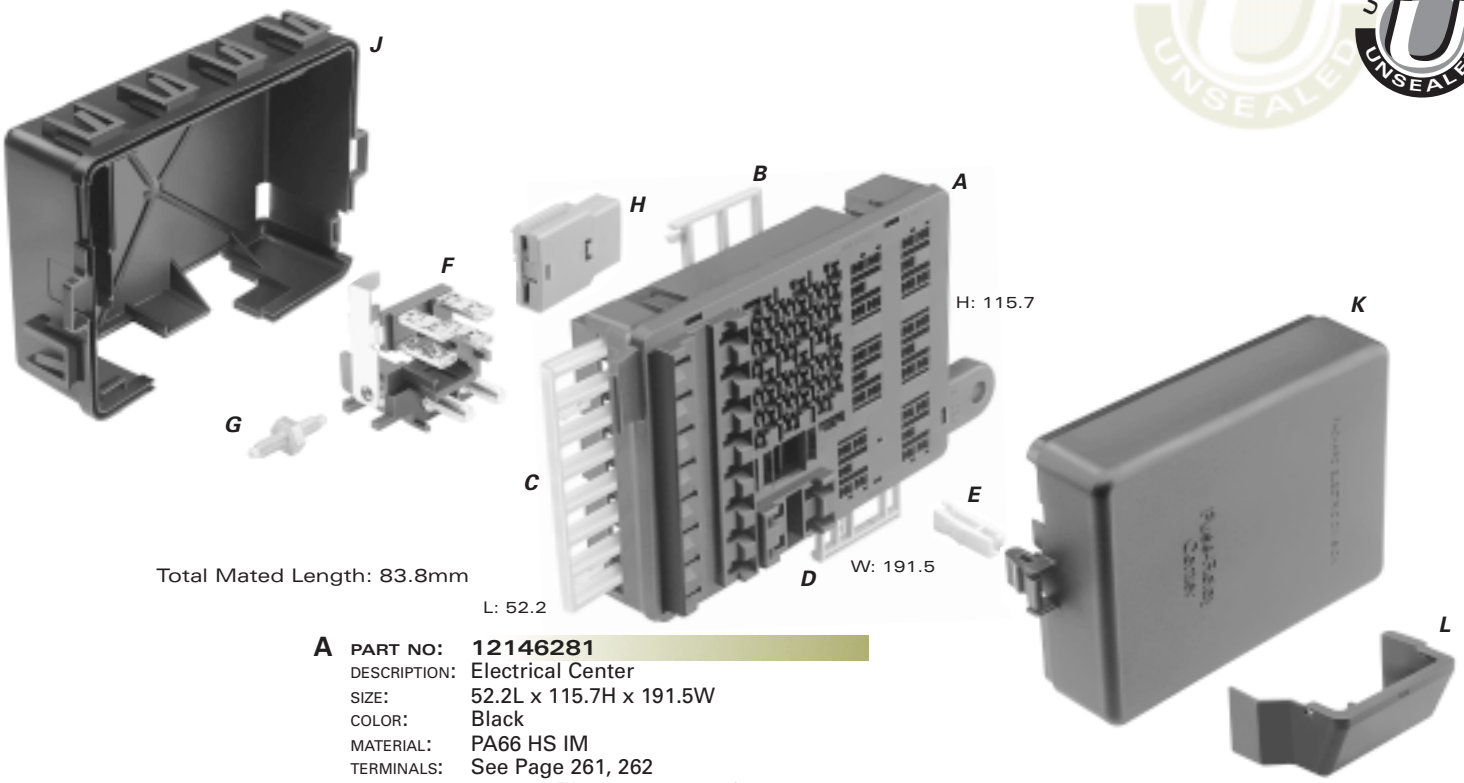
F PART NO: **12092748**
DESCRIPTION: Device Position Assurance
NUMBER REQ: 2
COLOR: Red
MATERIAL: PP

KEY:
B – 280 Metri-Pack Bus Bar 16.2mm Centerline
C – 280 Metri-Pack Bus Bar 15.0mm Centerline
F – 280 Metri-Pack

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



Downloaded from Arrow.com.



A PART NO: **12146281**
DESCRIPTION: Electrical Center
SIZE: 52.2L x 115.7H x 191.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 261, 262
APPLICATIONS: 10 MAXI™ Fuses, 16 MINI® Fuses, 2 Diodes, Micro-Relays, Mini-Relays

B PART NO: **12146284**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PBT

C PART NO: **12077532**
DESCRIPTION: Secondary Lock
COLOR: Natural
MATERIAL: PA66 HS IM

D PART NO: **12146283**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PBT

E PART NO: **12084791**
DESCRIPTION: Fuse Extractor
COLOR: White
MATERIAL: PA66

F PART NO: **12146341**
DESCRIPTION: Bus Stud Terminal Assembly
COLOR: Black
MATERIAL: PA66 HS IM 14% GF
TERMINALS: See Page 262, M8 Ring

G PART NO: **12160759**
DESCRIPTION: Bolt
MATERIAL: Steel
TERMINALS: See Page 262, M6 Ring

H PART NO: **12146805**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PP

J PART NO: **12146286**
DESCRIPTION: Bottom Cover
COLOR: Black
MATERIAL: PA66 HS IM
NOTE: Cover will accept 6 external relays.

K PART NO: **12162365**
DESCRIPTION: Top Cover
COLOR: Black
MATERIAL: PA66 HS IM

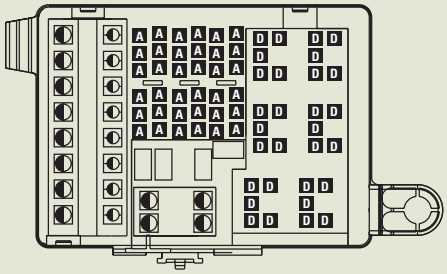
L PART NO: **12160765**
DESCRIPTION: Bus Stud Assembly Cover
COLOR: Black
MATERIAL: PP IM

KEY:

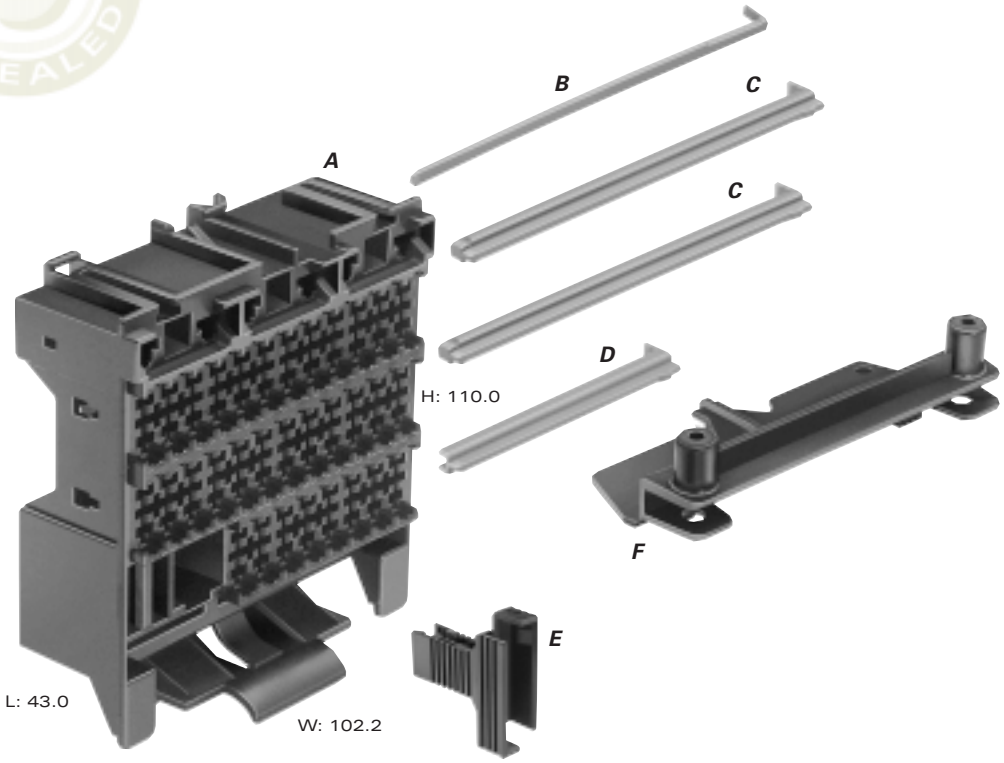
- **A** – 280 Metri-Pack Bus Bar 16.2 Centerline Tangless
- **D** – 280 Metri-Pack Tangless
- – 800 MaxiFuse Bus Bar
- – 800 MaxiFuse
- – Spare MINI® Fuse Cavity

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.

- To assemble this electrical system, informational drawing 12146337 is available.



Downloaded from Arrow.com.



Total Mated Length: 60.0mm

A PART NO: **10740483**
DESCRIPTION: Fuseblock
SIZE: 43.0L x 110.0H x 102.2W
COLOR: Black
MATERIAL: PA66 HS
TERMINALS: See Page 263
APPLICATIONS: 32 ATO® Fuses, 3 MAXI™ Fuses

B PART NO: **10740484**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF

C PART NO: **10717812**
DESCRIPTION: Secondary Lock
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

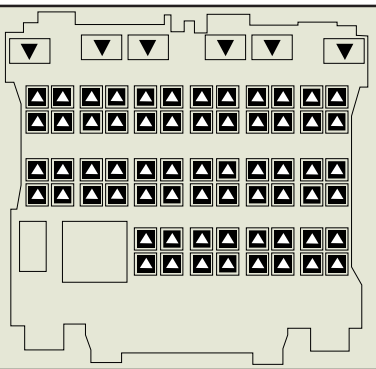
D PART NO: **10740485**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 15% GF

E PART NO: **12185643 (Optional)**
DESCRIPTION: Fuse Extractor
COLOR: Black
MATERIAL: PA6

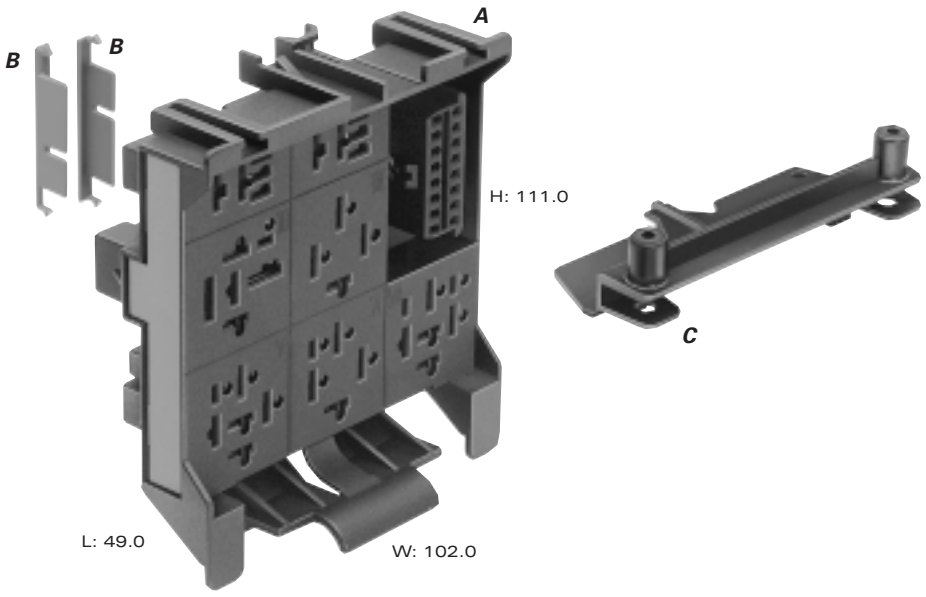
F PART NO: **10718038**
DESCRIPTION: Hinge
COLOR: Black
MATERIAL: PP

KEY:
▼ 800 Metri-Pack
▲ 6.3 VF

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



Downloaded from Arrow.com.



Total Mated Length: 50.0mm

A PART NO: **10740486**
DESCRIPTION: Relay Block
SIZE: 49.0L x 111.0H x 102.0W
COLOR: Black
MATERIAL: PA6 10% GF 20% GB
TERMINALS: See Page 263
APPLICATIONS: 2 Mini Relays, 4 Standard Relays, 1 Relay, OBD II

B PART NO: **10740487**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Gray
MATERIAL: PA6 15% GF

C PART NO: **10718038**
DESCRIPTION: Hinge
COLOR: Black
MATERIAL: PP

SECTION NOTES:

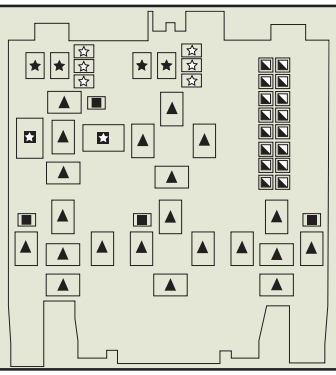
Contact your regional support representative at the number listed below.

- Terminals available from manufacturer.

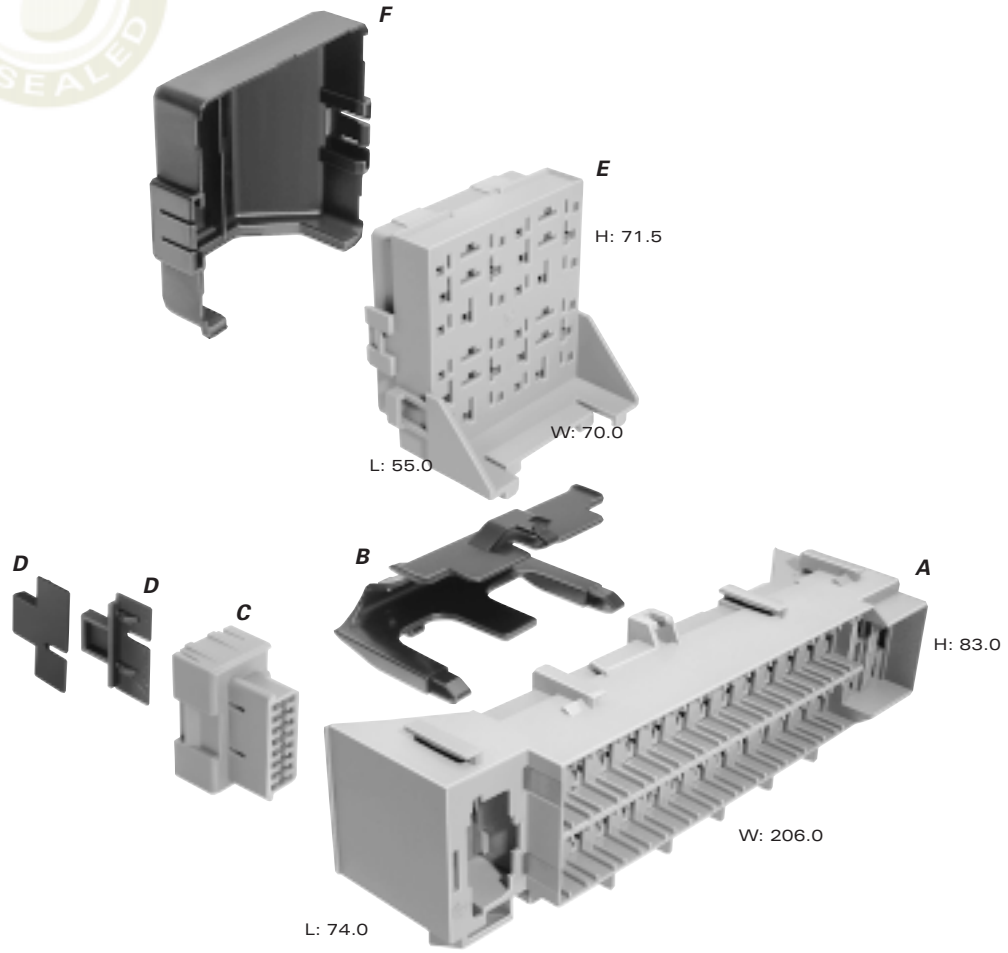
KEY: TANGLESS

- ⬔ 150 Metri-Pack
- ■ 280 Metri-Pack
- ▲ 630 Metri-Pack
- ☆ 4.8 Faston
- ★ 6.3 Faston
- ✪ 9.5 Faston

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



Downloaded from Arrow.com.



Total Mated Length: 98.0mm

A PART NO: **10718620**
DESCRIPTION: Fuse Module
SIZE: 74.0L x 83.0H x 206.0W
COLOR: Gray
MATERIAL: PA6 10% GF 20% GB
TERMINALS: See Page 260
APPLICATIONS: 26 ATO® Fuses, 2 MAXI™ Fuses

B PART NO: **10720018**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: ABS

C PART NO: **15327645**
DESCRIPTION: OBD II Connector 16F
COLOR: Gray
MATERIAL: PA6

D PART NO: **15327646**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6 15% GF

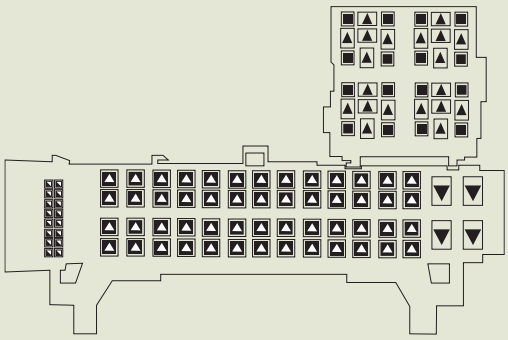
E PART NO: **10718621**
DESCRIPTION: Relay Module
SIZE: 55.0L x 71.5H x 70.0W
COLOR: Gray
MATERIAL: PA6 10% GF 20% GB
APPLICATION: 4 Standard Relays

F PART NO: **10720017**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: ABS

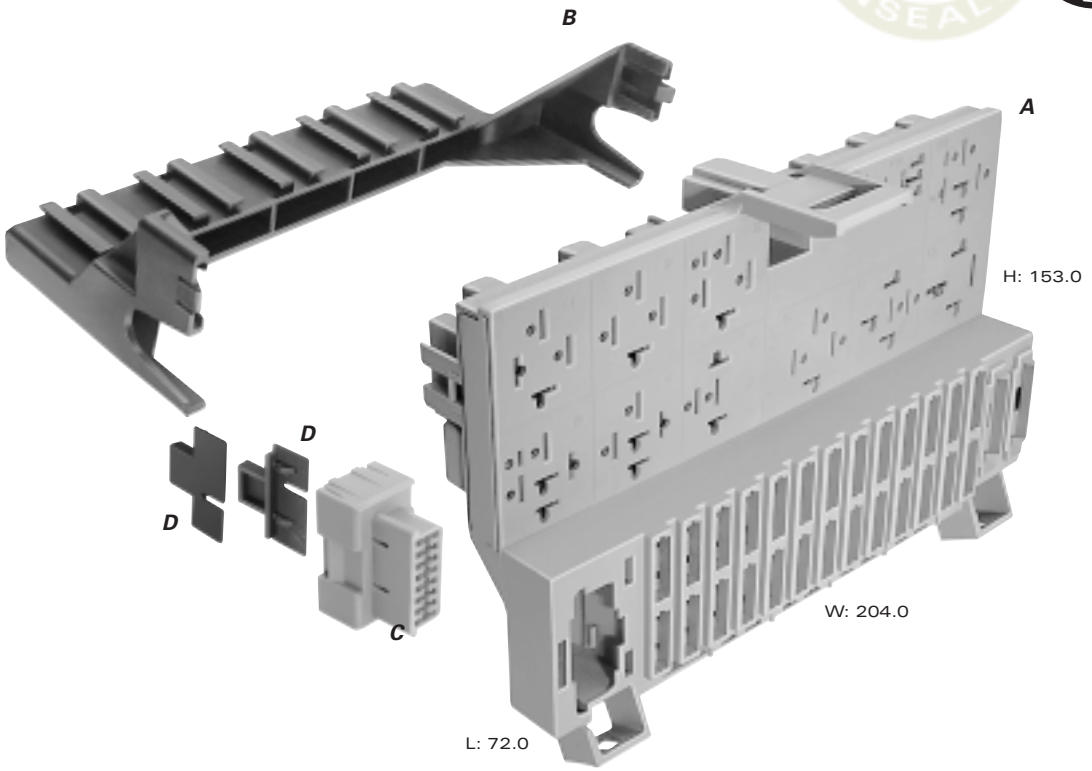
KEY: TANGLESS

- ◹ 150 Metri-Pack
- ■ 280 Metri-Pack
- ▲ 630 Metri-Pack
- ▼ 800 Metri-Pack
- ◮ 6.3 VF

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



Downloaded from Arrow.com.



Total Mated Length: 148.0mm

A

PART NO: **15344665**
DESCRIPTION: Electrical Center
SIZE: 72.0L x 153.0H x 204.0W
COLOR: Gray
MATERIAL: PA6 20% GF 10% GB
TERMINALS: See Page 260
APPLICATIONS: 26 ATO® Fuses, 2 MAXI™ fuses, 2 Mini Relays, 9 Standard Relays, 1 Relay

B

PART NO: **10719976 (Optional)**
DESCRIPTION: Holder
COLOR: Black
MATERIAL: PA6 30% GF
APPLICATIONS: 5 Position Carrier Relay

C

PART NO: **15327645**
DESCRIPTION: OBD II Connector 16F
COLOR: Gray
MATERIAL: PA6

D

PART NO: **15327646**
DESCRIPTION: TPA
NUMBER REQ: 2
COLOR: Black
MATERIAL: PA6 15% GF

SECTION NOTES:

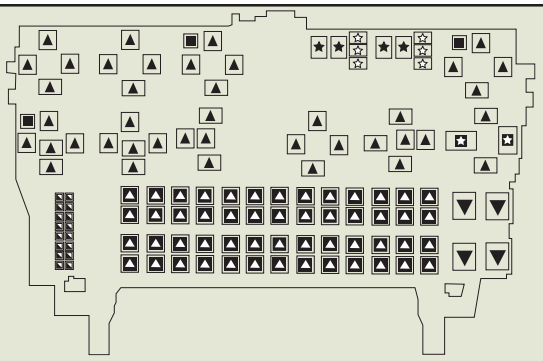
Contact your regional support representative at the number listed below.

- Terminals available from manufacturer.

KEY: TANGLESS

- 150 Metri-Pack
- 280 Metri-Pack
- 630 Metri-Pack
- 800 Metri-Pack
- 6.3 VF
- 4.8 Faston
- 6.3 Faston
- 9.5 Faston

Traditional Electrical Centers feature a combination of different terminal cavities, as indicated by the Key.



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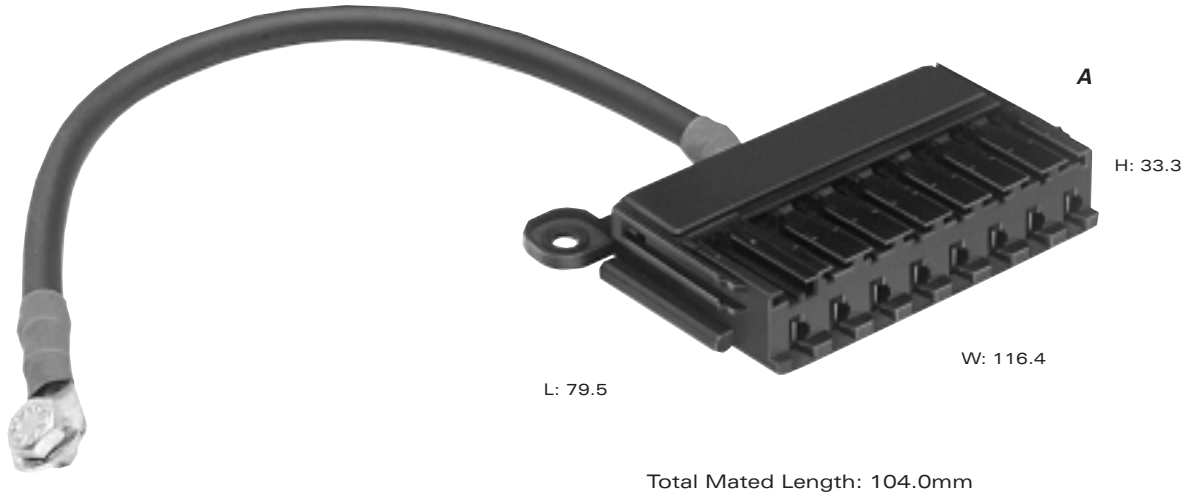
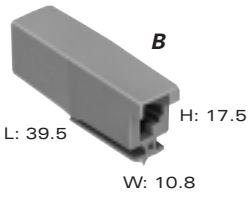


Total Mated Length: 104.0mm



A PART NO: **15327622**
DESCRIPTION: Module Assembly 8F
SIZE: 79.5L x 33.3H x 116.4W
COLOR: Black
MATERIAL: PA66 HS IM

B PART NO: **15327626**
DESCRIPTION: Connector 1F
SIZE: 39.5L x 17.5H x 10.8W
COLOR: Gray
MATERIAL: PA66 HS IM
TERMINALS: See page 262
APPLICATION: 1 MAXI™ Fuse

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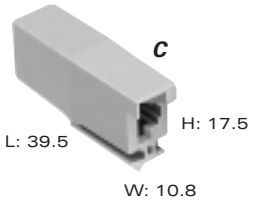
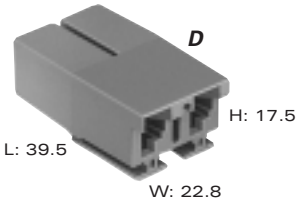
C PART NO: **15327625**
DESCRIPTION: Connector 1F
SIZE: 39.5L x 17.5H x 10.8W
COLOR: Yellow
MATERIAL: PA66 HS IM
TERMINALS: See page 262
APPLICATION: 1 MAXI™ Fuse

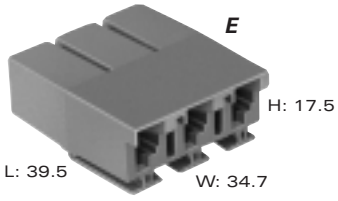
D PART NO: **15327627**
DESCRIPTION: Connector 2F
SIZE: 39.5L x 17.5H x 22.8W
COLOR: Blue
MATERIAL: PA66 HS IM
TERMINALS: See page 262
APPLICATION: 2 MAXI™ Fuses

E PART NO: **15327628**
DESCRIPTION: Connector 3F
SIZE: 39.5L x 17.5H x 34.7W
COLOR: Blue
MATERIAL: PA66 HS IM
TERMINALS: See page 262
APPLICATION: 3 MAXI™ Fuses

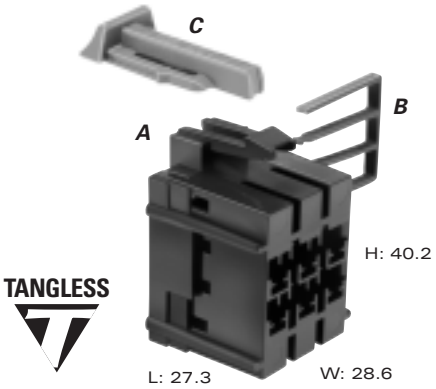
F PART NO: **15327694**
DESCRIPTION: Cover
COLOR: Black
MATERIAL: PA66 HS 15% GF







Downloaded from Arrow.com.

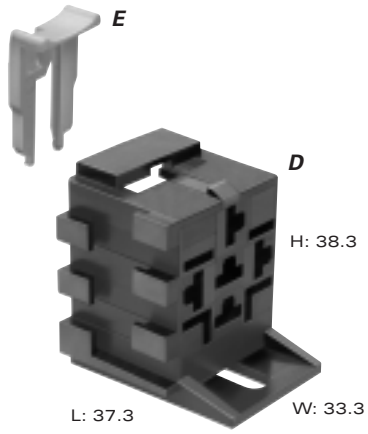


TANGLESS

A PART NO: **12110541 (Black)**
12129715 (Md. Gray)
DESCRIPTION: 280 Metri-Pack Connector 6F
SIZE: 27.3L x 40.2H x 28.6W
MATERIAL: PA66 HS IM
TERMINALS: See Page 261, 280 Metri-Pack Tangless
APPLICATION: Relay

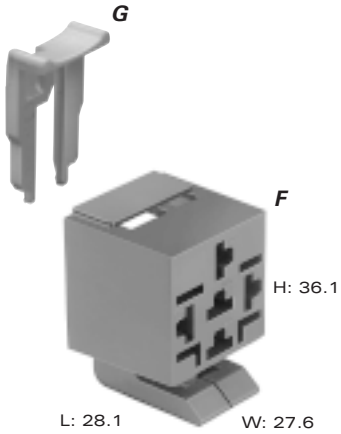
B PART NO: **12110542**
DESCRIPTION: Secondary Lock
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



D PART NO: **12033871**
DESCRIPTION: 630 Metri-Pack Connector 5F
SIZE: 37.3L x 38.3H x 33.3W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 261, 630 Metri-Pack Relay Series
APPLICATION: Relay (ISO)
NOTE: Interlocking multiple connectors form a Relay module.

E PART NO: **12033872**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA6



F PART NO: **12034003**
DESCRIPTION: 630 Metri-Pack Connector 5F
SIZE: 28.1L x 36.1H x 27.6W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 261, 630 Metri-Pack Relay Series
APPLICATION: Relay (ISO)

G PART NO: **12033872**
DESCRIPTION: TPA
COLOR: Natural
MATERIAL: PA6

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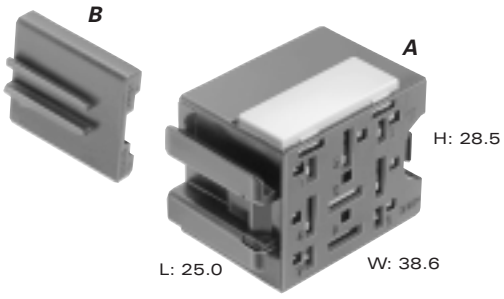
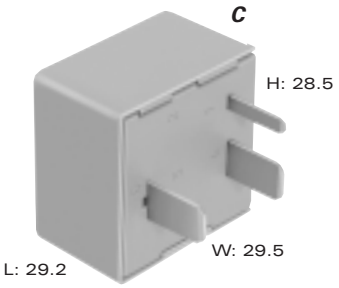


A PART NO: **12131317**
DESCRIPTION: 280/630 Metri-Pack Mixed Connector 9F
SIZE: 25.0L x 28.5H x 38.6W
COLOR: Black
MATERIAL: PA6 15% GF
TERMINALS: See Page 261, 630 Metri-Pack, 280 MP Relay Series
APPLICATION: Standard Relay Socket

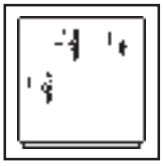
B PART NO: **10719968 (Optional)**
DESCRIPTION: Clip Adapter
COLOR: Black
MATERIAL: PA6



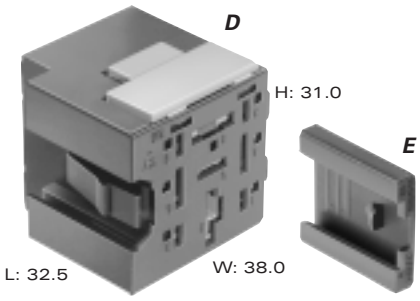
C PART NO: **10740407 (Gray)**
10719332 (Blue)
10740408 (Brown)
10740410 (Black)
DESCRIPTION: Standard Bridging Relay
SIZE: 29.2L x 28.5H x 29.5W
BLADE SIZE: 2.8, 6.3mm
MATERIAL: PA6 15% GF

10740407

10719332

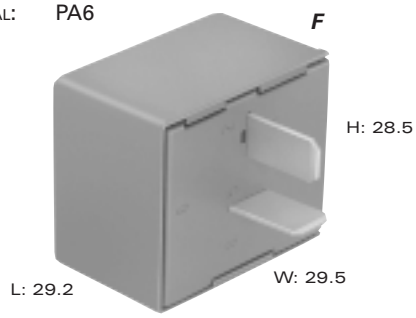

10740408

10740410



D PART NO: **12162998**
DESCRIPTION: 280/630 M/P 9.5 Faston Connector Assembly 9F
SIZE: 32.5L x 31.0H x 38.0W
COLOR: Black
MATERIAL: PA6 15% GF
TERMINALS: See Page 261, 630 Metri-Pack, 280 MP Relay Series
APPLICATION: Power Relay Socket

E PART NO: **10719968 (Optional)**
DESCRIPTION: Clip Adapter
COLOR: Black
MATERIAL: PA6



F PART NO: **10740409 (Green)**
DESCRIPTION: Power Bridging Relay
SIZE: 29.2L x 28.5H x 29.5W
BLADE SIZE: 9.5mm
MATERIAL: PA6 15% GF

10720098

10740409

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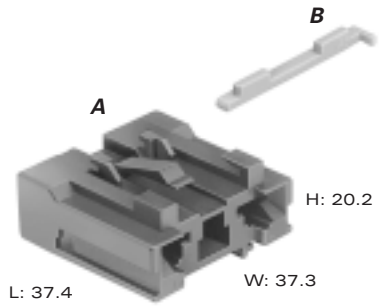
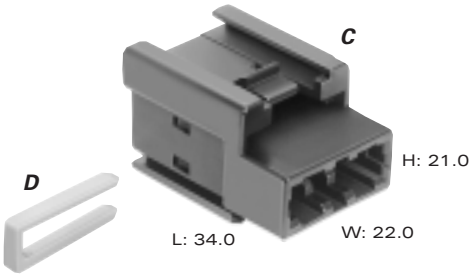


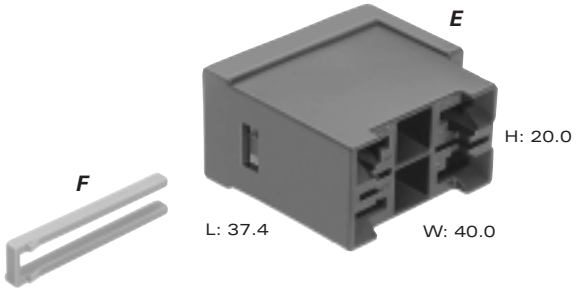
A PART NO: **12110057**
DESCRIPTION: 800 MAXI™ Fuse Connector 2F
SIZE: 37.4L x 20.2H x 37.3W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 262, 800 MaxiFuse
APPLICATION: 1 MAXI™ Fuse
NOTE: Interlocking multiple connectors form a MaxiFuse module.

B PART NO: **12110058**
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66



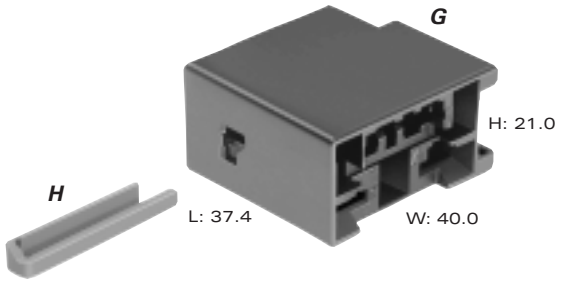
C PART NO: **12147079**
DESCRIPTION: ATO® Fuse Connector 2F
SIZE: 34.0L x 21.0H x 22.0W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 263, 800 MaxiFuse,
APPLICATION: 1 ATO® Fuse

D PART NO: **12131359**
DESCRIPTION: Secondary Lock
COLOR: Yellow
MATERIAL: PA66 25% GF



E PART NO: **15339818**
DESCRIPTION: 800 MAXI™ Fuse Connector 4F
SIZE: 37.4L x 22.0H x 40.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 262, 800 MaxiFuse
APPLICATION: 2 MAXI™ Fuses

F PART NO: **15337249**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 30% GF



G PART NO: **12158100**
DESCRIPTION: MAXI™/ATO Fuse Connector 4F
SIZE: 37.4L x 21.0H x 40.0W
COLOR: Black
MATERIAL: PA66
TERMINALS: See Page 263, 800 MaxiFuse,
APPLICATION: 1 MAXI™ Fuse, 1 ATO Fuse

H PART NO: **12158101**
DESCRIPTION: Secondary Lock
COLOR: Gray
MATERIAL: PA6 30% GF

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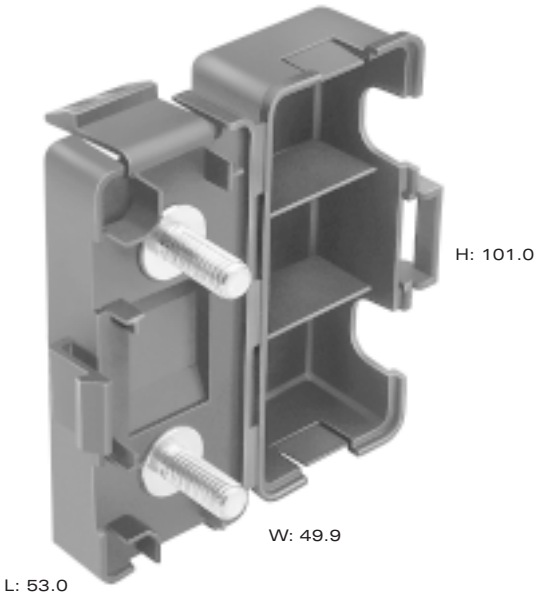
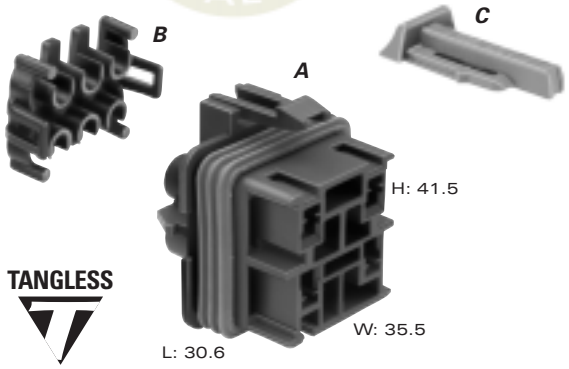


A PART NO: **15305003**

DESCRIPTION:	Connector (MEGA® Fuse)
SIZE:	53.0L x 101.0H x 49.9W
COLOR:	Black
MATERIAL:	PP IM
TERMINALS:	See Page 262, M8 Ring
APPLICATION:	1 MEGA® Fuse (100 - 200 AMPS)
NOTE:	Bolt thread size M8 X 1.25.

Downloaded from Arrow.com.

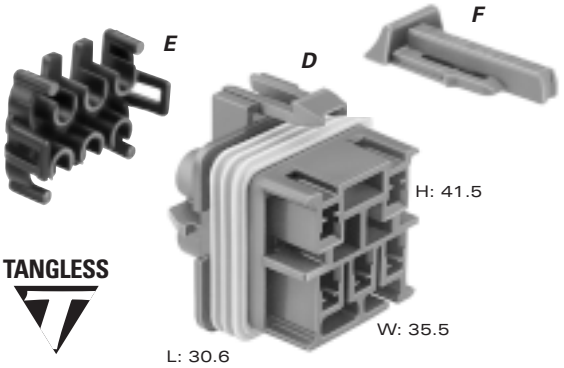


TANGLESS

A PART NO: **12129716**
DESCRIPTION: 280 Metri-Pack Connector Assembly 4F
SIZE: 30.6L x 41.5H x 35.5W
COLOR: Md. Gray
MATERIAL: PA66 HS IM
TERMINALS: See Page 263, 280 Metri-Pack Tangless Sealed
SEALS/PLUGS: See page 263
APPLICATION: Relay

B PART NO: **12110540**
DESCRIPTION: TPA
COLOR: Dk. Green
MATERIAL: PA6

C PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP

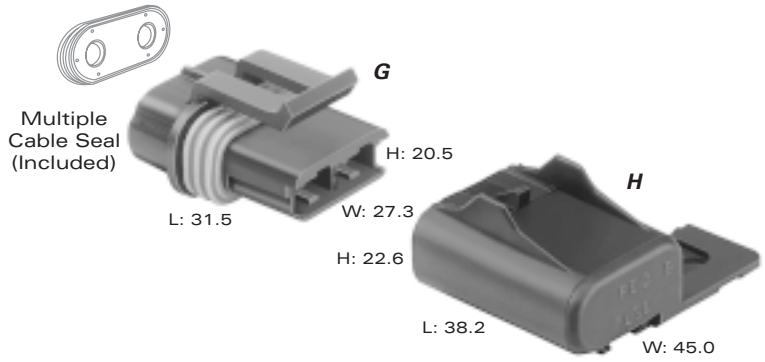


TANGLESS

D PART NO: **12110539**
DESCRIPTION: 280 Metri-Pack Connector Assembly 5F
SIZE: 30.6L x 41.5H x 35.5W
COLOR: Black
MATERIAL: PA66 HS IM
TERMINALS: See Page 263, 280 Metri-Pack Tangless Sealed
SEALS/PLUGS: See page 263
APPLICATION: Relay

E PART NO: **12110540**
DESCRIPTION: TPA
COLOR: Dk. Green
MATERIAL: PA6

F PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



G PART NO: **12085030 (Black/Lt. Orange Seal)**
4.48-3.72 CABLE O.D.
12033769 (Black/Green Seal)
3.65-2.89 CABLE O.D.
12103172 (Gray/Green Seal)
3.65-2.89 CABLE O.D.
12066681 (Black/Lt. Gray Seal)
2.64-1.90 CABLE O.D.
DESCRIPTION: 630 Pull-To-Seat Connector Assembly 2F
SIZE: 31.5L x 20.5H x 27.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 263, 630 Metri-Pack Pull-To-Seat
APPLICATION: 1 ATO® Fuse

H PART NO: **12033731 (Black)**
12146104 (Red)
12059426 (Black—Dual)
DESCRIPTION: Cover
SIZE: 38.2L x 22.6H x 45.0W
SIZE (DUAL): 38.2L x 23.5H x 56.3W
MATERIAL: PA66 HS IM

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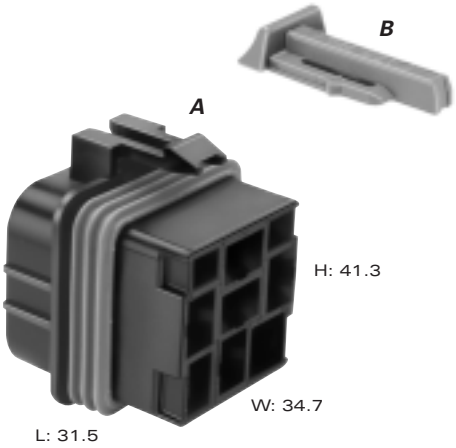
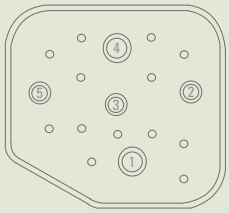


A PART NO: **12092605**
12065686
12065685

DESCRIPTION: 630 Pull-to-Seat Connector Assembly
SIZE: 31.5L x 41.3H x 34.7W
COLOR: Black
MATERIAL: PA6
TERMINALS: See Page 263, 630 Metri-Pack Pull-to-Seat
PLUGS: See Page 263
APPLICATION: Relay (ISO)

B PART NO: **12052834**
DESCRIPTION: CPA
COLOR: Green
MATERIAL: PP



Multiple Cavity Cable Seal (Included)

Cable O.D. (mm)

Conn. Asm. Part Number	Cable Seal Color	Cavity 1	Cavity 2	Cavity 3	Cavity 4	Cavity 5
12092605	Orange	1.60-2.12	1.60-2.12	1.60-2.12	Blocked	1.60-2.12
12065686	Lt. Gray	3.49-3.88	2.03-2.44	Blocked	3.49-3.88	2.03-2.44
12065685	Green	3.49-3.88	2.03-2.44	2.03-2.44	3.49-3.88	2.03-2.44

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Sensor Series

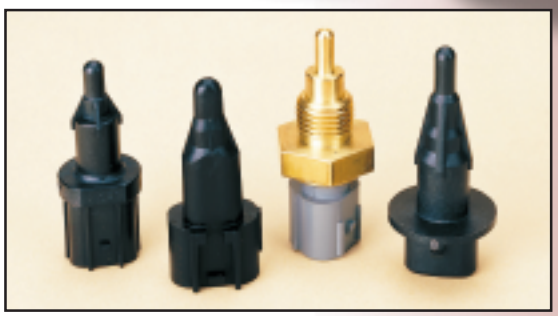
Temperature Sensors

Flexible, Affordable and Fast to Market

Delphi Connection Systems' growing line of temperature sensors is a perfect integration of product and process technologies. Our crimpless conductive path design enables automatic processing for efficient, cost-effective sensor manufacturing.

Capable of matching any calibration criteria, these reliable and durable sensors can be packaged into customer systems worldwide. These products can be promptly brought to market, utilizing Delphi Packard Electric's global network of engineering and manufacturing locations.

Our sensor product line offers a variety of designs for various sensing applications. In addition, we are currently developing high-temperature sensor products, multifunction sensors, sensors for non-temperature applications, and sensors that integrate electronics into the packaging.



Temperature Sensor Features

- *Rugged housing design*
- *Customized electrical and mechanical mounting*
- *Design flexibility*
- *Few components, cost effective*

TEMPERATURE SENSORS

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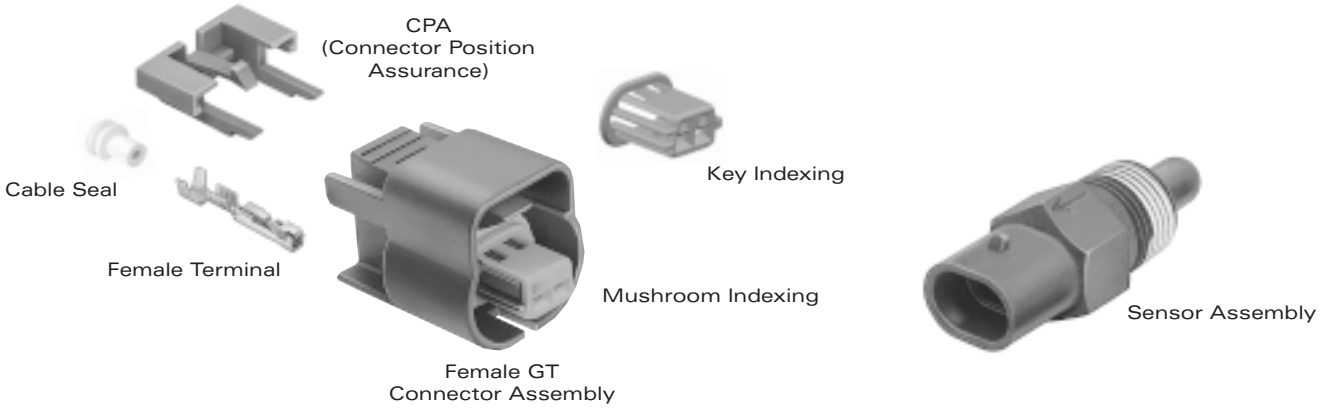
Description

Air temperature sensors are continuous function devices that change resistance inversely proportional to temperature. These sensors consist of two major components: the high temperature thermoplastic shell and a thermistor pre-mold sub-assembly. The plastic shell is custom designed to meet specific mounting and packaging requirements. Containing an NTC thermistor, the patented pre-mold assembly is inserted into the shell.

Typical Application

The air sensors measure the engine intake air temperature in the manifold, in the intake air duct, and in the air cleaner. They provide a signal to the Powertrain Control Module (PCM).



150 GT CONNECTOR ASSEMBLIES SEALED

Cavities	Connector Part #	Cover/Indexing	Color	Material
2	15336004	Shrouded/Mushroom	Black	PA6 10% GF & 20% GB
2	15335987	Shrouded/Key	Black	PA6 10% GF & 20% GB
2	15336024	Unshrouded/Mushroom	Black	PA6 10% GF & 20% GB

Mating options, 150.2 Metri-Pack Pull-to-Seat Connectors: 12162193, 12162194, 12162195, 12162197, 12162198, 12162199.

AIR TEMPERATURE SENSORS

Cavity Indexing	Air Temperature Sensor	Color	Material
Mushroom	12110446	Black	PEI 30% GF
Key	12146830	Gray	PEI 30% GF
Key	12129596	Black	PA66 HS 33% GF
Key	12160244	Black	PBT 30% GF
Key	12160245	Black	PBT 30% GF
Key	12160246	Black	PBT 30% GF

150 GT FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326266	0.50-0.35	Tin Brass	Tin
15305350	*1.00-0.75	Tin Brass	Tin

* Accomodates 1.00 European Ultra Thin Wall Cable.
Accomodates 0.80 SAE Ultra Thin Wall Cable.

GT CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191155	15366022	1.47-1.85	Silicone	Green
-	15305351	1.70-2.10	Silicone	Yellow

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Chart A

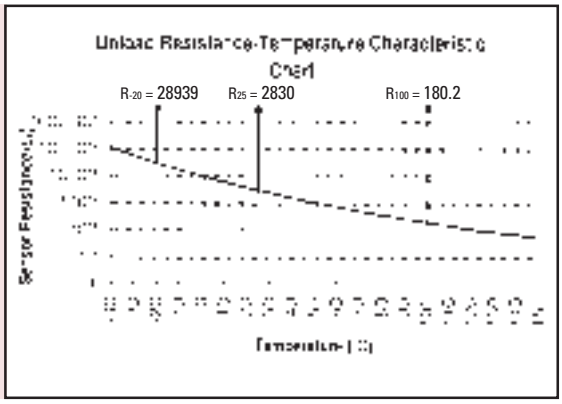
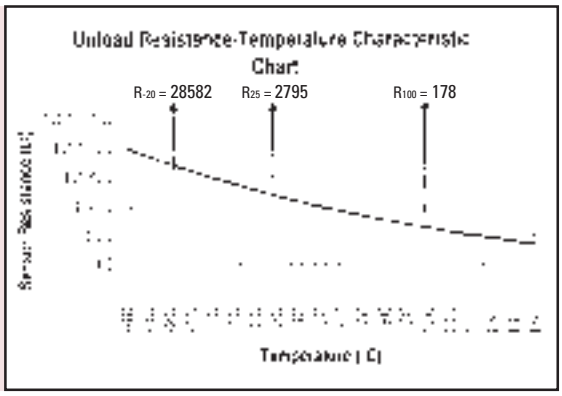
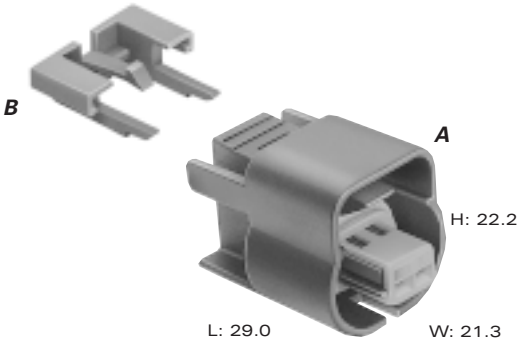
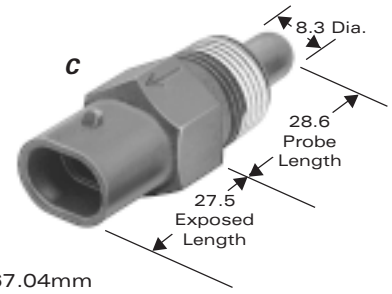


Chart B







Total Mated Length: 67.04mm

A PART NO: **15336004** (Shrouded)
15336024 (Unshrouded)

DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 292
SEALS: See Page 292
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors: 12162193, 12162194, 12162195

B PART NO: **15317832**

DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C PART NO: **12110446**

DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: PEI 30% GF
WEIGHT: 13.2g
MOUNTING THREAD SIZE: 3/8" - 18 NPTF

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	18mW/˚C
THERMAL TIME CONSTANT:	60 seconds
ACCURACY:	See Chart A

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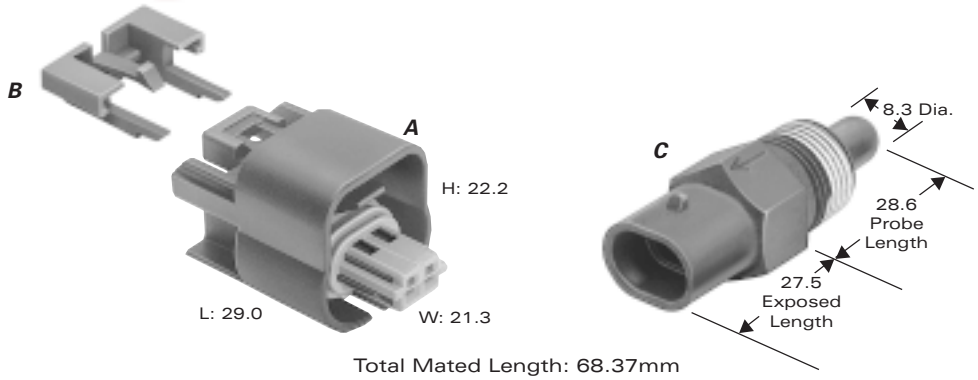


Total Mated Length: 68.37mm

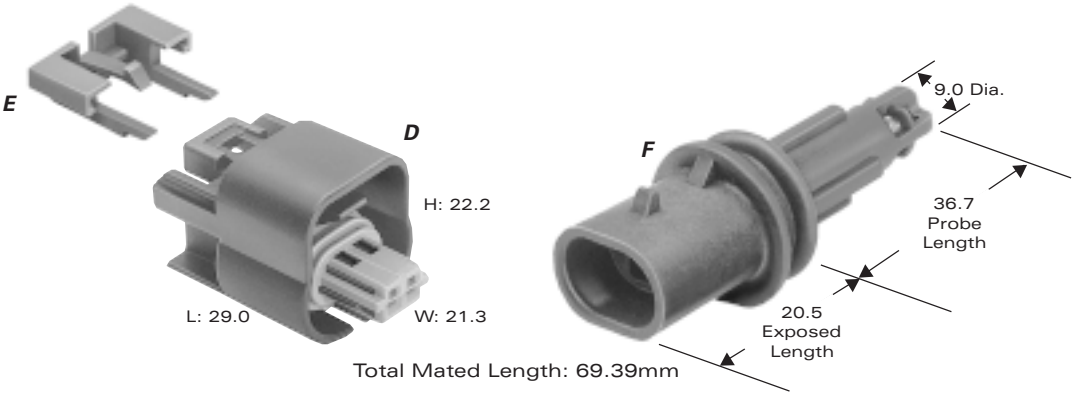
A PART NO: **15335987**
DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 292
SEALS: See Page 292
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors
12162197, 12162198, 12162199

B PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C PART NO: **12146830**
DESCRIPTION: Sensor Assembly 2M
COLOR: Gray
MATERIAL: PEI 30% GF
WEIGHT: 13.8g
MOUNTING THREAD SIZE: 3/8" - 18 NPTF

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	18mW/˚C
THERMAL TIME CONSTANT:	60 seconds
ACCURACY:	See Chart A



Total Mated Length: 69.39mm

D PART NO: **15335987**
DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 292
SEALS: See Page 292
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors
12162197, 12162198, 12162199

E PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

F PART NO: **12129596**
DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: PA66 HS 33% GF
WEIGHT: 8.2g
MOUNTING: Push

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	12mW/˚C
THERMAL TIME CONSTANT:	<15 seconds
ACCURACY:	See Chart A

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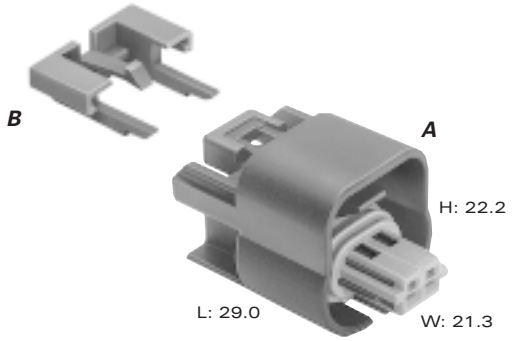
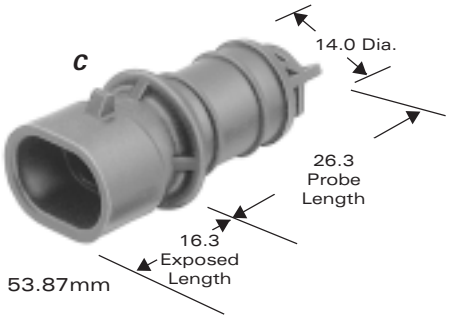




Total Mated Length: 53.87mm

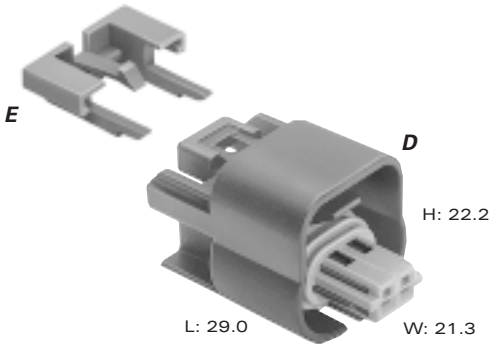
A PART NO: **15335987**
- DESCRIPTION: 150 GT Connector Assembly 2F
- SIZE: 29.0L x 22.2H x 21.3W
- COLOR: Black
- MATERIAL: PA6 10% GF & 20% GB
- TERMINALS: See Page 292
- SEALS: See Page 292
- MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors 12162197, 12162198, 12162199

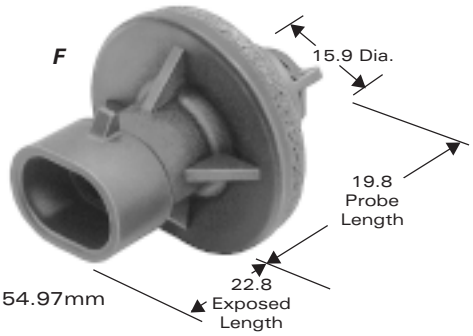
B PART NO: **15317832**
- DESCRIPTION: CPA
- COLOR: Gray
- MATERIAL: PA6 10% GF & 20% GB

C PART NO: **12160244**
- DESCRIPTION: Sensor Assembly 2M
- COLOR: Black
- MATERIAL: PBT 30% GF
- WEIGHT: 5.5g
- MOUNTING: Push

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart B
DISSIPATION CONSTANT:	9mW/˚C
THERMAL TIME CONSTANT:	<15 seconds
ACCURACY:	See Chart B





Total Mated Length: 54.97mm

D PART NO: **15335987**
- DESCRIPTION: 150 GT Connector Assembly 2F
- SIZE: 29.0L x 22.2H x 21.3W
- COLOR: Black
- MATERIAL: PA6 10% GF & 20% GB
- TERMINALS: See Page 292
- SEALS: See Page 292
- MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors 12162197, 12162198, 12162199

E PART NO: **15317832**
- DESCRIPTION: CPA
- COLOR: Gray
- MATERIAL: PA6 10% GF & 20% GB

F PART NO: **12160245**
- DESCRIPTION: Sensor Assembly 2M
- COLOR: Black
- MATERIAL: PBT 30% GF
- WEIGHT: 8.9g
- MOUNTING: Clip

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart B
DISSIPATION CONSTANT:	9mW/˚C
THERMAL TIME CONSTANT:	<15 seconds
ACCURACY:	See Chart B

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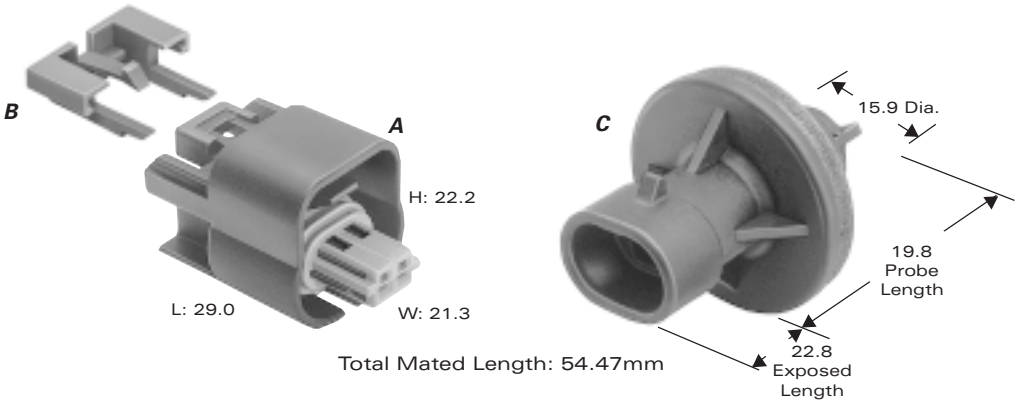

A PART NO: **15335987**

DESCRIPTION:	150 GT Connector Assembly 2F
SIZE:	29.0L x 22.2H x 21.3W
COLOR:	Black
MATERIAL:	PA6 10% GF & 20% GB
TERMINALS:	See Page 292
SEALS:	See Page 292
MATING OPT:	150.2 Metri-Pack Pull-To-Seat Connectors 12162197, 12162198, 12162199

B PART NO: **15317832**

DESCRIPTION:	CPA
COLOR:	Gray
MATERIAL:	PA6 10% GF & 20% GB

C PART NO: **12160246**

DESCRIPTION:	Sensor Assembly 2M
COLOR:	Black
MATERIAL:	PBT 30% GF
WEIGHT:	9.3g
MOUNTING:	Twist Lock

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart B
DISSIPATION CONSTANT:	9mW/˚C
THERMAL TIME CONSTANT:	<15 seconds
ACCURACY:	See Chart B

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Description

The Heating Ventilation Air Conditioning temperature sensor is a continuous function device that changes resistance inversely proportional to temperature. The discharge air sensor consists of an NTC thermistor with a crimpless conductive path protected by a plastic body.

Typical Application

The discharge air sensor measures the inside air temperature and provides a signal to the automatic climate control unit.

TPA (Terminal Position Assurance)

Female Terminal

Female Metri-Pack Connector

Sensor Assembly

150 METRI-PACK FEMALE CONNECTOR UNSEALED

Cavities	Part #	Color	Material	TPA
2	12047662	Black	PA66 HS IM	12047664

HVAC TEMPERATURE SENSOR

HVAC Temperature Sensor	Color	Material
12160947	Black	PA66 HS IM

150 METRI-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm^2)	Material	Plating
12047767	1.0-0.80	Silicon Bronze	Tin
12064971	0.50-0.35	Silicon Bronze	Tin

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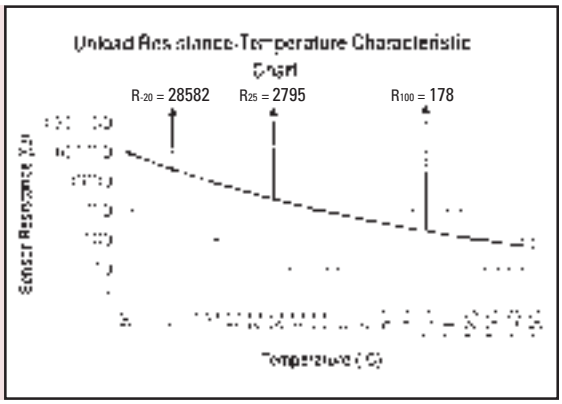
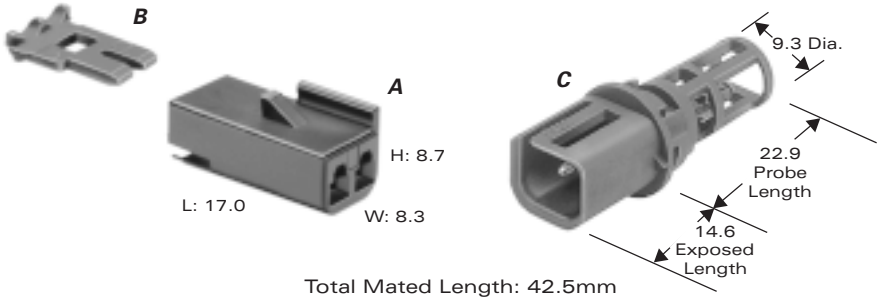
Chart B





Total Mated Length: 42.5mm

A PART NO: **12047662 (Black)**
12059249 (Natural)

DESCRIPTION: 150 Metri-Pack Connector 2F
SIZE: 17.0L x 8.7H x 8.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 297

B PART NO: **12047664**

DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12160947**

DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: PA66 HS IM
WEIGHT: 2.2g
MOUNTING: Twist Lock

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 125˚C
RESISTIVE RANGE (Ω):	See Chart B
DISSIPATION CONSTANT:	9mW/˚C
THERMAL TIME CONSTANT:	8 seconds
ACCURACY:	See Chart B

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Description

Coolant/Fluid temperature sensors are continuous function devices that change resistance inversely proportional to temperature. These brass sensors consist of five major components: the brass shell, thermal grease, insulating sleeve, gasket, and insert molded connector. The shell utilizes customized thread and hex sizes per application requirements and the connector contains an NTC thermistor with a crimpless conductive path.

Typical Application

The brass sensors measure the temperature of the engine oil, the fuel or the engine coolant and provide a signal to the Powertrain Control Module (PCM).

CPA
(Connector Position
Assurance)

Cable Seal

Female Terminal

Female GT
Connector Assembly

Mushroom Indexing

Sensor Assembly

150 GT CONNECTOR ASSEMBLIES SEALED

Cavities	Connector Part #	Cover/Indexing	Color	Material
2	15336004	Shrouded/Mushroom	Black	PA6 10% GF & 20% GB
2	15336024	Unshrouded/Mushroom	Black	PA6 10% GF & 20% GB

Mating options, 150.2 Metri-Pack Pull-to-Seat Connectors: 12162193, 12162194, 12162195

COOLANT/FLUID SENSORS

Cavity Indexing	Coolant Fluid Sensors	Color	Material	
			Housing	Connector
Mushroom	12146312	Black	Brass	PBT 30% GF
Mushroom	12146911	Black	Brass	PBT 30% GF
Mushroom	12146897	Black	Brass	PBT 30% GF

150 GT FEMALE TERMINALS SEALED

Part #	Cable Range (mm²)	Material	Plating
15326266	0.50-0.35	Tin Brass	Tin
15305350	*1.00-0.75	Tin Brass	Tin

* Accommodates 1.00 European Ultra Thin Wall Cable.
Accommodates 0.80 SAE Ultra Thin Wall Cable.

GT CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12191155	15366022	1.47-1.85	Silicone	Green
-	15305351	1.70-2.10	Silicone	Yellow

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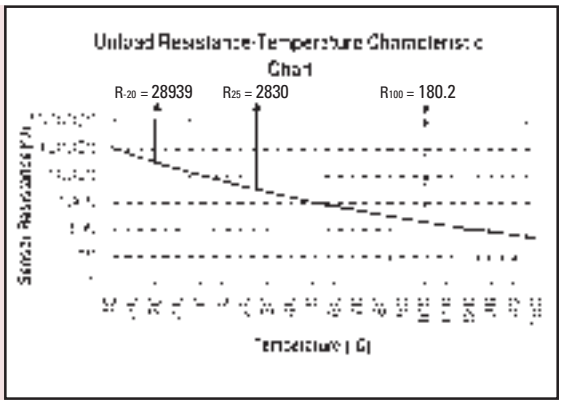
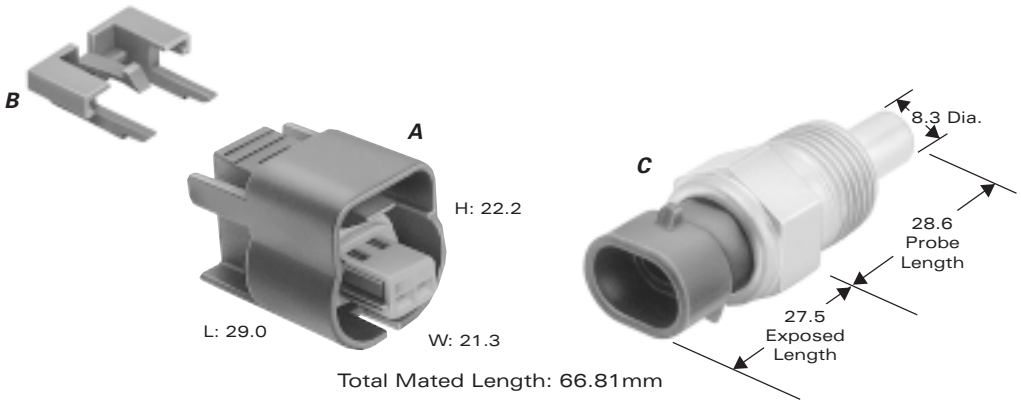
Chart A





Total Mated Length: 66.81mm

A PART NO: **15336004** (Shrouded)
15336024 (Unshrouded)
DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 299
SEALS: See Page 299
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors
12162193, 12162194, 12162195

B PART NO: **15317832**
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C PART NO: **12146312**
DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: Brass Housing; PBT 30% GF Connector
WEIGHT: 39.5g
MOUNTING THREAD SIZE: 3/8" - 18 NPTF

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	25mW/˚C
THERMAL TIME CONSTANT:	20 to 30 seconds
ACCURACY:	See Chart A

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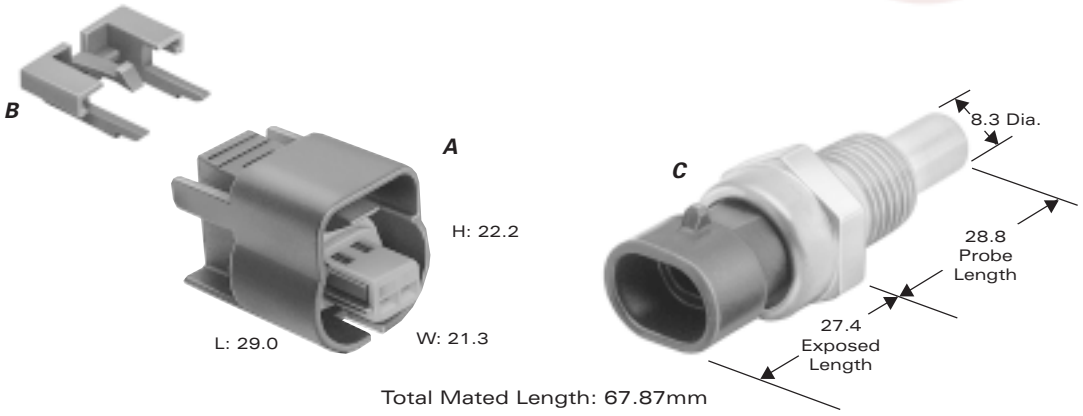


Total Mated Length: 67.87mm

A PART NO: **15336004** (Shrouded)
15336024 (Unshrouded)

DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 299
SEALS: See Page 299
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors
12162193, 12162194, 12162195

B PART NO: **15317832**

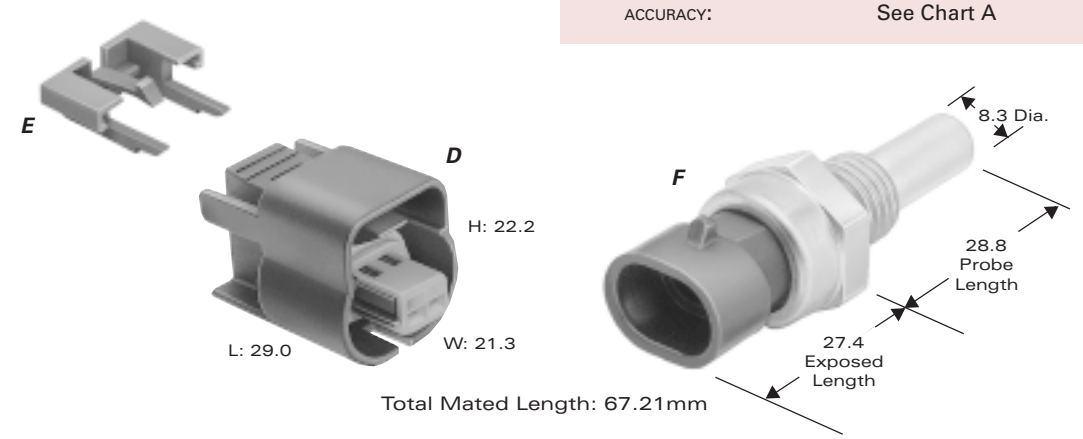
DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

C PART NO: **12146911**

DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: Brass Housing; PBT 30% GF Connector
WEIGHT: 29.4g
MOUNTING THREAD SIZE: 1/4" - 18 NPTF

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	25mW/˚C
THERMAL TIME CONSTANT:	20 to 30 seconds
ACCURACY:	See Chart A



Total Mated Length: 67.21mm

D PART NO: **15336004** (Shrouded)
15336024 (Unshrouded)

DESCRIPTION: 150 GT Connector Assembly 2F
SIZE: 29.0L x 22.2H x 21.3W
COLOR: Black
MATERIAL: PA6 10% GF & 20% GB
TERMINALS: See Page 299
SEALS: See Page 299
MATING OPT: 150.2 Metri-Pack Pull-To-Seat Connectors
12162193, 12162194, 12162195

E PART NO: **15317832**

DESCRIPTION: CPA
COLOR: Gray
MATERIAL: PA6 10% GF & 20% GB

F PART NO: **12146897**

DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: Brass Housing; PBT 30% GF Connector
WEIGHT: 23.2g
MOUNTING THREAD SIZE: M12 X 1.5

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart A
DISSIPATION CONSTANT:	25mW/˚C
THERMAL TIME CONSTANT:	20 to 30 seconds
ACCURACY:	See Chart A

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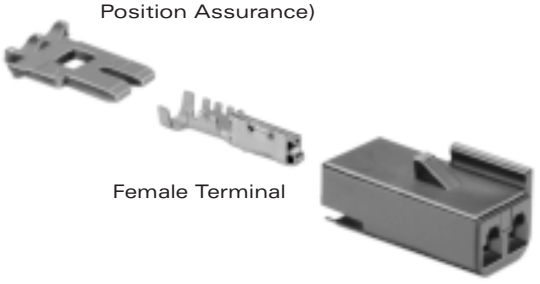
• TRANSMISSION

DESCRIPTION

Transmission temperature sensors are continuous function devices that change resistance inversely proportional to temperature. The two primary types of sensors that monitor the automatic transmission fluid are: the metal stator temperature sensor and the plastic sump temperature sensor. The stator sensor consists of a brass or stainless steel shell, thermal grease, insulating sleeve, gasket, and insert-molded connector containing an NTC thermistor. The sump sensor consists of a high temperature plastic shell and a patented pre-mold sub-assembly that contains an NTC thermistor with a crimpless conductive path.

TYPICAL APPLICATION

These sensors measure the fluid temperature in two transmission environments: in-line near the stator and the sump tank. A signal is provided to the Powertrain Control Module (PCM).



TPA (Terminal Position Assurance)

Female Terminal

Female Metri-Pack Connector

Sensor Assembly

150 METRI-PACK FEMALE CONNECTOR UNSEALED

Cavities	Part #	Color	Material	TPA
2	12047662	Black	PA66 HS IM	12047664

150 METRI-PACK FEMALE TERMINALS UNSEALED

Part #	Cable Range (mm^2)	Material	Plating
12047767	1.0-0.80	Silicon Bronze	Tin
12064971	0.50-0.35	Silicon Bronze	Tin

TRANSMISSION TEMPERATURE SENSORS

Transmission Temp. Sensors	Color	Material	
		Housing	Connector
12160855	Black	Brass	PA66 HS IM
12129691	Md. Gray	PA66 HS IM	–

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Chart B

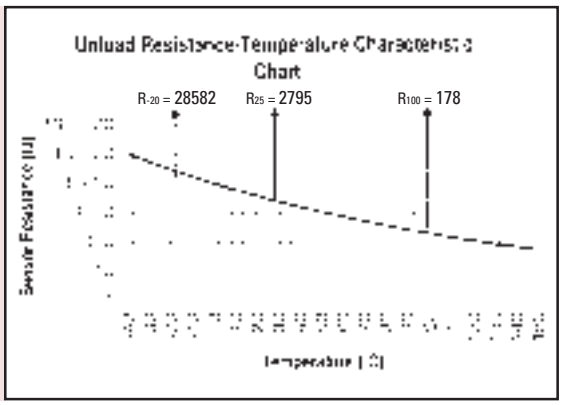
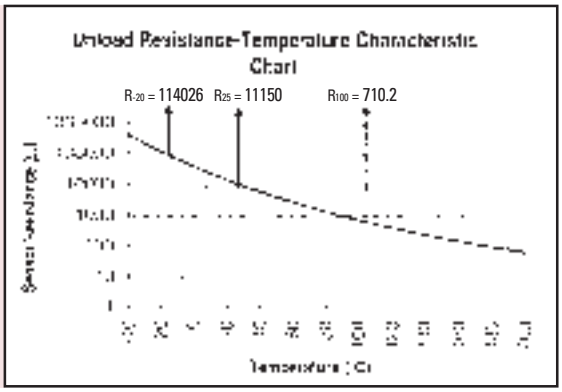
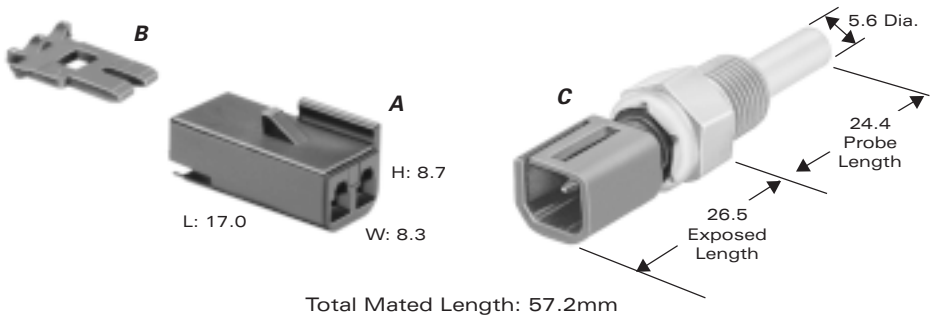


Chart C





Total Mated Length: 57.2mm

A PART NO: **12047662 (Black)**
12059249 (Natural)

DESCRIPTION: 150 Metri-Pack Connector 2F
SIZE: 17.0L x 8.7H x 8.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 302

B PART NO: **12047664**

DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12160855**

DESCRIPTION: Sensor Assembly 2M
COLOR: Black
MATERIAL: Brass Housing; PA66 HS IM Connector
WEIGHT: 12.2g
MOUNTING THREAD SIZE: 1/8"-27 PTF

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	
SENSOR TIP:	-40˚C to 200˚C
CONNECTOR:	-40˚C to 150˚C
RESISTIVE RANGE (Ω):	See Chart C
DISSIPATION CONSTANT:	12mW/˚C
THERMAL TIME CONSTANT:	10 seconds
ACCURACY:	See Chart C

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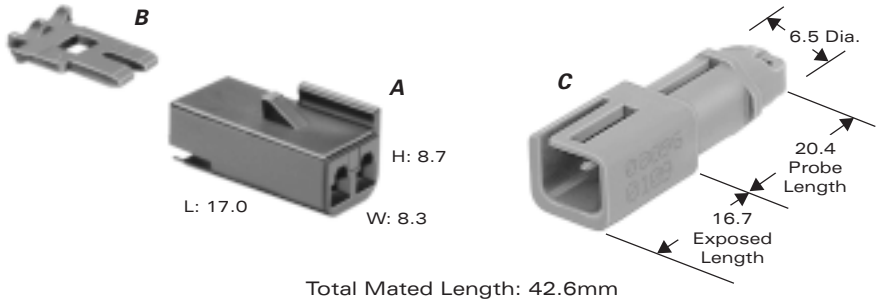

Total Mated Length: 42.6mm

A PART NO: **12047662 (Black)**
12059249 (Natural)

DESCRIPTION: 150 Metri-Pack Connector 2F
SIZE: 17.0L x 8.7H x 8.3W
MATERIAL: PA66 HS IM
TERMINALS: See Page 302

B PART NO: **12047664**

DESCRIPTION: TPA
COLOR: Md. Gray
MATERIAL: PA66 HS IM

C PART NO: **12129691**

DESCRIPTION: Sensor Assembly 2M
COLOR: Md. Gray
MATERIAL: PA66 HS IM
WEIGHT: 2.8g
MOUNTING: Clip/Tie

Thermal & Electrical Properties

TYPICAL VOLTAGE SUPPLY:	5V dc
OPERATING TEMPERATURE:	-40˚C to 135˚C
RESISTIVE RANGE (Ω):	See Chart B
DISSIPATION CONSTANT:	12mW/˚C
THERMAL TIME CONSTANT:	5 seconds
ACCURACY:	See Chart B

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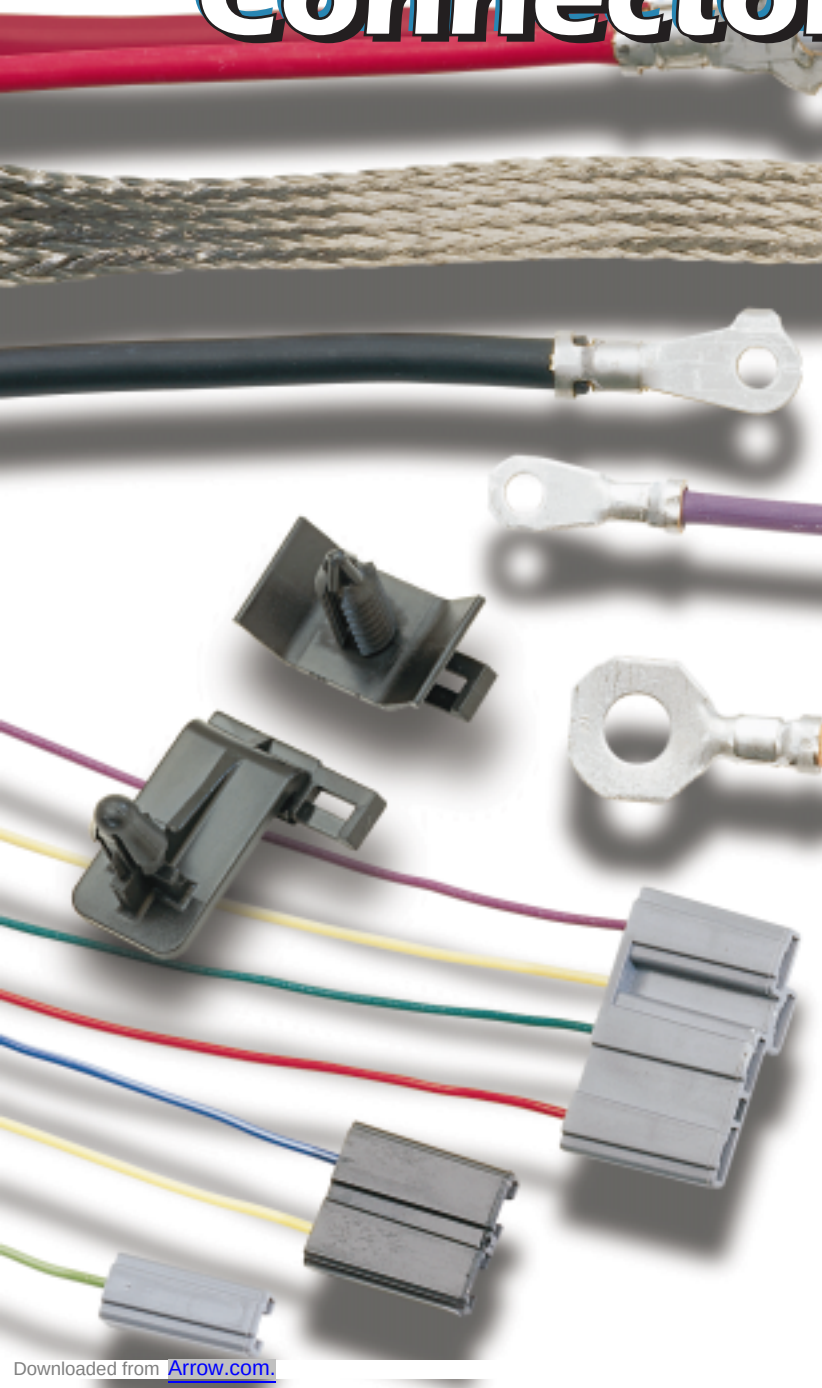
Supplemental Products

Ring Terminals, Battery Terminals, 56 Series Device Connections, Connector Carriers & Clips



SUPPLEMENTAL PRODUCTS

Ring Terminal Features

- Advanced crimp wing design
- Complete selection of English and Metric stud-hole sizes
- Wide variety of locking and orientation features

Battery Terminal Features

- State of the art crimp interface technology
- Designed for all appropriate battery and starter cable gage sizes and cable types
- Battery terminals mate to: side post, top post, or top stud batteries
- Starter terminals have anti-rotation features for ease of installation

56 Series Device Features

- Proven connection systems reliability
- Compatible connection systems to most devices
- State of the art crimp interface technology

Clip Features

- Broad product selection
- Clips attach easily and securely to connectors via mechanical locking design
- Proven anti-rattle design features

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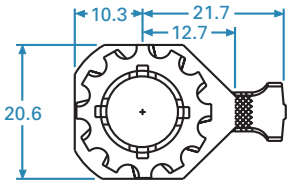
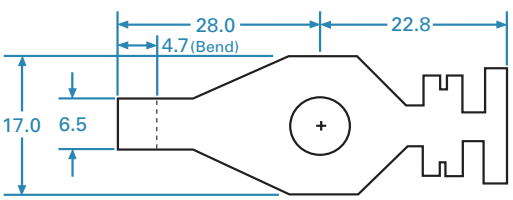
• RING TERMINALS

A wide selection of basic washer style and spade style terminals with design features to accomodate various application requirements. These terminals are designed with both core and insulation crimp wings and employ the same state of the art crimp design features as our entire connection systems family.



RING AND WASHER TERMINAL ASSEMBLIES

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M6.3	7.16	8.0	12162932	Brass	Tin	0.81
M6.3	7.16	5.0-3.0	12065449	Brass	Tin	0.81
M6.3	7.16	3.0-2.0	12089263	Brass	Tin	0.81
M6.3	7.16	1.0-0.80	12089496	Brass	Tin	0.81
M6.3	7.16	1.0-0.80 (2 Req'd.)	12103086	Brass	Tin	0.81
M10	10.34	5.0	12084554	Brass	Tin	0.81
M10	10.34	3.0 - 2.0	12089240	Brass	Tin	0.81
M10	10.34	1.0-0.80	12089045	Brass	Tin	0.81
M10	10.34	1.0-0.80 (2 Req'd.)	12084185	Brass	Tin	0.81
M12	12.60	1.0 (2 Req'd.) 1.0-0.80 (2 Req'd.)	12129822	Brass	Tin	0.81



ANTI-ROTATION TERMINALS W/90˚ TAB

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M6	6.70	8.0	15354755	Copper Alloy	Tin	0.81
M6	6.70	5.0	15354754	Copper Alloy	Tin	0.81
M6	6.70	3.0-2.0	15354753	Copper Alloy	Tin	0.81
M6	6.70	1.0-0.80	15355521	Copper Alloy	Tin	0.81
M8	8.50	8.0	15354758	Copper Alloy	Tin	0.81
M8	8.50	5.0	15354757	Copper Alloy	Tin	0.81
M8	8.50	3.0-2.0	15354756	Copper Alloy	Tin	0.81
M10	10.60	1.0-0.80	12191057	Copper Alloy	Tin	0.81

Anti-Rotation terminals are designed in a straight configuration.
A crimp and bend die is available for terminal application.

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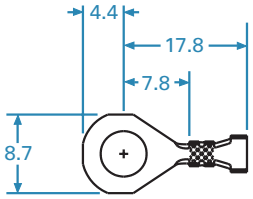
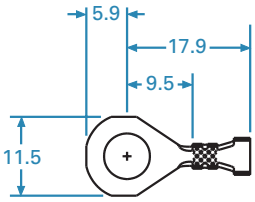
SMALL RING TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M4	4.30	5.0	12103518	Copper Alloy	Tin	1.02
M4	4.30	3.0-2.0	12103520	Copper Alloy	Tin	0.81
M5	5.40	5.0	12103517	Copper Alloy	Tin	1.02
M5	5.40	3.0-2.0	12103519	Copper Alloy	Tin	0.81



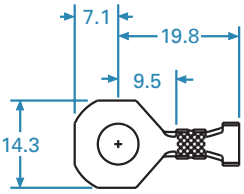
MEDIUM RING TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M4	4.30	1.0-0.80	12103516	Copper Alloy	Tin	0.65
M5	5.40	1.0-0.80	12103515	Copper Alloy	Tin	0.65
M6	6.70	1.0-0.80	12103514	Copper Alloy	Tin	0.65



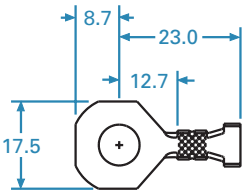
RING TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M6	6.70	5.0	12103512	Copper Alloy	Tin	1.02
M6	6.70	3.0-2.0	12103513	Copper Alloy	Tin	0.81



RING TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M6	6.70	8.0	12103965	Copper Alloy	Tin	1.02
M6	6.70	5.0	12162098	Copper Alloy	Tin	1.02
M6	6.70	3.0-2.0	12162099*	Copper Alloy	Tin	0.81
M6	6.70	1.0-0.80	12162100	Copper Alloy	Tin	0.65
M6	6.70	1.0-0.80 (2 Req'd.)	12103511	Copper Alloy	Tin	0.65
M8	8.50	8.0	12103502*	Copper Alloy	Tin	1.02
M8	8.50	5.0	12103504	Copper Alloy	Tin	1.02
M8	8.50	3.0-2.0	12103506*	Copper Alloy	Tin	0.81
M8	8.50	1.0-0.80	12103508*	Copper Alloy	Tin	0.65
M8	8.50	1.0-0.8 (2 Req'd.)	12103510	Copper Alloy	Tin	0.65
M10	10.60	8.0	12103501	Copper Alloy	Tin	1.02
M10	10.60	5.0	12103503	Copper Alloy	Tin	1.02
M10	10.60	3.0-2.0	12103505	Copper Alloy	Tin	0.81
M10	10.60	1.0-0.80	12103507	Copper Alloy	Tin	0.65
M10	10.60	1.0-0.80 (2 Req'd.)	12103509	Copper Alloy	Tin	0.65



Anti-Rotation terminals are designed in a straight configuration.

A crimp and bend die is available for terminal application.

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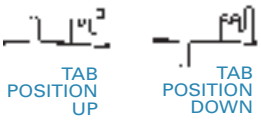
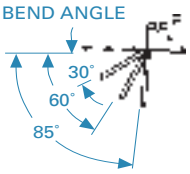
• BATTERY TERMINALS

HEAVY DUTY TERMINALS

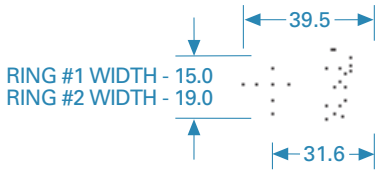
Delphi Connection Systems offers a complete line of top and side mounted battery terminals for all applications. Anti-rotation tabs are included for ease of installation and assembly. Stamped and serrated crimp wings offer unparalleled crimp reliability and durabilty.



Tab position prevents rotation of the battery terminal during installation.

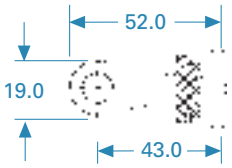


Delphi Packard Electric offers ***battery cable assemblies*** for applications requiring an angled terminal. Contact your regional support representative at the number listed below.



SHORT NECK RING TERMINALS

Ring #	Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Width	Material	Plating	Stock Thickness (mm)
1	M6	6.70	32.0	12146425	15.0	Copper	Tin	1.52
1	M6	6.70	19.0-13.0	12146366	15.0	Copper	Tin	1.52
1	M6	6.70	8.0	12146364	15.0	Copper	Tin	1.30
1	M8	8.50	32.0	12191220	19.0	Copper	Tin	1.52
1	M8	8.50	32.0	12146429	15.0	Copper	Tin	1.52
1	M8	8.50	19.0-13.0	12146365	15.0	Copper	Tin	1.52
1	M8	8.50	8.0	12146363	15.0	Copper	Tin	1.30
2	M10	10.34	32.0	12146744	19.0	Copper	Tin	1.52
2	M10	10.34	19.0-13.0	12146745	19.0	Copper	Tin	1.52



STANDARD NECK RING TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M6	6.70	32.0	12124276	Copper	Tin	1.52
M6	6.70	19.0-13.0	12146713	Copper	Tin	1.52
M6	6.70	8.0	12124296	Copper	Tin	1.52
M8	8.50	62.0-50.0	12103014	Copper	Tin	1.83
M8	8.50	32.0	12146361	Copper	Tin	1.52
M8	8.50	19.0-13.0	12129598	Copper	Tin	1.52
M8	8.50	8.0	12124297	Copper	Tin	1.52
M10	10.34	62.0-50.0	12103010	Copper	Tin	1.83
M10	10.34	50.0	12160231	Copper	Tin	1.83
M10	10.34	32.0	12146360	Copper	Tin	1.52
M10	10.34	19.0-13.0	12146362	Copper	Tin	1.52
M10	10.34	8.0	12124295	Copper	Tin	1.30

http://delphi.com/products/connect

North American Region 1-800-PACKARD
European Region 49-202-291-2000
Asia Pacific Region 65-730-9900
South American Region 55-12-378-2002

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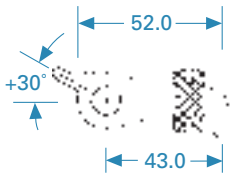
HEAVY DUTY TERMINALS

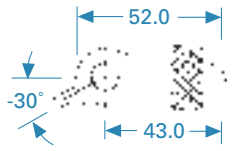
STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	30° Up	32.0	12146506	Copper	Tin	1.52
M10	10.34	30° Up	32.0	12146401	Copper	Tin	1.52
M8	8.50	30° Down	32.0	15317798	Copper	Tin	1.52
M8	8.50	30° Down	19.0-13.0	12110246	Copper	Tin	1.52



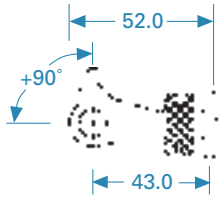
STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	-30° Up	50.0	12161119	Copper	Tin	1.83
M8	8.50	-30° Up	32.0	12129433	Copper	Tin	1.52
M8	8.50	-30° Up	19.0-13.0	12146579	Copper	Tin	1.52
M10	10.34	-30° Up	50.0	12146471	Copper	Tin	1.83
M10	10.34	-30° Up	32.0	12146487	Copper	Tin	1.52
M8	8.50	-30° Down	32.0	12129651	Copper	Tin	1.52
M8	8.50	-30° Down	19.0-13.0	12160443	Copper	Tin	1.52
M10	10.34	-30° Down	32.0	12160281	Copper	Tin	1.52



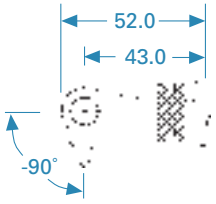
STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	90° Up	50.0	15305504	Copper	Tin	1.83
M8	8.50	90° Up	32.0	12129437	Copper	Tin	1.52
M8	8.50	90° Up	19.0-13.0	12129435	Copper	Tin	1.52
M10	10.34	90° Up	50.0	12160229	Copper	Tin	1.83
M10	10.34	90° Up	32.0	15304850	Copper	Tin	1.52
M8	8.50	90° Down	32.0	12161133	Copper	Tin	1.52
M8	8.50	90° Down	19.0-13.0	12161170	Copper	Tin	1.52



STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	-90° Up	32.0	12176593	Copper	Tin	1.52
M8	8.50	-90° Up	19.0-13.0	12160242	Copper	Tin	1.52
M10	10.34	-90° Up	50.0	12129222	Copper	Tin	1.83
M10	10.34	-90° Up	32.0	12129628	Copper	Tin	1.52
M8	8.50	-90° Down	50.0	12160233	Copper	Tin	1.83
M8	8.50	-90° Down	32.0	12160232	Copper	Tin	1.52
M8	8.50	-90° Down	19.0-13.0	12146999	Copper	Tin	1.52
M10	10.34	-90° Down	19.0-13.0	12146736	Copper	Tin	1.52



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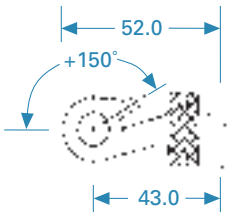
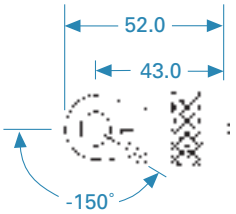
• BATTERY TERMINALS

HEAVY DUTY TERMINALS



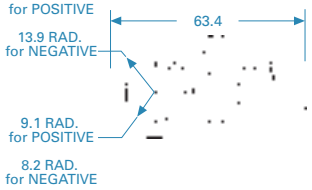
STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	150° Up	50.0	15305508	Copper	Tin	1.83
M8	8.50	150° Up	32.0	12191773	Copper	Tin	1.52
M10	10.34	150° Up	50.0	12191005	Copper	Tin	1.83
M8	8.50	150° Down	19.0-13.0	12146718	Copper	Tin	1.52
M10	10.34	150° Down	32.0	12191461	Copper	Tin	1.52



STANDARD NECK STARTER TERMINALS

Stud Size	Hole Dia.	Tab Position	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
M8	8.50	-150° Up	50.0	12191787	Copper	Tin	1.83
M10	10.34	-150° Down	32.0	15318209	Copper	Tin	1.52

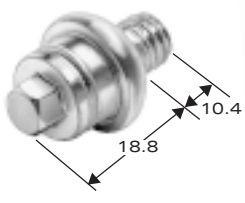


TOP POST BATTERY TERMINALS

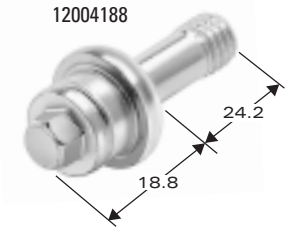
Application	Cable Range (mm²)	Part #	Material	Plating	Stock Thickness (mm)
Negative	50.0	12177299	Copper	Tin	1.52
Positive	50.0	12177296	Copper	Tin	1.52
Negative	32.0	12177297	Copper	Tin	1.52
Positive	32.0	12177298	Copper	Tin	1.52
Positive	19.0	15305118	Copper	Tin	1.52
Negative	19.0	15305119	Copper	Tin	1.52

Fastener Bolt (12177293) and nut (12177294) are available from the manufacturer.

08917444



12004188



BATTERY BOLTS & SPACER

Part #	Material	Plating	Spacer
08917444	Steel	Zinc Gold Chromate	–
12004188	Steel	Zinc Gold Chromate	12004189

Coated with "Pavco" sealer to provide corrosion protection.

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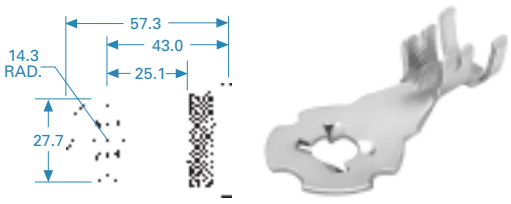
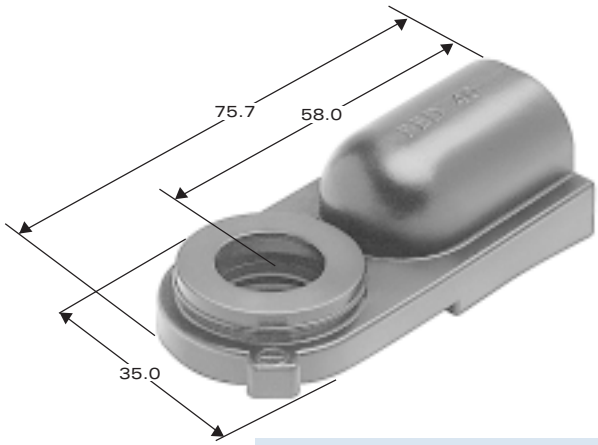
SIDE POST BATTERY TERMINALS & COVERS

SIDE POST BATTERY TERMINALS

Stud Size	Hole Dia.	Cable Range (mm²)	Part #	Barbs*	Material	Plating	Stock Thickness (mm)
M10	9.90	62.0	12129221	Yes	Copper	Tin	1.83
M10	9.90	50.0	12129465	Yes	Copper	Tin	1.83
M10	9.90	32.0	12146466	Yes	Copper	Tin	1.52
M10	9.90	19.0	12146467	Yes	Copper	Tin	1.52
M10	9.90	13.0	12146464	Yes	Copper	Tin	1.52

*Barbs (indentations in center hole) in terminals are used to prevent rotation after assembly.
Bolts ordered separately.

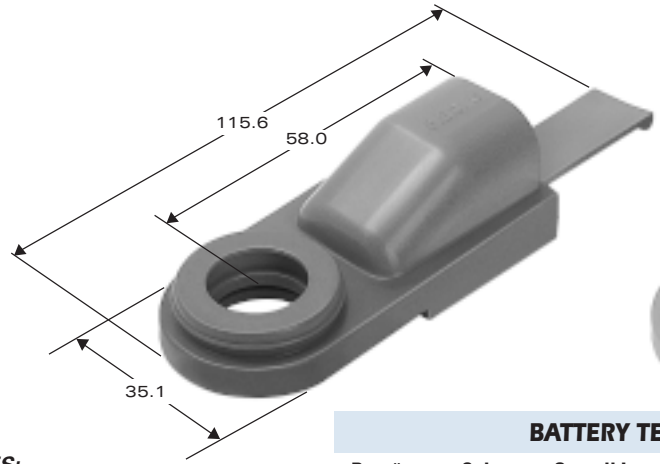




BATTERY TERMINAL COVERS

Part #	Color	Overall Length	Height	Width	Application	Material
12160209	Black	75.7	25.5	35.0	Single	Vinyl
12160210	Red	75.7	25.5	35.0	Single	Vinyl

Used with battery bolt 08917444 or equivalent



BATTERY TERMINAL COVER ASSEMBLY*

Part #	Color	Overall Length	Height	Width	Application	Material
15304878	Black	115.6	27.5	35.1	(2) Stackable	Vinyl
15304876	Red	115.6	27.5	35.1	(2) Stackable	Vinyl

Used with battery bolt 12004188 or equivalent.
* Includes 12004189 Spacer.

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Covers protect the interface between the cable and the battery.

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Delphi Packard Electric designs and manufactures a wide selection of cable seals and cavity plugs for a variety of connection systems applications. The following chart captures only a few of the diverse sealing products available for your design needs. Please contact your Delphi Packard Electric representative for additional product selections and application information.

3.6mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
–	15327913	1.60-1.20	Silicone	Red
15344666	15327918	2.00-1.40	Silicone	Gray
–	15339412	2.10-1.90	Silicone	Yellow
–	15344324	2.10-1.20	Silicone	Dk. Red
–	15366022	1.85-1.47	Silicone	Green
–	15305351	2.10-1.70	Silicone	Yellow

3.6mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
12198198	Silicone	White

4.0mm INTERNAL CAVITY DIAMETER CABLE SEALS

Part #	Cable Diameter	Material	Color
15366021	1.85-1.20	Silicone	White
15366060	2.25-1.86	Silicone	Blue

5.2mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12089442	15344716	2.00-1.20	Silicone	Blue
10731091	10737671	2.30-1.50	Silicone	Red
–	10720833	2.40-1.60	Silicone	White
15344643	15327863	2.70-2.00	Silicone	Dk. Red
15363992	15344715	2.90-2.00	Silicone	Dk. Red
10731090	10737670	2.40-2.20	Silicone	Blue
10720641	15327859	2.90-2.70	Silicone	Orange
15343826	15339967	2.10-1.20	Silicone	Blue
15343827	10720947	3.00-2.20	Silicone	White
–	10727065	2.40-1.90	Silicone	Violet

5.2mm INTERNAL CAVITY DIAMETER CAVITY PLUGS

Part #	Material	Color
15337197	Silicone	White
10730124	Silicone	Green
12059168	Silicone	Dk. Red

5.7mm INTERNAL CAVITY DIAMETER CABLE SEALS

Part #	Cable Diameter	Material	Color
10720941	2.00-1.20	Silicone	Gray
10720950	2.90-2.10	Silicone	Yellow

5.8mm INTERNAL CAVITY DIAMETER CABLE SEALS

Part #	Cable Diameter	Material	Color
10727066	1.90-1.20	Silicone	Orange
15344103	3.70-3.40	Silicone	Violet

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Cable seals and cavity plugs are designed using multiple internal configurations. These design variations do not affect sealability.
- Your regional support representative will help you select the appropriate cable seal based on: cavity diameter, cable diameter, and crimp configuration requirements.

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6.7mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
12034365	12015899	2.00-1.20	Silicone	Dk. Red
15338470	15337207	2.40-1.60	Silicone	Violet
15363980	15344642	2.90-2.00	Silicone	Green
10733035	12041351	2.40-2.00	Silicone	Lt. Brown
15363991	10737704	3.50-2.80	Silicone	Gray
15344102	10720851	4.20-3.50	Silicone	Blue

6.7mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
12010300	Silicone	Green

6.8mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
10717456	10720611	2.30-1.50	Silicone	Green
10718234	10720613	3.00-2.20	Silicone	Yellow
10731103	10720615	3.70-3.40	Silicone	White

6.8mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
10720617	Silicone	Red

8.5mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
15344644	15363779	2.00-1.20	Silicone	Yellow
12052931	12052930	2.40-1.60	Silicone	Yellow
-	15327998	2.70-2.00	Silicone	Blue
12048433	12048441	2.90-2.00	Silicone	White
15344645	15363604	2.90-2.00	Silicone	White
12052452	12048442	3.90-2.80	Silicone	Dk. Red
15337204	15327864	2.80-3.80	Silicone	Dk. Red
15344646	15363605	3.60-4.50	Silicone	Green
10733034	10733145	4.40-5.10	Silicone	Gray
15344104	15344647	4.40-5.10	Silicone	Gray

8.5mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
12066082	Silicone	Lt. Green

9.8mm INTERNAL CAVITY DIAMETER CABLE SEALS

Reel Part #	Loose Part #	Cable Diameter	Material	Color
10730240	10720847	2.40-1.60	Silicone	Lt. Brown
12059259	10720844	2.90-2.00	Silicone	Dk. Red
10730241	10738785	3.80-2.80	Silicone	Gray
15344032	10738786	4.50-3.60	Silicone	Blue
12059257	12052386	5.10-4.40	Silicone	Green

9.8mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
12059255	Silicone	Lt. Green

13.75mm INTERNAL CAVITY DIAMETER CABLE SEALS

Part #	Cable Diameter	Material	Color
15327126	4.30-3.40	Silicone	Dk. Red
10720983	6.40-6.00	Silicone	Green

13.75mm INTERNAL CAVITY DIAMETER CAVITY PLUG

Part #	Material	Color
10720907	Silicone	Green

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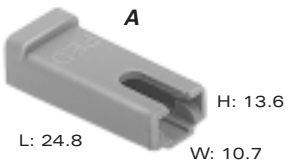
56 Series Device Connections

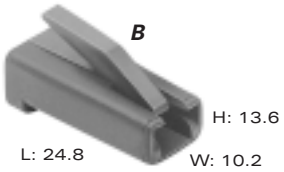
Using a proven terminal interface technology and an enhanced crimp configuration, 56 Series Device Connections remain an industry standard. A number of standard industry device connection systems are immediately available.

56 SERIES FEMALE TERMINALS UNSEALED

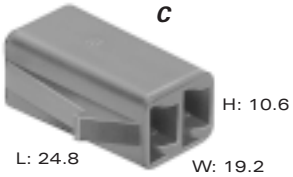
Part #	Cable Range (mm²)	Material	Plating
12124512*	0.80-0.50	Brass	Tin
12124513	0.80-0.50	Brass	Tin
12124515*	2.0-1.0	Brass	Tin
12124517	2.0-1.0	Brass	Tin
12124518*	3.0	Brass	Tin
12124519	3.0	Brass	Tin
12124520*	0.80-0.50 (2 Req'd.)	Brass	Tin
12124522*	2.0-1.0 (2 Req'd.)	Brass	Tin
12124523	2.0-1.0 (2 Req'd.)	Brass	Tin



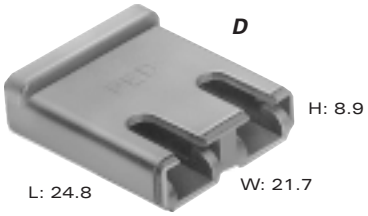
A PART NO: **12015306**
DESCRIPTION: Connector 1F
SIZE: 24.8L x 13.6H x 10.7W
COLOR: Gray
MATERIAL: PA66 HS IM
TERMINALS: See Above, 56 Series
TYPICAL APP: Switch



B PART NO: **12004267**
DESCRIPTION: Connector 1F
SIZE: 24.8L x 13.6H x 10.2W
COLOR: Black
MATERIAL: PP IM
TERMINALS: See Above, 56 Series
TYPICAL APP: Horn



C PART NO: **08900863**
DESCRIPTION: Connector 2F
SIZE: 24.8L x 10.6H x 19.2W
COLOR: Black
MATERIAL: PP
TERMINALS: See Above, 56 Series
TYPICAL APP: Switch



D PART NO: **02973407**
DESCRIPTION: Connector 2F
SIZE: 24.8L x 8.9H x 21.7W
COLOR: Black
MATERIAL: PP
TERMINALS: See Above, 56 Series
TYPICAL APP: Various

SECTION NOTES:

Contact your regional support representative at the number listed below.

- Nib on terminal provides increased retention when used with specific mating blade.

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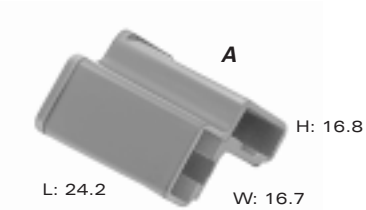
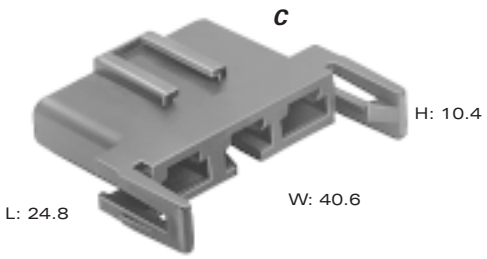
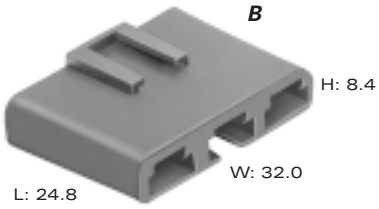


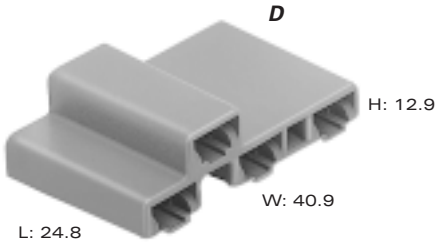
A PART NO: **02973385**
DESCRIPTION: Connector 2F
SIZE: 24.2L x 16.8H x 16.7W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Various



C PART NO: **08905790**
DESCRIPTION: Connector 3F
SIZE: 24.8L x 10.4H x 40.6W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Switch



B PART NO: **02984959**
DESCRIPTION: Connector 3F
SIZE: 24.8L x 8.4H x 32.0W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Various



D PART NO: **02965019**
DESCRIPTION: Connector 4F
SIZE: 24.8L x 12.9H x 40.9W
COLOR: Gray
MATERIAL: PP 40% TF
TERMINALS: See Page 314
TYPICAL APP: Relay

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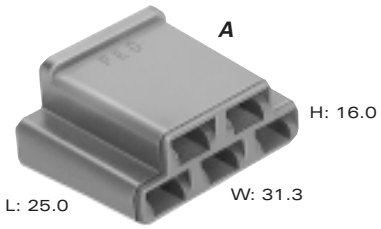
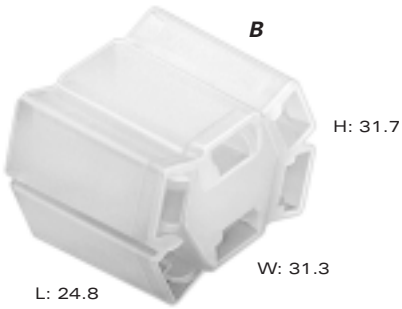
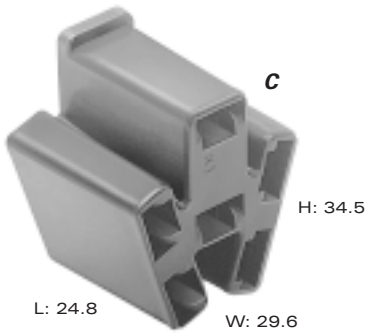


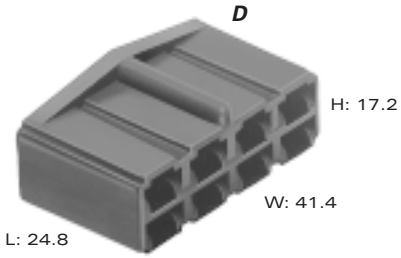
A PART NO: **12004327**
DESCRIPTION: Connector 5F
SIZE: 25.0L x 16.0H x 31.3W
COLOR: Brown
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Various



B PART NO: **12052978**
DESCRIPTION: Connector 6F
SIZE: 24.8L x 31.7H x 31.3W
COLOR: Natural
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Switch



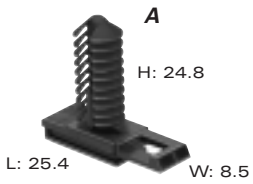
C PART NO: **02984017**
DESCRIPTION: Connector 6F
SIZE: 24.8L x 34.5H x 29.6W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Switch



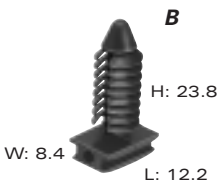
D PART NO: **02965977**
DESCRIPTION: Connector 8F
SIZE: 24.8L x 17.2H x 41.4W
COLOR: Black
MATERIAL: PP
TERMINALS: See Page 314
TYPICAL APP: Various

Downloaded from Arrow.com.

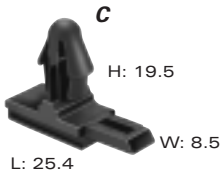
Connectors are positively positioned within the vehicle via the use of Delphi Packard's integral connector clips. These clips are easily assembled to the connectors and reliably remain in position. Designs incorporate features that prevent movement or rattling regardless of driving conditions.



A PART NO: **12186353**
DESCRIPTION: Clip (Self Locking)
SIZE: 25.4L x 24.8H x 8.5W
COLOR: Black
MATERIAL: PA66 HS IM

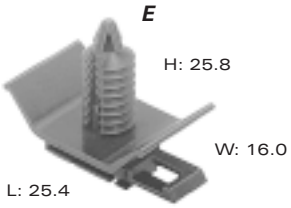


B PART NO: **12047835**
DESCRIPTION: Clip
SIZE: 12.2L x 23.8H x 8.4W
COLOR: Black
MATERIAL: PA6
NOTE: Attach by sonic weld (preferred) or adhesive.



C PART NO: **12084149 (Black)**
MATERIAL: PP IM
PART NO: **12110290 (Gray)**
MATERIAL: PA66 HS IM
DESCRIPTION: Clip (Self Locking)
SIZE: 25.4L x 19.5H x 8.5W

D PART NO: **12110517**
DESCRIPTION: Clip (Self Locking)
SIZE: 32.3L x 26.8H x 25.4W
COLOR: Black
MATERIAL: PA66 HS IM



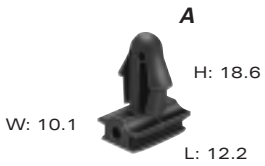
E PART NO: **12110783**
DESCRIPTION: Clip (Self Locking)
SIZE: 25.4L x 25.8H x 16.0W
COLOR: Black
MATERIAL: PA66 HS IM

SECTION NOTES:

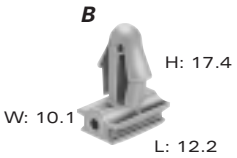
Contact your regionl support representative at the number listed below.

- Product information shown is a representative sample of the available plastic and metal clips.
- Self-locking clips require connectors with self-locking features.

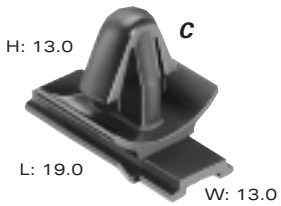
Downloaded from Arrow.com.



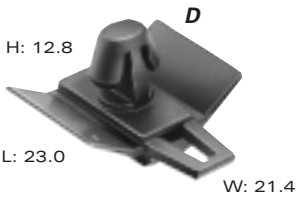
A PART NO: **08905563**
DESCRIPTION: Clip
SIZE: 12.2L x 18.6H x 10.1W
COLOR: Black
MATERIAL: PP IM
NOTE: Attach by sonic weld (preferred) or adhesive.



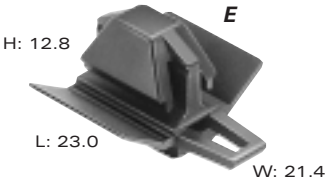
B PART NO: **12084561**
DESCRIPTION: Clip
SIZE: 12.2L x 17.4H x 10.1W
COLOR: Gray
MATERIAL: PA66 HS IM
NOTE: Attach by sonic weld (preferred) or adhesive.



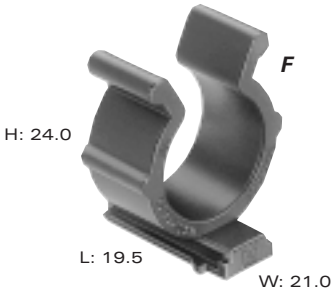
C PART NO: **10717452**
DESCRIPTION: Clip (Self-Locking)
SIZE: 19.0L x 13.0H x 13.0W
COLOR: Black
MATERIAL: PA66



D PART NO: **15439875**
DESCRIPTION: Clip (Self-Locking)
SIZE: 23.0L x 12.8H x 21.4W
COLOR: Black
MATERIAL: PA66



E PART NO: **15427170**
DESCRIPTION: Clip (Self-Locking)
SIZE: 23.0L x 12.8H x 21.4W
COLOR: Black
MATERIAL: PA66



F PART NO: **10720007**
DESCRIPTION: Tube Clip (Self-Locking)
SIZE: 19.5L x 24.0H x 21.0W
COLOR: Black
MATERIAL: PA66

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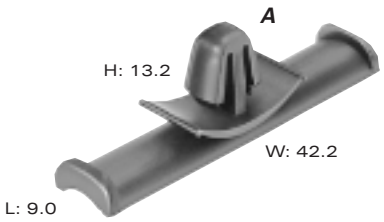
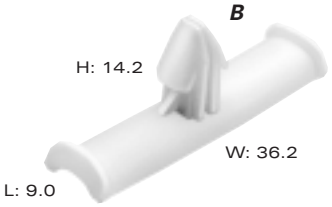
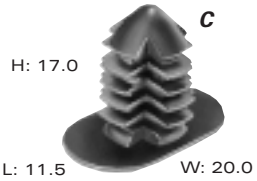


A PART NO: **12147875**
DESCRIPTION: Harness Clip
SIZE: 9.0L x 13.2H x 42.2W
COLOR: Black
MATERIAL: PA66

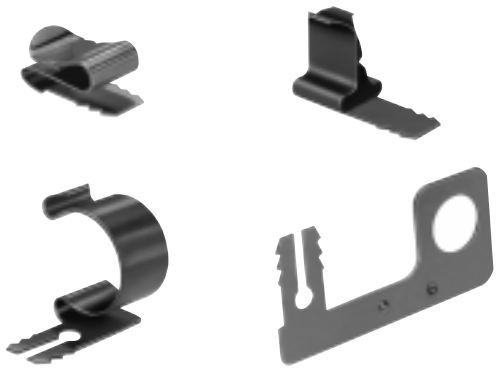


B PART NO: **15344856**
DESCRIPTION: Harness Clip
SIZE: 9.0L x 14.2H x 36.2W
COLOR: Natural
MATERIAL: PP



C PART NO: **10719204**
DESCRIPTION: Fixing Clip
SIZE: 11.5L x 17.0H x 20.0W
COLOR: Black
MATERIAL: PA66

Metal Clips



SECTION NOTES:

Contact your regionl support representative at the number listed below.

- Product information shown is a representative sample of the available plastic and metal clips.
- Self-locking clips require connectors with self-locking features.
- Attach by Hand Arbor or air assist machine.

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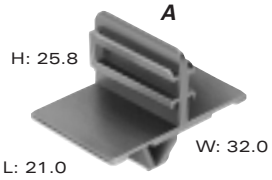
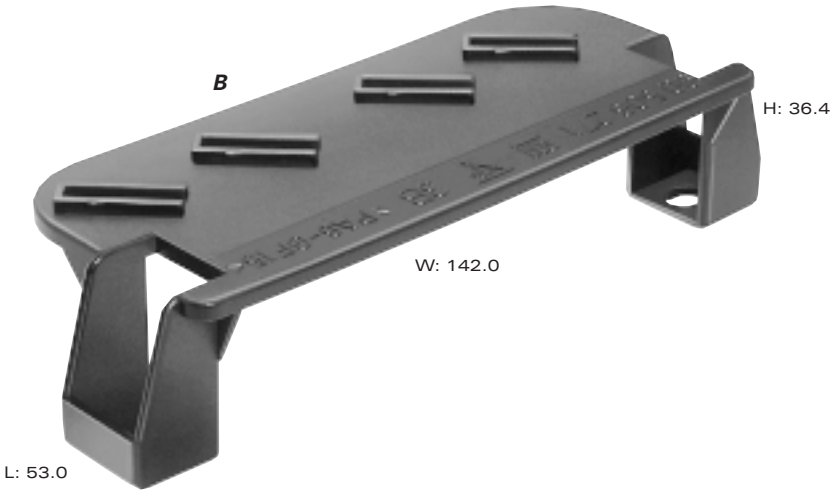
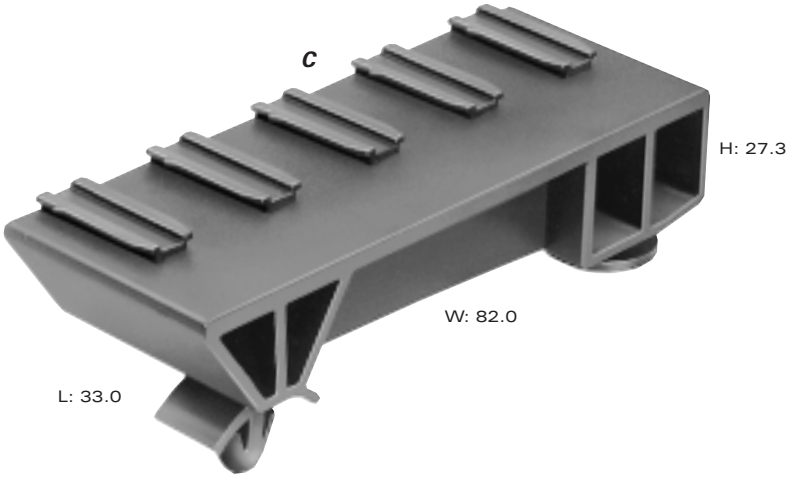
A PART NO: **12185083**
DESCRIPTION: 2 Position Carrier
SIZE: 21.0L x 25.8H x 32.0W
COLOR: Black
MATERIAL: PA6 15% GF



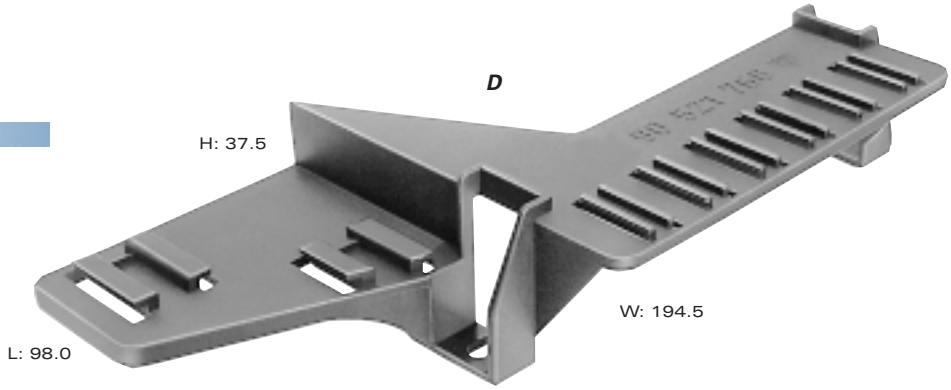
B PART NO: **10719975**
DESCRIPTION: 4 Position Carrier
SIZE: 53.0L x 36.4H x 142.0W
COLOR: Black
MATERIAL: PA6 15% GF



C PART NO: **10740405**
DESCRIPTION: 5 Position Carrier
SIZE: 33.0L x 27.3H x 82.0W
COLOR: Black
MATERIAL: PP 20% GF



D PART NO: **10720085**
DESCRIPTION: 8 Position* Carrier
SIZE: 98.0L x 37.5H x 194.5W
COLOR: Black
MATERIAL: PA6 15% GF
*6 STANDARD, 2 NON-STANDARD.



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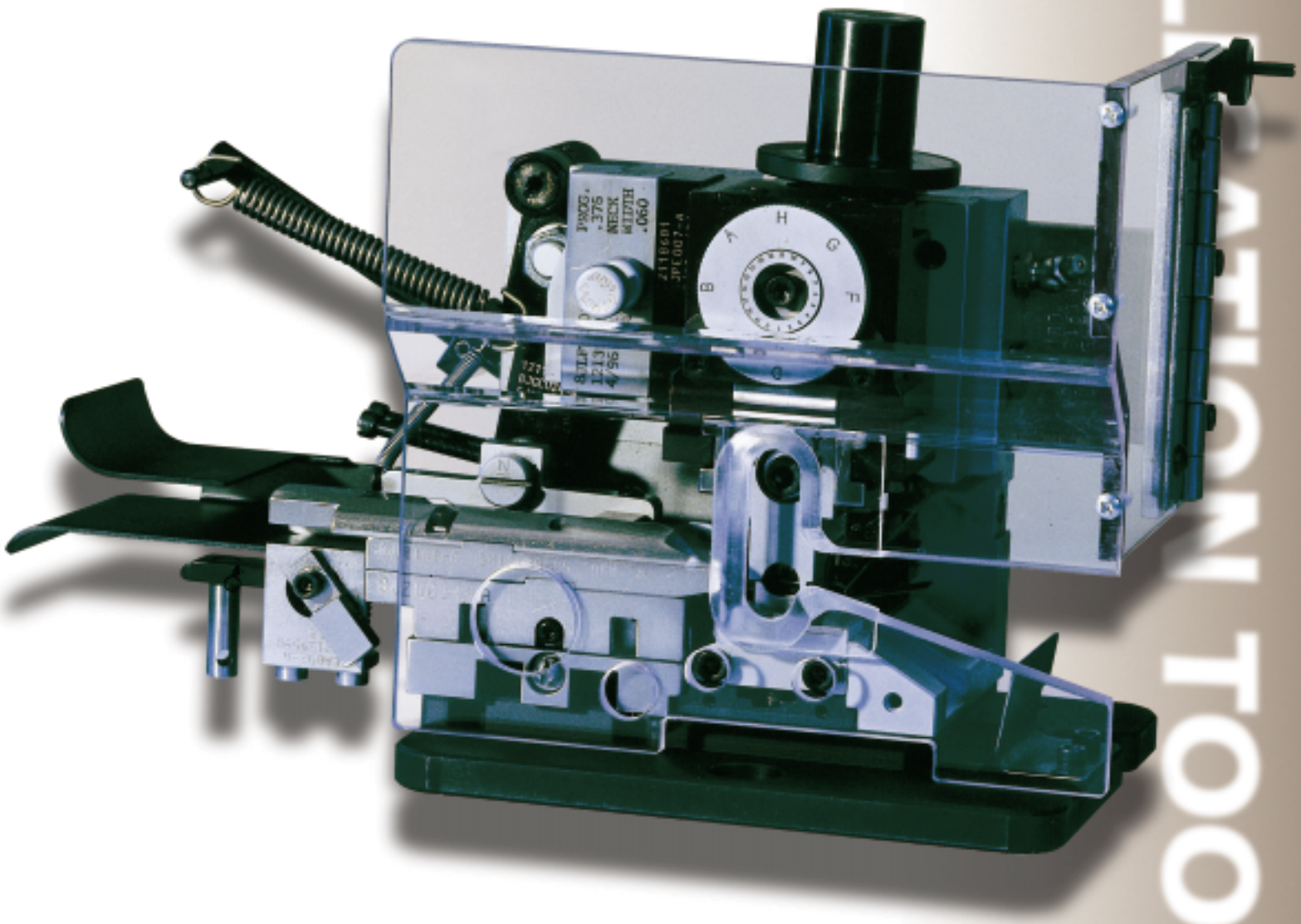
Application Tooling

Delphi Connection Systems offers application tooling for both automatic and hand tool operations. This section highlights various presses and dies as well as some of our more common hand tools.



Additional information on our automatic dies and presses is available by calling North American Regional Sales and Service number: 1-800-DIE-INFO (343-4636)
(All other regions contact regional support representative)

Additional information on our hand tools is available by contacting your regional support representative at the number listed at the bottom of each page.

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Delphi Packard Presses:

Delphi Packard offers two bench-style Speed-O-Matic presses.

3-TON USED FOR: Metri-Pack, Weather-Pack, ComPack, Micro-Pack, and Pack-Con terminals.

5-TON USED FOR: 56/58/59 series terminals and ring terminals.

SAFETY FEATURE:
- An optional single stroke mechanism will prevent the press from recycling if the electrical anti-repeat should fail.

MOTOR FEATURES:
- 1/2 H.P. (5-Ton) or 1/3 H.P. (3-Ton). 115V, 1750 rpm, single phase, 60 cycle.

Presses may be purchased, leased or rented. Contact your account representative.

Easy Maintenance

Application Rate of up to 4,000 Terminals per Hour

Safety Guard

Proven Press in the Connection Systems Industry

Rugged

Factory Life of over 40 years

Optional Heavy-Duty Stand

The press of choice for Delphi Packard Electric

Delphi Packard Speed-O-Matic Dies:

Delphi Packard Speed-O-Matic dies used together with our Speed-O-Matic 3-Ton or 5-Ton press will allow a maximum application rate of up to 4,000 terminals per hour. Speed-O-Matic dies can be set up to run a variety of applications.

Therefore, when ordering an applicator die, please provide Delphi Packard with the following information:

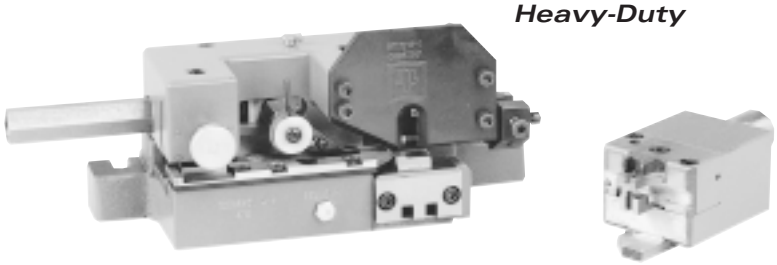
- Terminal part number
- Gauge of cable to be crimped
- Type of cable insulation

Speed-O-Matic dies may be purchased, and certain dies are also available for rental or lease. Contact your account representative.

Please see cross-reference sheet for terminal-to-die information. See Page 336.

Factory Life of over 40 years

Heavy-Duty



Application Rate of up to 4,000 terminals per hour

Downloaded from Arrow.com.

Delphi Packard E-Z Pack Die:

E-Z Pack Die can best be described as an advanced and flexible terminal application system.

FEATURES:

- This die consists of a die base, quick change module (terminal specific), and a conversion kit that adapts the base to various presses.
- This die may be installed in Delphi Packard's 3 or 5-ton press, or into other manufacturers' presses with an adapter kit.
- This die may be bench mounted or installed on wire processing cutter equipment.

ADVANTAGES:

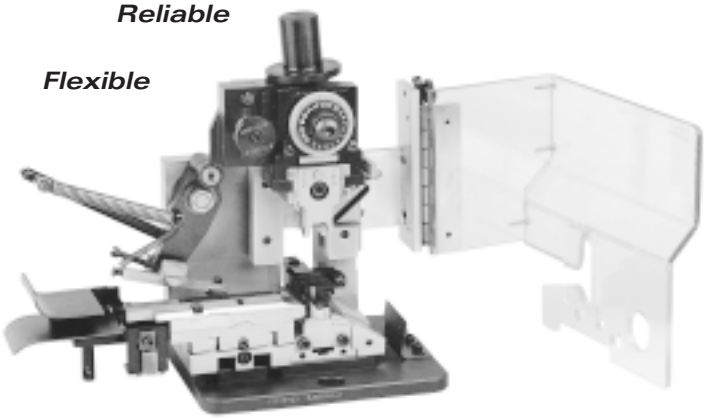
- Reduces changeover time and downtime.
- Die changes are performed quickly and easily, without a need for special tools. Simply remove the tool module and insert the next module into the die base.

E-Z Pack Dies may be purchased, leased or rented. Contact your account representative.

Please see cross reference sheet for terminal-to-die information. See Page 336.

Reliable

Flexible



Quick & Easy Die Changes

Delphi Packard Low Profile Splice Die and Stand:

This air operated press and die allows splicing of two or more wire leads and provides good visibility to crimping area.

Die & stand sold as a unit.

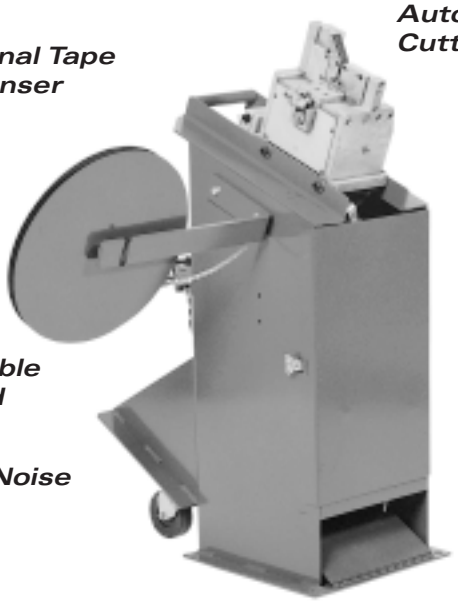
SPECIFICATIONS:

OVERALL HEIGHT:	1143mm (45 inches)
OVERALL WIDTH:	914mm (36 inches)
OVERALL DEPTH:	610mm (24 inches)

Efficient

Automatic Cutter Cycle

Optional Tape Dispenser



Portable Stand

Optional Liquid Solder Pot

Low Noise Level

Requires Minimal Floor Space

Downloaded from Arrow.com.

Delphi Packard Flex-Guard Conduit Cutter:

This versatile machine is designed for use both as a production line machine and for bulk conduit cutting operations.

FOR PRODUCTION LINE OPERATIONS:

- With machine modifications, will cut up to three different lengths of conduit in any pre-determined sequence.

FOR BULK CUTTING OPERATIONS:

- Will cut as many as 99,999 pieces of conduit of the same length in one continuous operation.

This cutter requires both electrical and pneumatic connections.

SPECIFICATIONS:

OVERALL HEIGHT:	1854mm (73 inches)
OVERALL WIDTH:	787mm (31 inches)
OVERALL DEPTH:	330mm (13 inches)
POWER REQUIREMENTS:	Electrical-440 volt, 60 cycle AC, 110 volt may be requested.

Cuts Various Lengths

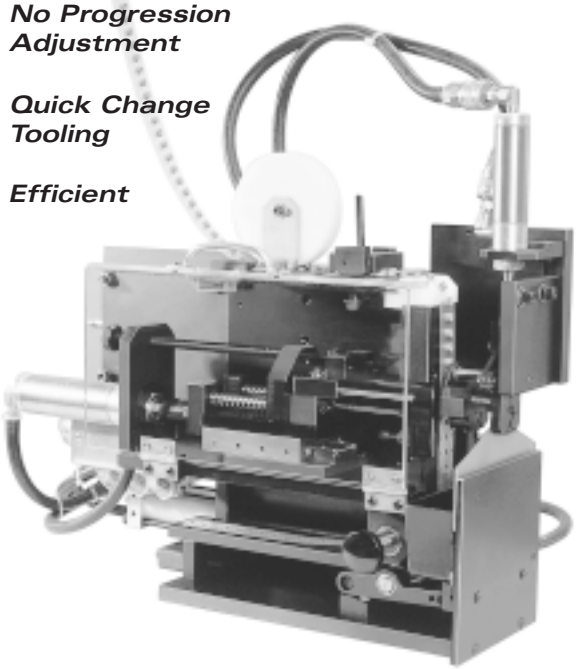
Versatile

Easy to Operate

Delphi Packard Automatic Cable Seal Applicator:

This tool is designed to automatically apply cable seals from a continuous mylar carrier strip onto unstripped cable. Cable may range in size from 0.22mm² gauge (thin wall) to 5.0mm² gauge (heavy wall).

This applicator is designed for use on automatic cable processing equipment.

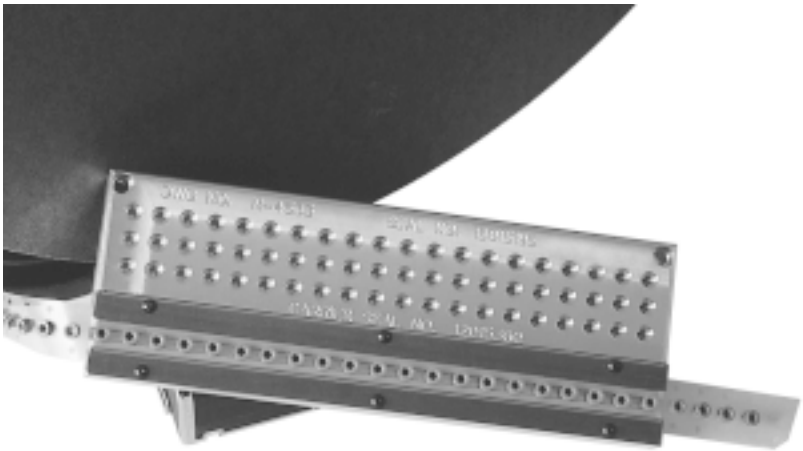


No Progression Adjustment

Quick Change Tooling

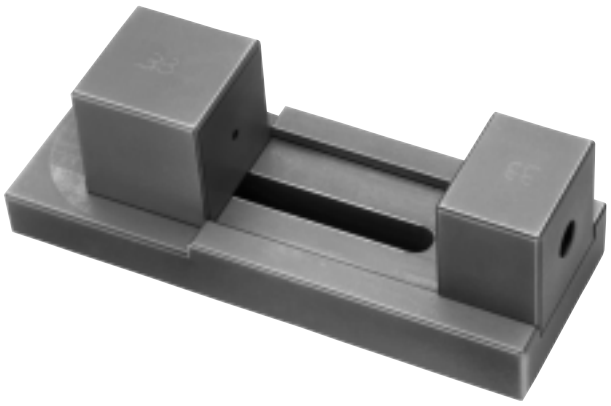
Efficient

Downloaded from Arrow.com.



Delphi Packard Manual Cable Seal Insertion Block:

This block is a machined piece of aluminum, approximately 1" thick, 6" wide, and 12" long. There are 80 holes drilled to correspond to the dimensions of Delphi Packard's various cable seals. Seals may be inserted into the block as loose piece or on mylar tape if desired. This Seal Insertion Block is designed for lower volume applications.



Weather-Pack 6060 Gauge as a Process Control Aid:

SPECIFICATIONS:

WEIGHT:	480g (1.05 lb.)
LENGTH:	102mm (4 inches)
WIDTH:	38mm (1-1/2 inches)
HEIGHT:	35mm (1-3/8 inches)

This gage is used as a process aid to verify that terminals are crimped and mated properly.

Downloaded from Arrow.com.

A PART NO: **12040070**
APPLICATION: Unsealed Doubles
Core and Insulation
CABLE RANGE (mm^2): 2.0-0.50

A

B PART NO: **06285847**
APPLICATION: Unsealed All Purpose
Core and Insulation
CABLE RANGE (mm^2): 2.0-0.50 (5.0-3.0 Core Only)

B

C PART NO: **12018777**
APPLICATION: Unsealed All Purpose
Core and Insulation
CABLE RANGE (mm^2): 0.35

C

D PART NO: **12014254**
APPLICATION: Sealed Weather Pack Pin and Sleeve
Core and Insulation
CABLE RANGE (mm^2): 2.0-0.50

D

E PART NO: **12039500**
APPLICATION: Unsealed 150 Metri-Pack, 150.1 and 150.2
Pull-To-Seat
Core and Insulation
CABLE RANGE (mm^2): 1.0-0.35

E

Downloaded from Arrow.com.

A PART NO: **12070948**
APPLICATION: Unsealed Micro-Pack 100, Female only
Core and Insulation
CABLE RANGE (mm^2): 2.0-0.35

A

B PART NO: **12070947**
APPLICATION: Unsealed Metri-Pack, Female only
Core and Insulation
CABLE RANGE (mm^2): 5.0-3.0

B

C PART NO: **12071687**
APPLICATION: Sealed 480 & 630 Metri-Pack
Core and Insulation
CABLE RANGE (mm^2): 5.0-3.0

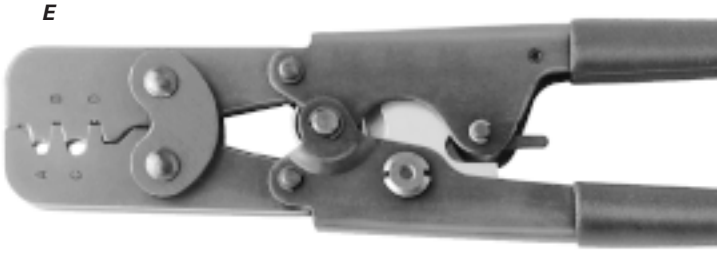
C

D PART NO: **12125080**
APPLICATION: Micro-Pack 100W
Core and Insulation
CABLE RANGE (mm^2): 0.80-0.35

D

E PART NO: **12155975**
APPLICATION: Sealed 150 & 280 Metri-Pack
Core and Insulation
CABLE RANGE (mm^2): 2.0-0.50

E



SECTION NOTES:

- Hand crimp tools are designed for repair, prototype or low volume usage.
- Solder with resin core solder to guarantee crimp intergrity.

Downloaded from Arrow.com.

A PART NO: **12014012**
APPLICATION: Weather-Pack Male and Female
HANDLE COLOR: Clear Yellow
BUTTON COLOR: White

A

B PART NO: **12031876**
APPLICATION: Micro-Pack 100 Female
HANDLE COLOR: Red
BUTTON COLOR: Black

B

C PART NO: **12094429**
APPLICATION: GT 150; GT 280; 150 Metri-Pack; 280 Metri-Pack; 280 Tangless & 280 Bus Bar; 630 Pull-To-Seat; Lamp Socket Bases, B-1 & W-3; 800 Metri-Pack Female
HANDLE COLOR: Green
BUTTON COLOR: White

C

D PART NO: **12094430**
APPLICATION: 56 Series; 280 Metri-Pack; 480 Metri-Pack; 630 Metri-Pack; 800 Metri-Pack Male Tangless; Lamp Socket Bases, W-2 & C-2
HANDLE COLOR: Blue
BUTTON COLOR: White

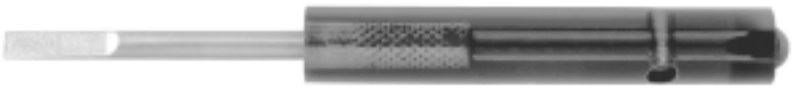
D

E PART NO: **12122523**
APPLICATION: Micro-Pack 100W; 24Way Female 12129225; 32Way Female 12129025 and 12160423; 36Way Female 12110487
HANDLE COLOR: Gray
BUTTON COLOR: Black

E

F PART NO: **12150860**
APPLICATION: 800 Maxi-Fuse Female
HANDLE COLOR: Blue
BUTTON COLOR: Blue

F



Downloaded from Arrow.com.

A PART NO: **12151195**
APPLICATION: 280 Metri-Pack 2Way Bus Bar
HANDLE COLOR: Clear
BUTTON COLOR: Black

B PART NO: **12151194**
APPLICATION: 280 Metri-Pack 3Way Bus Bar
HANDLE COLOR: Clear
BUTTON COLOR: Red

C PART NO: **12151193**
APPLICATION: 280 Metri-Pack 4Way Bus Bar
HANDLE COLOR: Clear
BUTTON COLOR: Blue

D PART NO: **12152395**
APPLICATION: 280 Metri-Pack 5Way Bus Bar
HANDLE COLOR: Clear
BUTTON COLOR: Green (Flat)

Downloaded from Arrow.com.

A PART NO: **10739582**
APPLICATION: Ducon 0.8
HANDLE COLOR: Black

B PART NO: **10739605**
APPLICATION: Ducon 1.5 and 2.8 One Tang
HANDLE COLOR: Black

C PART NO: **10739583**
APPLICATION: Ducon 1.5 Two Tang
HANDLE COLOR: Black

D PART NO: **10739584**
APPLICATION: Ducon 2.8 Two Tang
HANDLE COLOR: Black

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A

A PART NO: **10739585**
APPLICATION: Ducon 4.8 and 6.3
HANDLE COLOR: Black

B

B PART NO: **10714774**
APPLICATION: VF 2.8
HANDLE COLOR: Black

C

C PART NO: **10714792**
APPLICATION: VF 6.3
HANDLE COLOR: Black

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A PART NO: **12122727**
APPLICATION: Cavity Plug Insertion Tool
150 Metri-Pack Series
HANDLE COLOR: Clear
BUTTON COLOR: Green

A

B PART NO: **12121897**
APPLICATION: Cavity Plug Insertion Tool
280 Metri-Pack Series
HANDLE COLOR: Yellow
BUTTON COLOR: Blue

B

C PART NO: **12123162**
APPLICATION: Cavity Plug Insertion Tool
480 Metri-Pack Series
HANDLE COLOR: Yellow
BUTTON COLOR: Green

C

D PART NO: **12122584**
APPLICATION: Cavity Plug Insertion Tool
630 Metri-Pack Series
HANDLE COLOR: Clear
BUTTON COLOR: Red

D

E PART NO: **12150547**
APPLICATION: Cavity Plug Removal Tool
630 Metri-Pack Series
HANDLE COLOR: Blue
BUTTON COLOR: Green

E

F PART NO: **12075402**
APPLICATION: Lamp Socket Insert Removal Tool
for W-3 Right Angle Wedge Base

F

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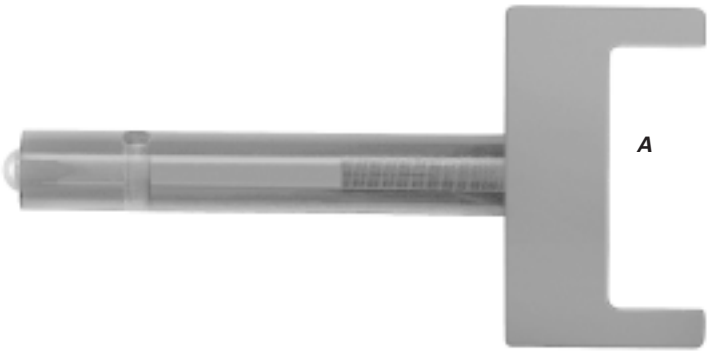

A PART NO: **12180082**
APPLICATION: Retainer Removal Tool for 100W Connector 24Way 12129225
HANDLE COLOR: Blue
BUTTON COLOR: Red

B PART NO: **12152019**
APPLICATION: Retainer Removal Tool for 100W Connector 32Way 12129025
HANDLE COLOR: Gray
BUTTON COLOR: Black

C PART NO: **15313892**
APPLICATION: GT Male Terminal Stabilizer Removal Tool
HANDLE COLOR: Blue
BUTTON COLOR: White

D PART NO: **12094441**
APPLICATION: All Purpose Large Secondary Lock/ TPA Removal Tool
HANDLE COLOR: Red
BUTTON COLOR: White

E PART NO: **12122647**
APPLICATION: All Purpose Small Secondary Lock/ TPA Removal Tool
HANDLE COLOR: Red
BUTTON COLOR: Red

F PART NO: **12018256**
APPLICATION: Wire Insulation Stripper
HANDLE COLOR: Blue
CABLE RANGE (mm^2): 8.0-0.35

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Terminal/Crimp Applicator Cross Reference

Part Number	After Termination Part Number	Terminal Description	Speed-O-Matic Die Part Number	E-Z Pack Die Available
12015858		280 Metri-Pack Series - Unsealed	12018253	yes
12015860		480 Metri-Pack Series - Unsealed	12018253	yes
12015864		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12015865		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12015869		630 Metri-Pack Series - Unsealed	12018253	yes
12015870		630 Metri-Pack Series - Unsealed	12018253	yes
12020035		630 Metri-Pack Series - Unsealed	12018253	yes
12020116		280 Metri-Pack Series - Unsealed	12018253	yes
12020119		480 Metri-Pack Series - Unsealed	12018253	yes
12020120		480 Metri-Pack Series - Unsealed	12018253	yes
12020125		630 Metri-Pack Series - Unsealed	12018253	yes
12020126		630 Metri-Pack Series - Unsealed	12018253	yes
12020156		630 Metri-Pack Series - Pull-To-Seat - Sealed	12018253	yes
12020335		630 Metri-Pack Series - Unsealed	12018253	yes
12020365		630 Metri-Pack Series - Unsealed	12018253	yes
12020366		480 Metri-Pack Series - Unsealed	12018253	yes
12020782		280 Metri-Pack Series - Unsealed	12018253	yes
12020784		480 Metri-Pack Series - Unsealed	12018253	no
12020801		Weather-Pack Series - Sealed	12012249	yes
12033820		480 Metri-Pack Series - Unsealed	12018253	yes
12033972		630 Metri-Pack Series - Unsealed	12018253	no
12033997		630 Metri-Pack Series - Pull-To-Seat - Sealed	12018253	yes
12034046		280 Metri-Pack Series - Unsealed	12018253	yes
12034047		280 Metri-Pack Series - Unsealed	12018253	yes
12040902		100 Micro-Pack Series - Unsealed	12039723	no
12045773		150 Metri-Pack Series - Sealed	12012249	yes
12047581		150 Metri-Pack Series - Unsealed	12018951	yes
12047767		150 Metri-Pack Series - Unsealed	12018951	yes
12048074		150 Metri-Pack Series - Sealed	12012249	yes
12048159		280 Metri-Pack Series - Sealed	12012249	yes
12048254		280 Metri-Pack Series - Sealed	12012249	yes
12048450		480 Metri-Pack Series - Unsealed	12039880	no
12048451		480 Metri-Pack Series - Unsealed	12039880	no
12052139		480 Metri-Pack Series - Unsealed	12039880	no
12052172		480 Metri-Pack Series - Unsealed	12039969	no
12052217		280 Metri-Pack Series - Unsealed	12018253	yes
12052219		480 Metri-Pack Series - Unsealed	12018253	yes
12052221		480 Metri-Pack Series - Unsealed	12018253	yes
12052222		630 Metri-Pack Series - Unsealed	12018253	yes
12052224		630 Metri-Pack Series - Unsealed	12018253	yes
12052225		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12052227		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12052455		630 Metri-Pack Series - Sealed	12039880	no
12052456		630 Metri-Pack Series - Sealed	12039880	no
12052457		630 Metri-Pack Series - Sealed	12039880	no
12052826		630 Metri-Pack Series - Unsealed	12018253	yes
12052827		480 Metri-Pack Series - Unsealed	12018253	yes
12059894		150 Metri-Pack Series - Unsealed	12018951	yes
12064734		630 Metri-Pack Series - Sealed	12039969	no
12064735		630 Metri-Pack Series - Sealed	12039969	no
12064736		630 Metri-Pack Series - Sealed	12039969	no
12064737		630 Metri-Pack Series - Sealed	12039969	no
12064971		150 Metri-Pack Series - Unsealed	12018951	yes
12065196		480 Metri-Pack Series - Unsealed	12039969	no
12065197		480 Metri-Pack Series - Unsealed	12039969	no
12065892		480 Metri-Pack Series for Relay application - Unsealed	12040128	yes
12065893		480 Metri-Pack Series for Relay application - Unsealed	12040128	yes
12065894		480 Metri-Pack Series for Relay application - Unsealed	12040128	yes
12065915		800 Maxi-Fuse - Unsealed	12071239	yes

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Terminal/Crimp Applicator Cross Reference

Part Number	After Termination Part Number	Terminal Description	Speed-O-Matic Die Part Number	E-Z Pack Die Available
12065916		800 Maxi-Fuse - Unsealed	12071239	yes
12065918		800 Maxi-Fuse - Unsealed	12071239	yes
12066214		280 Metri-Pack Series - Unsealed	12018253	yes
12066269		480 Metri-Pack Series - Unsealed	12018253	yes
12066271		280 Metri-Pack Series - Unsealed	12018253	yes
12066454		630 Metri-Pack Series - Unsealed	12018253	yes
12066493		630 Metri-Pack Series - Unsealed	12018253	yes
12066614		630 Metri-Pack Series - Pull-To-Seat - Sealed	12018253	yes
12066638		W2-W3 Lamp Socket Series - Sealed	12012249	yes
12066639		W2-W3 Lamp Socket Series - Sealed	12012249	yes
12077411		280 Metri-Pack Series - Sealed	12012249	yes
12077413		280 Metri-Pack Series - Sealed	12012249	yes
12077628		150 Metri-Pack Series - Sealed	12012249	yes
12077939		280 Metri-Pack Series - Pull-To-Seat - Sealed	12018951	yes
12084200		150 Metri-Pack Series - Sealed	12012249	yes
12084201		280 Metri-Pack Series - Sealed	12012249	yes
12084449		100 Micro-Pack Series - Unsealed	12039723	no
12084586		280 Metri-Pack Series - Unsealed	12018253	yes
12084588		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12084590		630 Metri-Pack Series - Unsealed	12018253	yes
12084595		480 Metri-Pack Series - Unsealed	12018253	yes
12084596		630 Metri-Pack Series - Unsealed	12018253	yes
12084912		100W Micro-Pack Series - Sealed	12040128	yes
12084913		100W Micro-Pack Series - Sealed	12040128	yes
12089040		Weather-Pack Series - Sealed	12012249	yes
12089188		Weather-Pack Series - Sealed	12012249	yes
12089236		480 Metri-Pack Series for Relay application - Unsealed	12040128	yes
12089307		Weather-Pack Series - Sealed	12012249	yes
12092444		800 Maxi-Fuse - Unsealed	12071239	yes
12092445		800 Maxi-Fuse - Unsealed	12071239	no
12103360		280 Metri-Pack Series - Pull-To-Seat - Sealed	12018951	yes
12103501		Ring - Unsealed	06286013	no
12103502		Ring - Unsealed	06286013	no
12103503		Ring - Unsealed	06286013	no
12103504		Ring - Unsealed	06286013	no
12103505		Ring - Unsealed	06286013	no
12103506		Ring - Unsealed	06286013	no
12103507		Ring - Unsealed	06286013	no
12103508		Ring - Unsealed	06286013	no
12103509		Ring - Unsealed	06286013	no
12103510		Ring - Unsealed	06286013	no
12103511		Ring - Unsealed	06286013	no
12103512		Ring - Unsealed	08910204	no
12103513		Ring - Unsealed	08910204	no
12103514		Ring - Unsealed	08910162	no
12103515		Ring - Unsealed	08910162	no
12103516		Ring - Unsealed	08910162	no
12103517		Ring - Unsealed	06292518	no
12103518		Ring - Unsealed	06292518	no
12103519		Ring - Unsealed	06292518	no
12103520		Ring - Unsealed	06292518	no
12103948		480 Metri-Pack Series for Relay application - Unsealed	12040128	yes
12103965		Ring - Unsealed	06286013	no
12110127		800 Maxi-Fuse - Unsealed	12071239	yes
12110128		800 Maxi-Fuse - Unsealed	12071239	yes
12110644	12110648	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110645	12110649	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110645	12110650	280 Metri-Pack Series - 2 way Bus Bar - Tangless - Unsealed	12118477	no
12110645	12110651	280 Metri-Pack Series - 3 way Bus Bar - Tangless - Unsealed	12118477	no
12110646	12110652	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no

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Terminal/Crimp Applicator Cross Reference

Part Number	After Termination Part Number	Terminal Description	Speed-O-Matic Die Part Number	E-Z Pack Die Available
12110646	12110653	280 Metri-Pack Series - 2 way Bus Bar - Tangless - Unsealed	12118477	no
12110646	12110654	280 Metri-Pack Series - 3 way Bus Bar - Tangless - Unsealed	12118477	no
12110646	12110655	280 Metri-Pack Series - 4 way Bus Bar - Tangless - Unsealed	12118477	no
12110646	12110656	280 Metri-Pack Series - 5 way Bus Bar - Tangless - Unsealed	12118477	no
12110647	12110657	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110647	12110658	280 Metri-Pack Series - 2 way Bus Bar - Tangless - Unsealed	12118477	no
12110647	12110659	280 Metri-Pack Series - 3 way Bus Bar - Tangless - Unsealed	12118477	no
12110647	12110660	280 Metri-Pack Series - 4 way Bus Bar - Tangless - Unsealed	12118477	no
12110647	12110661	280 Metri-Pack Series - 5 way Bus Bar - Tangless - Unsealed	12118477	no
12110662	12110663	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110664	12110665	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110685	12110686	280 Metri-Pack Series - 1 way Bus Bar - Tangless - Unsealed	12118476	no
12110700		800 Maxi-Fuse - Unsealed	12071239	no
12110708	12110711	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12118477	no
12110708	12110712	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12118477	no
12110709	12110713	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12118477	no
12110709	12110714	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12118477	no
12110709	12110715	280 Metri-Pack Series - 4 way Bus Bar - Unsealed	12118477	no
12110709	12110716	280 Metri-Pack Series - 5 way Bus Bar - Unsealed	12118477	no
12110710	12110717	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12118477	no
12110710	12110718	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12118477	no
12110710	12110719	280 Metri-Pack Series - 4 way Bus Bar - Unsealed	12118477	no
12110710	12110720	280 Metri-Pack Series - 5 way Bus Bar - Unsealed	12118477	no
12110842		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12110843		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12110844		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12110845		280 Metri-Pack Series - Tangless - Sealed	12012249	yes
12110846		280 Metri-Pack Series - Tangless - Sealed	12012249	yes
12110847		280 Metri-Pack Series - Tangless - Sealed	12012249	yes
12110853		280 Metri-Pack Series - Tangless - Sealed	12012249	yes
12124075		150.2 Metri-Pack Series - Pull-To-Seat - Sealed	12040128	yes
12124076		150.2 Metri-Pack Series - Pull-To-Seat - Sealed	12040128	yes
12124304		480 Metri-Pack Series - Unsealed	12018253	yes
12124471		W-2 Lamp Socket Series - Sealed	12071239	yes
12124512		56 Series - Unsealed	12018253	yes
12124513		56 Series - Unsealed	12018253	yes
12124515		56 Series - Unsealed	12018253	yes
12124517		56 Series - Unsealed	12018253	yes
12124518		56 Series - Unsealed	12018253	yes
12124519		56 Series - Unsealed	12018253	yes
12124520		56 Series - Unsealed	12018253	yes
12124522		56 Series - Unsealed	12018253	yes
12124523		56 Series - Unsealed	12018253	yes
12124559		630 Metri-Pack Series for Relay application - Unsealed	12018253	yes
12124580		Weather-Pack Series - Sealed	12012249	yes
12124581		Weather-Pack Series - Sealed	12012249	yes
12124582		Weather-Pack Series - Sealed	12012249	yes
12124587		Weather-Pack Series - Sealed	12012249	yes
12124598		W-2 Lamp Socket Series - Sealed	none	yes
12124977		280 Metri-Pack Series - Sealed	12012249	no
12129052		B1-C2 Lamp Socket Series - Sealed	12118726	no
12129053		B1-C2 Lamp Socket Series - Sealed	12012249	yes
12129061		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12129373		150 Metri-Pack Series - Tangless - Unsealed	12018951	yes
12129409		280 Metri-Pack Series - Tangless - Sealed	12012249	yes
12129424		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12129425		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12129484		150 Metri-Pack Series - Tangless - Unsealed	12018951	no
12129493		280 Metri-Pack Series - Sealed	12012249	yes

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Terminal/Crimp Applicator Cross Reference

Part Number	After Termination Part Number	Terminal Description	Speed-O-Matic Die Part Number	E-Z Pack Die Available
12129494		280 Metri-Pack Series - Unsealed	12018253	yes
12129497		280 Metri-Pack Series - Sealed	12012249	yes
12129498		280 Metri-Pack Series - Unsealed	12018253	yes
12129663		280 Metri-Pack Series - Tangless - Unsealed	12018253	yes
12146447		100 Micro-Pack Series - Unsealed	12018951	no
12146448		100 Micro-Pack Series - Unsealed	12018951	no
12160222		150 Metri-Pack Series - Sealed	12012249	yes
12160223		150 Metri-Pack Series - Sealed	12012249	yes
12160635	12160643	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160635	12160648	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12014021	no
12160635	12160652	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12014021	no
12160635	12160657	280 Metri-Pack Series - 4 way Bus Bar - Unsealed	12014021	no
12160635	12160660	280 Metri-Pack Series - 5 way Bus Bar - Unsealed	12014021	no
12160635	12160662	280 Metri-Pack Series - 6 way Bus Bar - Unsealed	12014021	no
12160636	12160644	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160636	12160649	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12014021	no
12160636	12160653	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12014021	no
12160636	12160658	280 Metri-Pack Series - 4 way Bus Bar - Unsealed	12014021	no
12160636	12160661	280 Metri-Pack Series - 5 way Bus Bar - Unsealed	12014021	no
12160637	12160645	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160637	12160650	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12014021	no
12160637	12160654	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12014021	no
12160638	12160646	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160638	12160655	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12014021	no
12160640	12160663	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160640	12160664	280 Metri-Pack Series - 3 way Bus Bar - Unsealed	12014021	no
12160641	12160665	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12160641	12160666	280 Metri-Pack Series - 2 way Bus Bar - Unsealed	12014021	no
12160642	12160667	280 Metri-Pack Series - 1 way Bus Bar - Unsealed	12095585	no
12161184		150.2 Metri-Pack - Pull-To-Seat - Sealed	12040128	yes
12162098		Ring - Unsealed	06286013	no
12162099		Ring - Unsealed	06286013	no
12162100		Ring - Unsealed	06286013	no
12162595		280 Metri-Pack Series - Unsealed	12018253	yes
12162596		280 Metri-Pack Series - Unsealed	12018253	yes
12162597		280 Metri-Pack Series - Unsealed	12018253	yes
12186320		W2-W3 Lamp Socket Series - Sealed	12012249	yes
12191811		GT 150 - Unsealed	none	yes
12191812		GT 150 - Unsealed	none	yes
12191818		GT 150 - Sealed	none	yes
12191819		GT 150 - Sealed	none	yes
15304621		B1-C2 Lamp Socket Series - Sealed	12012249	yes
15304622		B1-C2 Lamp Socket Series - Sealed	12118726	no
15304701		GT 150 - Unsealed	12040128	yes
15304702		GT 150 - Unsealed	12040128	yes
15304706		GT 150 - Sealed	12012249	yes
15304707		GT 150 - Sealed	12012249	yes
15304710		GT 280 - Unsealed	12040128	yes
15304711		GT 280 - Unsealed	12040128	yes
15304712		GT 280 - Unsealed	12040128	yes
15304715		GT 280 - Sealed	12012249	yes
15304716		GT 280 - Sealed	12012249	yes
15304717		GT 280 - Sealed	12012249	yes
15304722		GT 280 - Unsealed	12040128	yes
15304723		GT 280 - Unsealed	12040128	yes
15304724		GT 280 - Unsealed	12040128	yes
15304727		GT 280 - Sealed	12012249	yes
15304728		GT 280 - Sealed	12012249	yes
15304729		GT 280 - Sealed	12012249	yes

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ABBREVIATIONS

ABS ..... *Acrylonitrile Butadiene Styrene*
amps ..... *Amperes*
App ..... *Application*
˚C ..... *Degrees Centigrade*
cm ..... *Centimeter*
CPA ..... *Connector Position Assurance*
dc ..... *Direct Current*
DIN .... *Deutsche Industry Norm (Standard)*
Dk ..... *Dark*
DS ..... *Double Sping*
EPDM .. *Ethylene Propylene Diene Monomer*
EMS ..... *Engine Management Systems*
˚F ..... *Degrees Fahrenheit*
F ..... *Female*
GB ..... *Glass Bead*
GF ..... *Glass Fiber*
g ..... *Grams*
GT ..... *Global Terminal*
H ..... *Height*
HS ..... *Heat Stabilized*
HVAC .. *Heating Ventilation Air Conditioning*
IM ..... *Impact Modified*
I MLD ..... *Insert Molded*
ISO ... *International Standards Organization*
JIS ..... *Japanese Industry Standard*
L ..... *Length*
LT ..... *Left*
Lt ..... *Light*
M ..... *Male*
Max ..... *Maximum*
Md ..... *Medium*
Min ..... *Minimum*
mm ..... *Millimeter*
MF ..... *Mineral Filled*
M/P ..... *Metri-Pack*
mV ..... *Millivolt*
mV/amp ..... *Millivolt per amp*
mW ..... *Milliwatts*
Nm ..... *Newtons Meter*
No. ..... *Number*
NPTF ..... *National Pipe Thread Fine*
NTC ..... *Negative Temperature Coefficient*
OBD ..... *On Board Diagnostics*
O.D. ..... *Outside Diameter*
PA6 ..... *Polyamide 6*
PA12 ..... *Polyamide 12*
PA66 ..... *Polyamide 66*
PBT .. *Polybutylene Terephtalate (Polyester)*
P/C ..... *Printed Circuit*
PC ..... *Polycarbonate*
PEI ..... *Polyetherimide*
PET .... *Polyethylene Terephtalate Polyester*
PLR ..... *Primary Lock Reinforcement*
PP ..... *Polypropylene*
PPE ..... *Polyphenylene Ether*
PVC ..... *Polyvinyl Chloride*
Ref ..... *Reference*
RT ..... *Right*
SAE ..... *Society of Automotive Engineers*
SST ..... *Stainless Steel*
TF ..... *Talc Filled*
TEEE ..... *Hytrel*
Temp ..... *Temperature*
TEO 45A .. *Thermoplastic Polyester Olefinic*
TPA ..... *Terminal Position Assurance*
V ..... *Volt*
W ..... *Width*

DIN Cable
Rated Cross Section

PRIMARY CABLE (mm^2)	BATTERY CABLE (mm^2)
0.22	10
0.35	16
0.5	25
0.75	35
1	50
1.5	70
2.5	95
4	120
6	

SAE Cable
Rated Cross Section

BATTERY CABLE RANGE CONVERSION

Metric Size mm^2	SAE Gage
13.0	6
19.0	4
32.0	2
40.0	1
50.0	0
62.0	2/0

PRIMARY CABLE RANGE CONVERSION

Metric Size mm^2	SAE Gage
0.22	24
0.35	22
0.50	20
0.80	18
1.00	16
2.00	14
3.00	12
5.00	10
8.00	8

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