

Panel feed-through terminal block - PWO 16-POT/S



1705654

<https://www.phoenixcontact.com/de/produkte/1705654>

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Panel feed-through terminal block, connection method: Push-in spring connection, Cable lug connection, number of positions: 1, load current: 76 A, cross section: 1.5 mm² - 16 mm², connection direction of the conductor to plug-in direction: 45 °, width: 12 mm

Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Tool-free snap-in principle enables easy mounting on the device panel
- Automatic panel thickness compensation enables universal use
- Reliable seal even with low-viscosity molding compounds

Commercial Data

Item number	1705654
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	A1 - Reihenklemmen
Product Key	AA1DEB
Catalog Page	Page 604 (C-1-2013)
GTIN	4046356790857
Weight per Piece (including packing)	29,158 g
Weight per Piece (excluding packing)	29,158 g
Customs tariff number	85369010
Country of origin	CN

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Technical Data

Product properties

Product type	Panel feed-through terminal block
	PWO 16-POT
Number of positions	1
Pitch	12.1 mm
Number of connections	2
Number of potentials	1

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Nominal current I_N	76 A
Nominal voltage U_N	1000 V
Degree of pollution	3
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV

Connection data

Connection technology

Connector system	UW 16 / PW 16
Nominal cross section	16 mm ²

Conductor connection exterior

Connection method	Push-in spring connection
Connection direction of the conductor to plug-in direction	45 °
Conductor cross section solid	1.5 mm ² ... 16 mm ²
Conductor cross section flexible	1.5 mm ² ... 16 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm ² ... 16 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm ² ... 16 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm ² ... 4 mm ²
Stripping length	18 mm

Conductor connection interior

Connection method	Cable lug connection
Connection direction of the conductor to plug-in direction	0 °

Mounting

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Plate thickness	1 mm ... 6 mm
Attachment to feed-through panel	
Tightening torque	1 Nm (Mounting screw torque)
Screw	M4

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

Material data - housing

Color (Housing)	gray (7042)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

Material data – actuating element

Color ()	()
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Notes

Safety note

Safety note	<ul style="list-style-type: none">• Only electrically qualified personnel may install and operate the product. To recognize and prevent danger, the qualified personnel must be familiar with the basics of electrical engineering.• Observe the technical data provided here and refer to the documents listed under "Downloads". The download area contains important information, such as installation notes, technical drawings, and 3D data.• To maintain the nominal voltage, align the cable lugs straight and centered, and cast the terminals on the inside.• The cable entry funnel is not safe to touch. Never connect or disconnect the terminal when it is energized. Take appropriate steps to ensure touch protection.
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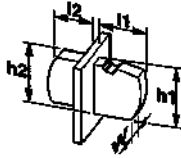
Dimensions

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Dimensional drawing	
Pitch	12.1 mm
Width [w]	12 mm

External dimensions

Width [w]	12 mm
Height [h1]	44.4 mm
Length [l1]	39.7 mm

Internal dimensions

Width [w]	12 mm
Height [h2]	26 mm
Length [l2]	23.1 mm

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60947-7-1:2009-04
Result	Test passed

Pull-out test

Specification	IEC 60947-7-1:2009-04
Conductor cross section/conductor type/tractive force setpoint/actual value	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N
	16 mm ² / solid / > 100 N
	16 mm ² / flexible / > 100 N

Electrical tests

Temperature-rise test

Specification	IEC 60947-7-1:2009-04 (following)
Requirement temperature-rise test	Increase in temperature ≤ 45 K

Short-time withstand current

Specification	IEC 60947-7-1:2009-04
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Air clearances and creepage distances | 1. Insulation coordination

Application	Internal part molded
	Control cabinet panel 1 - 4 mm
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V

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Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Air clearances and creepage distances | 2. Insulation coordination

Application	Internal part molded Control cabinet panel 5 - 6 mm
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Air clearances and creepage distances | 3. Insulation coordination

Application	Internal part not molded DP-PWO 16-3 (width: 3 mm)
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	400 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	5 mm
Rated insulation voltage (III/2)	500 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm

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Rated insulation voltage (II/2)	800 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 mm

Air clearances and creepage distances | 4. Insulation coordination

Application	Internal part not molded
	DP-PWO 16-6 (width: 6 mm)
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	800 V
Rated surge voltage (III/3)	6 kV
minimum clearance value - non-homogenous field (III/3)	5.5 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	800 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
minimum clearance value - non-homogenous field (II/2)	0 mm
minimum creepage distance (II/2)	5 mm

Air clearances and creepage distances | 5. Insulation coordination

Application	Internal part not molded
	DP-PWO 16-9 (width: 9 mm)
	Control cabinet panel 1 - 4 mm
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	12.5 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Air clearances and creepage distances | 6. Insulation coordination

	Internal part not molded
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Application	DP-PWO 16-9 (width: 9 mm) Control cabinet panel 5 - 6 mm
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	10 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	8 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
minimum clearance value - non-homogenous field (II/2)	5.5 mm
minimum creepage distance (II/2)	5.5 mm

Air clearances and creepage distances | 7. Insulation coordination

Application	Internal part not molded
Specification	IEC 60947-1:2007-06 + A1:2010-12
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
minimum clearance value - non-homogenous field (III/3)	0 mm
minimum creepage distance (III/3)	0 mm
minimum clearance value - non-homogenous field (III/2)	0 mm
minimum creepage distance (III/2)	0 mm
minimum clearance value - non-homogenous field (II/2)	0 mm
minimum creepage distance (II/2)	0 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

Glow-wire test

Specification	IEC 60695-2-11:2000-10
Temperature	960 °C
Time of exposure	30 s

Ambient conditions

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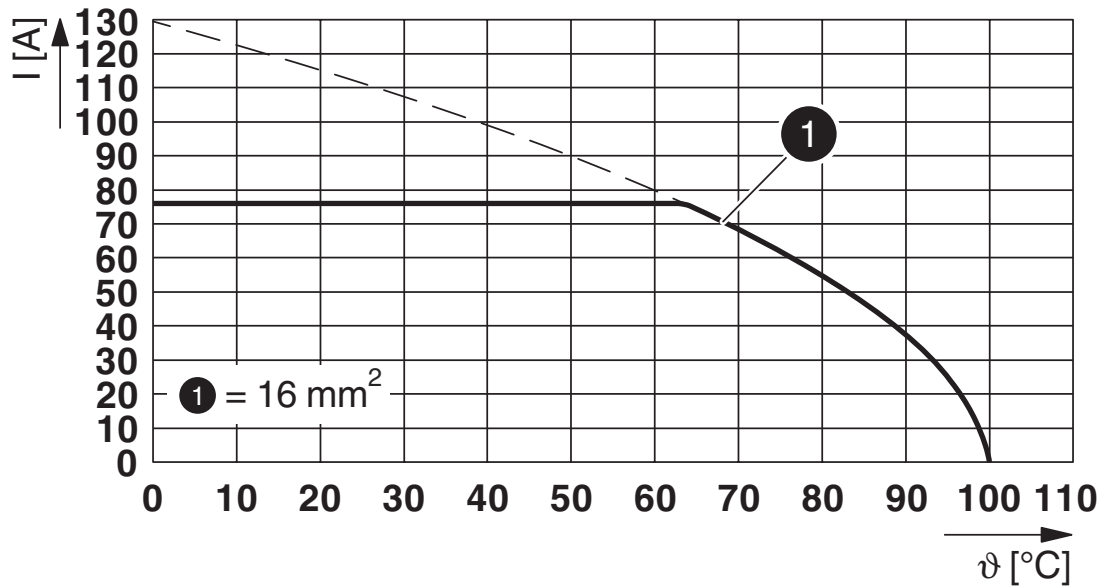
Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (actuation)	-5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

Packaging specifications

Type of packaging	packed in cardboard
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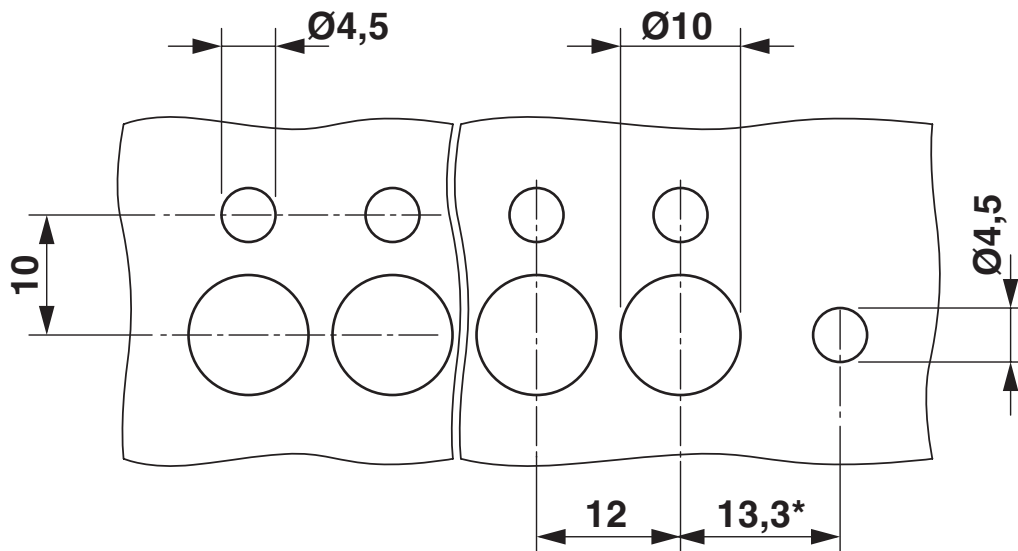
Drawings

Diagram



Type: PWO 16-POT(S)

Dimensional drawing



*Only when using the PWO 16-F flange plate


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Approvals

 CSA Approval ID: 13631				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group C				
	600 V	66 A	14 - 4	-

 EAC Approval ID: B.01687				
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 cULus Recognized Approval ID: E60425-20100423				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	600 V	66 A	14 - 4	-
Use group C				
	600 V	66 A	14 - 4	-

 VDE Gutachten mit Fertigungsüberwachung Approval ID: 40039989				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Reports with production monitoring	1000 V	76 A	-	1.5 - 16

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Classifications

ECLASS

ECLASS-9.0	27141134
ECLASS-10.0.1	27141134
ECLASS-11.0	27141134

ETIM

ETIM 8.0	EC001283
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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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Accessories

Panel feed-through terminal block

Panel feed-through terminal block - PWO 16-F - 1705659

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Mounting flange, for mounting directly on the wall



Spacer plate

Spacer plate - DP-PWO 16-3 - 1705655

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Spacer plate, for electrical isolation between the individual feed-through terminal blocks, width: 3 mm, color: gray



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Spacer plate

Spacer plate - DP-PWO 16-6 - 1705657

<https://www.phoenixcontact.com/de/produkte/1705657>



Spacer plate, for electrical isolation between the individual feed-through terminal blocks, width: 6 mm, color: gray

Spacer plate

Spacer plate - DP-PWO 16-9 - 1705658

<https://www.phoenixcontact.com/de/produkte/1705658>



Spacer plate, for electrical isolation between the individual feed-through terminal blocks, width: 9 mm, color: gray

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Screwdriver

Screwdriver - SZF 2-0,8X4,0 - 1204520

<https://www.phoenixcontact.com/de/produkte/1204520>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

Screwdriver

Screwdriver - SZK PZ2 VDE - 1206463

<https://www.phoenixcontact.com/de/produkte/1206463>



Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

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Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/de/produkte/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Crimping pliers

Crimping pliers - CRIMPFOX 25R - 1212039

<https://www.phoenixcontact.com/de/produkte/1212039>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 10 mm² ... 25 mm², lateral entry, WM crimp

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Zack marker strip

Zack marker strip - ZB 12,LGS:L1-N,PE - 0812146

<https://www.phoenixcontact.com/de/produkte/0812146>



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snapped, for terminal block width: 12.2 mm, lettering field size: 10.5 x 12.15 mm, Number of individual labels: 5

Zack Marker strip, flat

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735

<https://www.phoenixcontact.com/de/produkte/0809735>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

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Zack marker strip

Zack marker strip - ZB 12:UNPRINTED - 0812120

<https://www.phoenixcontact.com/de/produkte/0812120>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12.2 mm, lettering field size: 12 x 10.5 mm, Number of individual labels: 5

Marker for terminal blocks

Marker for terminal blocks - TMT 10 R - 0816210

<https://www.phoenixcontact.com/de/produkte/0816210>



Marker for terminal blocks, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, perforated, mounting type: snapped, snap into flat marker groove, for terminal block width: 10.2 mm, lettering field size: 6.35 x 10.15 mm, Number of individual labels: 10000

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Marker for terminal blocks

Marker for terminal blocks - TMT 10 R CUS - 0824500

<https://www.phoenixcontact.com/de/produkte/0824500>



Marker for terminal blocks, can be ordered: by line, white, labeled according to customer specifications, mounting type: snap into universal marker groove, snap into flat marker groove, for terminal block width: 10.2 mm, lettering field size: 6.35 x 10.15 mm

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PHOENIX CONTACT Deutschland GmbH

Flachsmarktstraße 8

D-32825 Blomberg

+49 52 35/3-1 20 00

info@phoenixcontact.de