

# MCV 1,5/ 2-G-3,5 P26 THRR32 - PCB header



1779378

<https://www.phoenixcontact.com/de/produkte/1779378>

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PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MCV 1,5/..-G-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 32 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

## Your advantages

- Designed for integration into the SMT soldering process
- Vertical connection enables multi-row arrangement on the PCB
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

## Commercial Data

Item number	1779378
Packing unit	200 pc
Minimum order quantity	200 pc
Sales Key	E1 - Leiterplattenanschl.
Product Key	AABTAF
Catalog Page	Page 213 (C-1-2013)
GTIN	4046356531856
Weight per Piece (including packing)	2,781 g
Weight per Piece (excluding packing)	0,5 g
Customs tariff number	85366930
Country of origin	DE

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## Technical Data

### Product properties

Type	Component suitable for through hole reflow
Product line	COMBICON Connectors S
Product type	PCB headers
Product family	MCV 1,5/...-G-THR
Number of positions	2
Pitch	3.5 mm
Number of connections	2
Number of rows	1
Mounting flange	without
Number of potentials	2
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

Nominal current $I_N$	8 A
Nominal voltage $U_N$	160 V
Degree of pollution	3
Contact resistance	1.6 mΩ
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
	250 V
Rated surge voltage (II/2)	2.5 kV

### Mounting

Mounting type	THR soldering
Pin layout	Linear pinning

### Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature $T_c$	260 °C
Solder cycles in the reflow	3

### Material specifications

#### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated

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Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

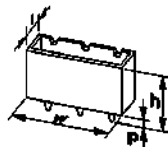
## Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

## Material data – actuating element

Color ( )	( )
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## Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	8.4 mm
Height [h]	11.8 mm
Length [l]	6.9 mm
Installed height	9.2 mm
Solder pin length [P]	2.6 mm

## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

### Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Insertion and withdrawal forces

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Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	9 N
Withdraw strength per pos. approx.	7 N

## Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

## Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

## Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

## Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

## Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

### Temperature cycles

Specification	IEC 60999-1:1999-11
Result	Test passed

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm

# MCV 1,5/ 2-G-3,5 P26 THRR32 - PCB header



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Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance $R_1$	1.6 m $\Omega$
Contact resistance $R_2$	1.7 m $\Omega$
Insertion/withdrawal cycles	25

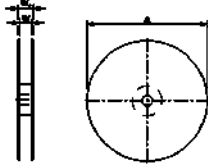
### Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Dimensional drawing	
Type of packaging	32 mm wide tape

# MCV 1,5/ 2-G-3,5 P26 THRR32 - PCB header



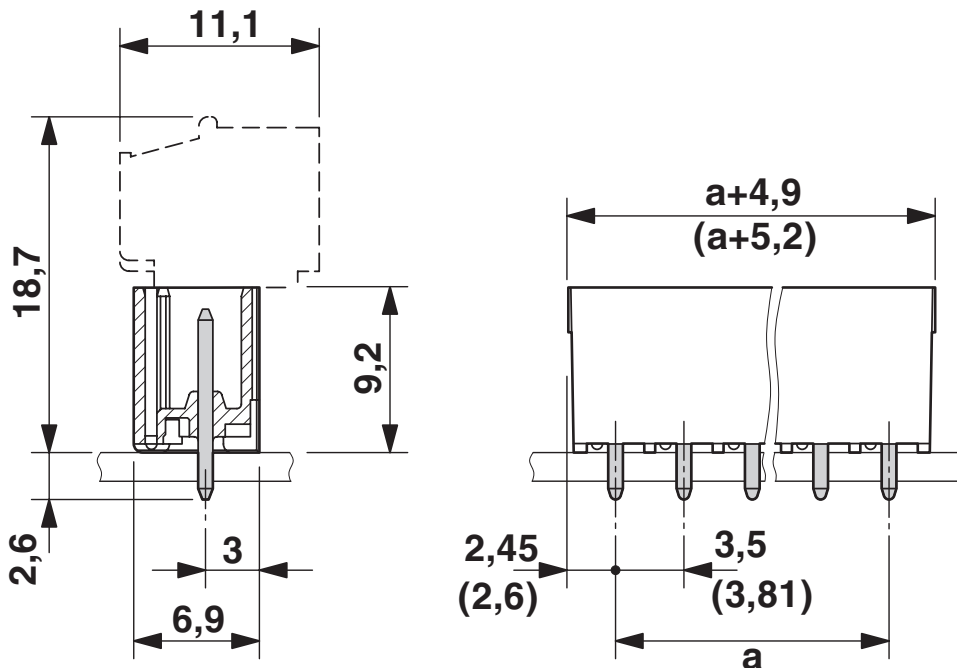
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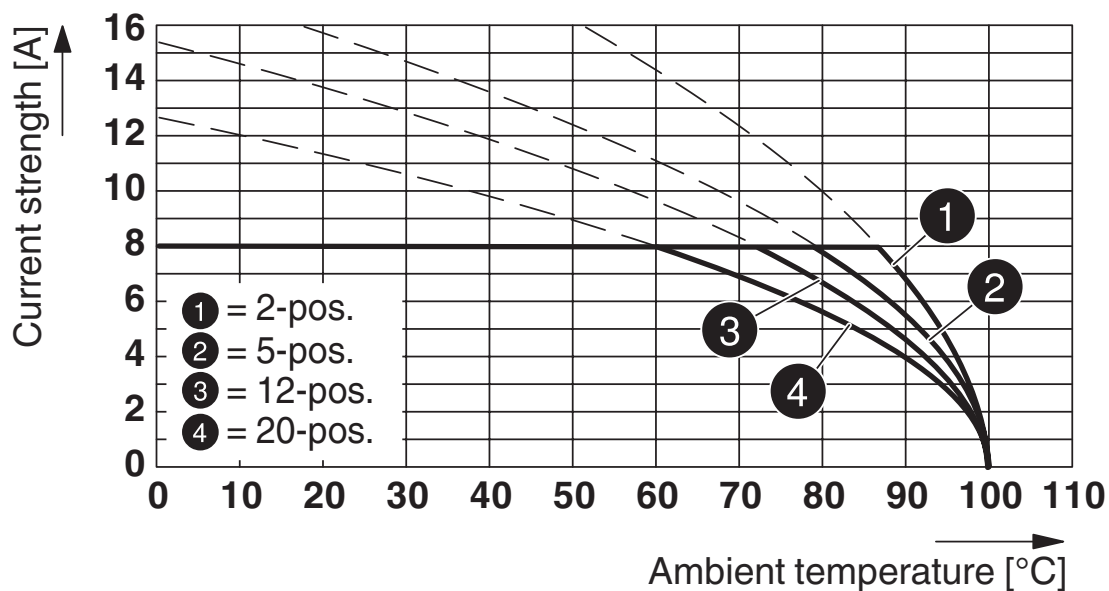
[W] tape width	32 mm
[W2] coil overall dimension	38.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

Drawings

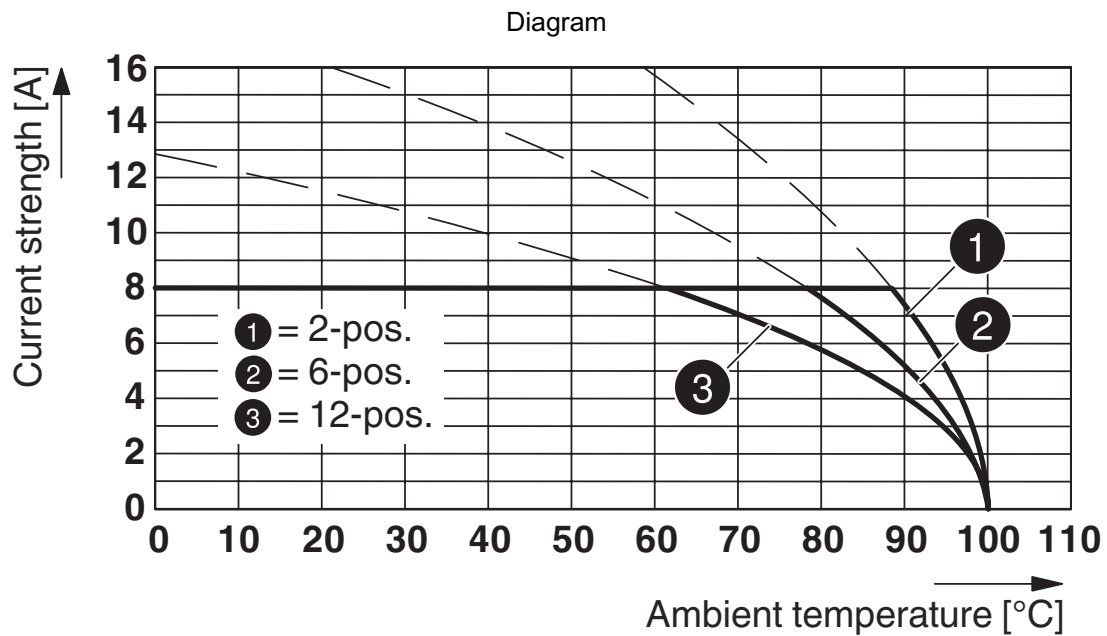
Dimensional drawing



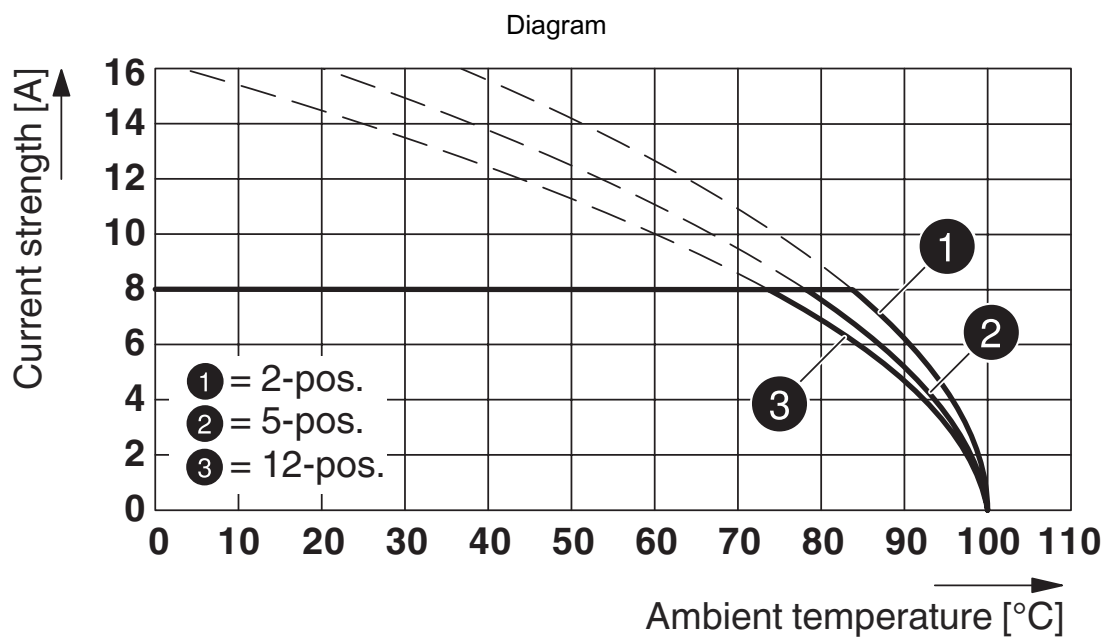
Diagram



Type: FMC 1,5/...-ST-3,5 with MCV 1,5/...-G-3,5 P... THR



Type: IMCV 1,5/...-G-3,5 P20 THR with MCV 1,5/...-G-3,5 P26 THR

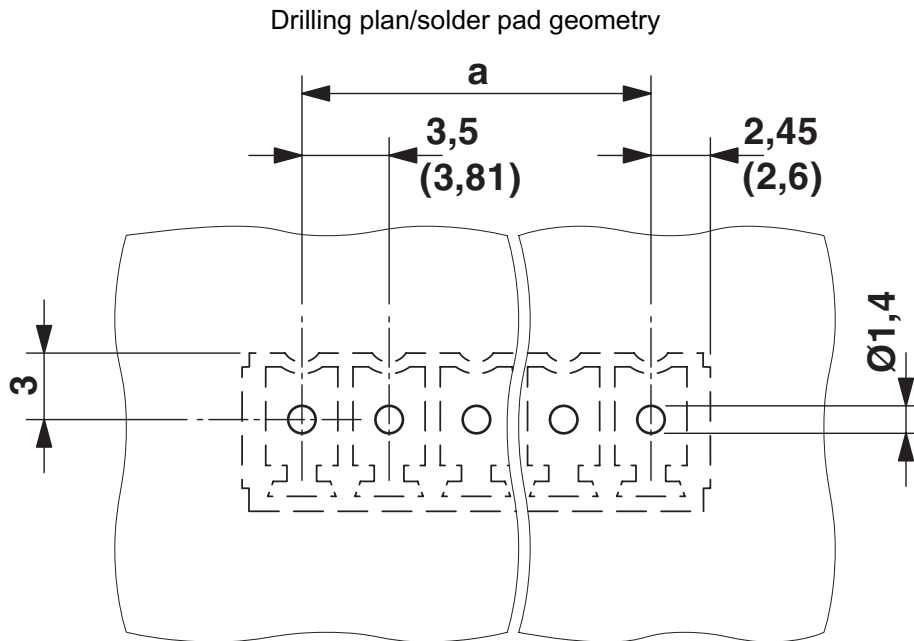


Type: FK-MCP 1,5/...-ST-3,5 with MCV 1,5/...-G-3,5 P... THR

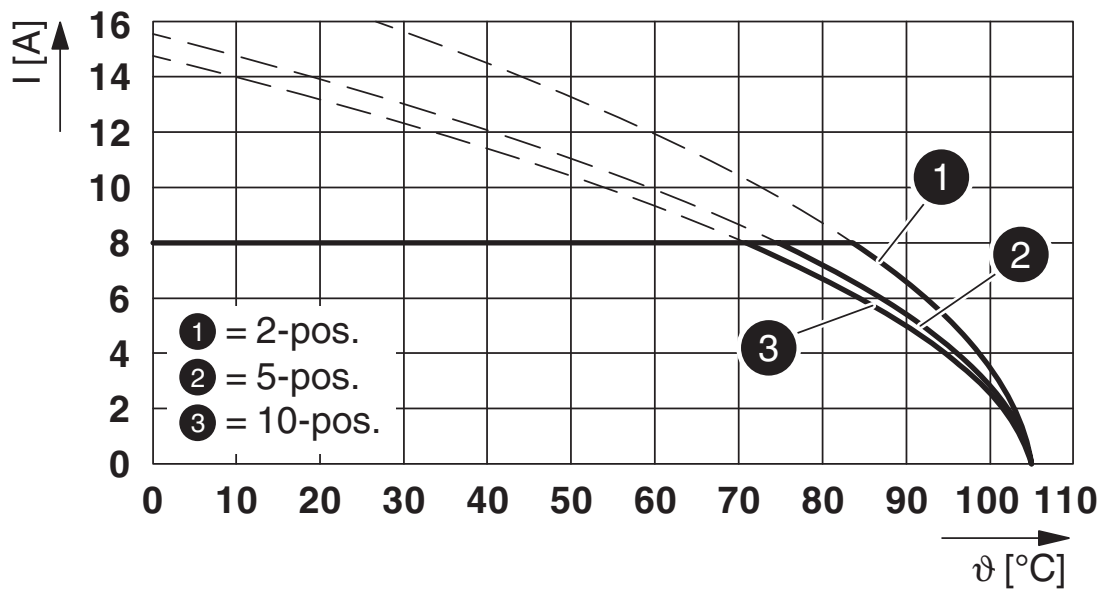
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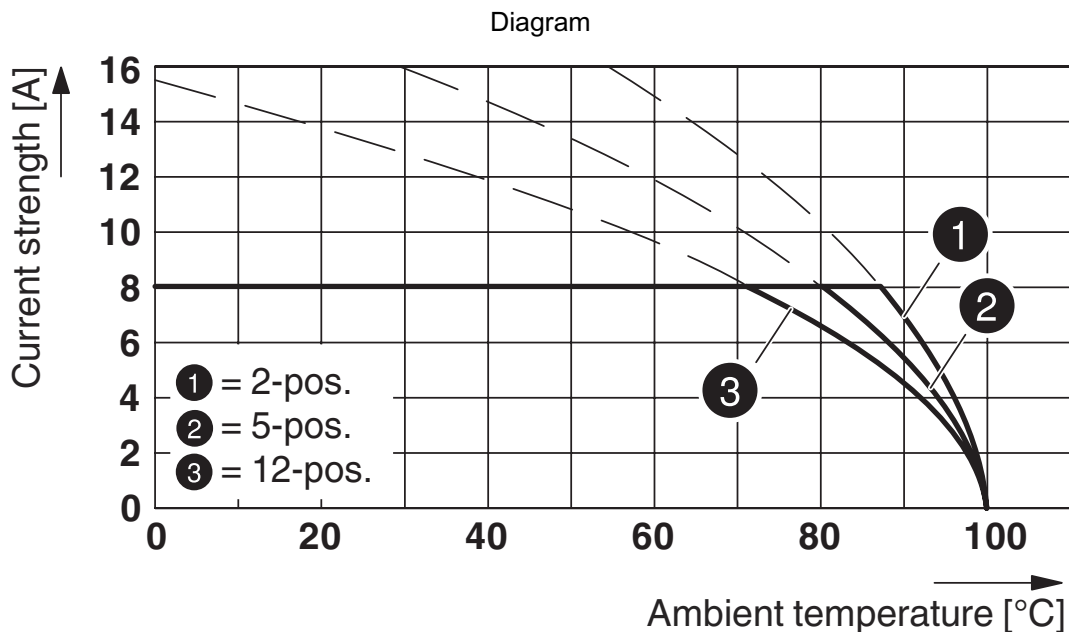
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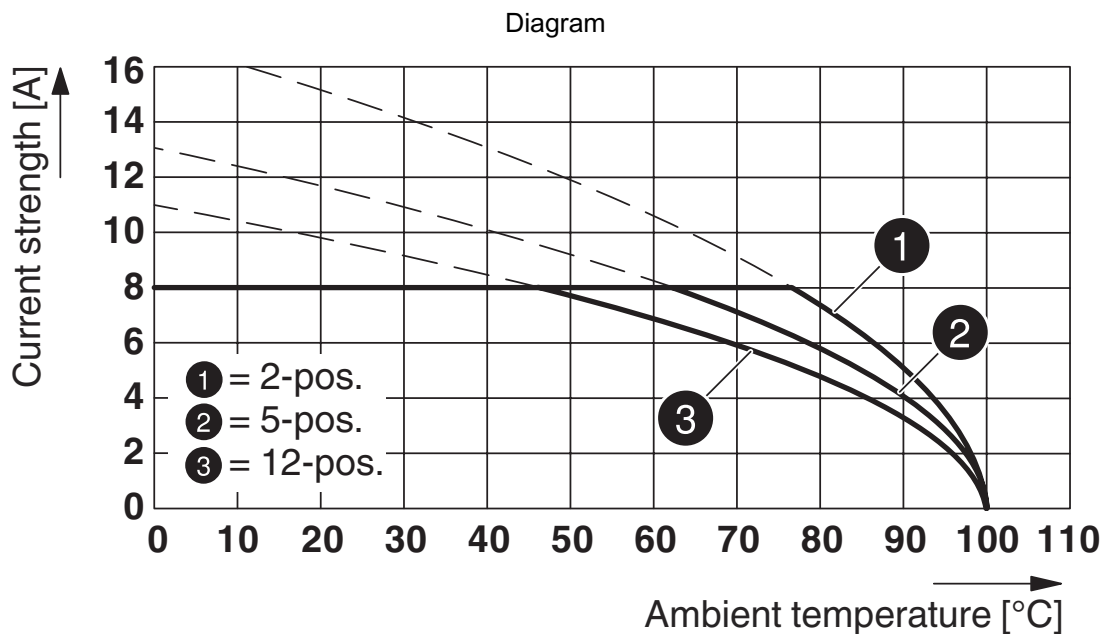
Diagram



Type: TFMC 1,5/...-ST-3,5 with MCV 1,5/...-G-3,5 P... THR



Type: MC 1,5/...-ST(F)-3,5 with MCV 1,5/...-G(F)-3,5 P... THR



Type: MCVR 1,5/...-ST-3,5 with MCV 1,5/...-G-3,5 P26THR

# MCV 1,5/ 2-G-3,5 P26 THRR32 - PCB header





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## Approvals

 <b>IECEE CB Scheme</b> Approval ID: DE1-60987-B1B2				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	160 V	8 A	-	-

 <b>EAC</b> Approval ID: B.01687				
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 <b>cULus Recognized</b> Approval ID: E60425-20110128				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B				
	300 V	8 A	-	-
Use group D				
	300 V	8 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40011723				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	160 V	8 A	-	-

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## Classifications

### ECLASS

ECLASS-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	27460201

### ETIM

ETIM 8.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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