

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



1705654

<https://www.phoenixcontact.com/us/products/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 mm<sup>2</sup> - 16 mm<sup>2</sup>, connection direction of the conductor to plug-in direction: 45 °, width: 12 mm, color: gray

## 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	AA28
Product key	AA1DEB
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
Product family	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

#### Properties

Nominal current $I_N$	76 A
Nominal voltage $U_N$	1000 V
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
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV

### Connection data

#### Connection technology

Connector system	UW 16 / PW 16
Nominal cross section	16 mm <sup>2</sup>

#### Conductor connection exterior

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

#### Conductor connection interior

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

Panel thickness	1 mm...6 mm
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### 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

## Notes

### Safety note

Safety note	• 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.

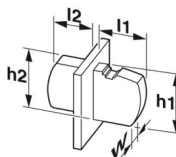
## Dimensions

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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 <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N
	16 mm <sup>2</sup> / solid / > 100 N
	16 mm <sup>2</sup> / 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 mm ... 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 mm ... 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 mm ... 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 mm ... 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)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

### Glow-wire test

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

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## Ambient conditions

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

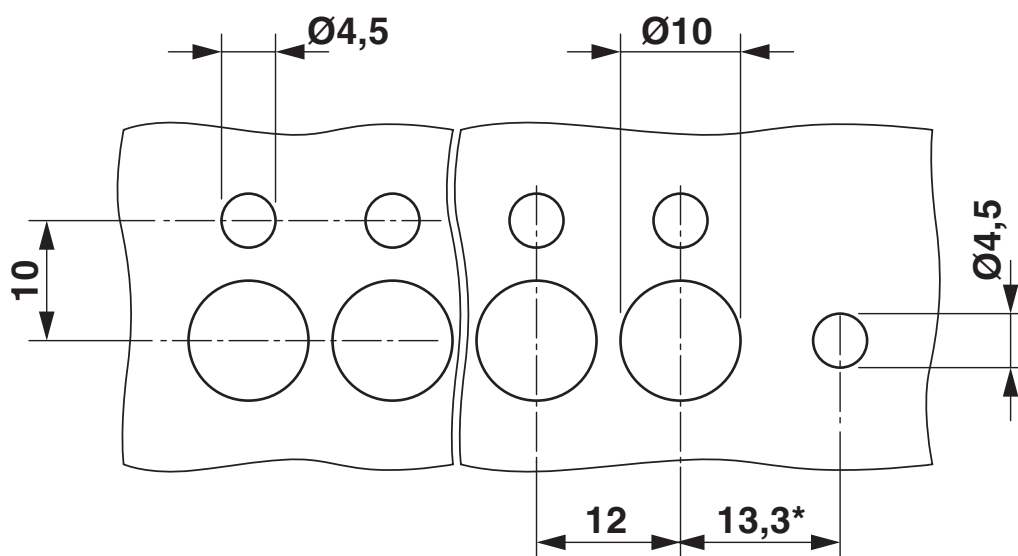
## Packaging specifications

Type of packaging	packed in cardboard
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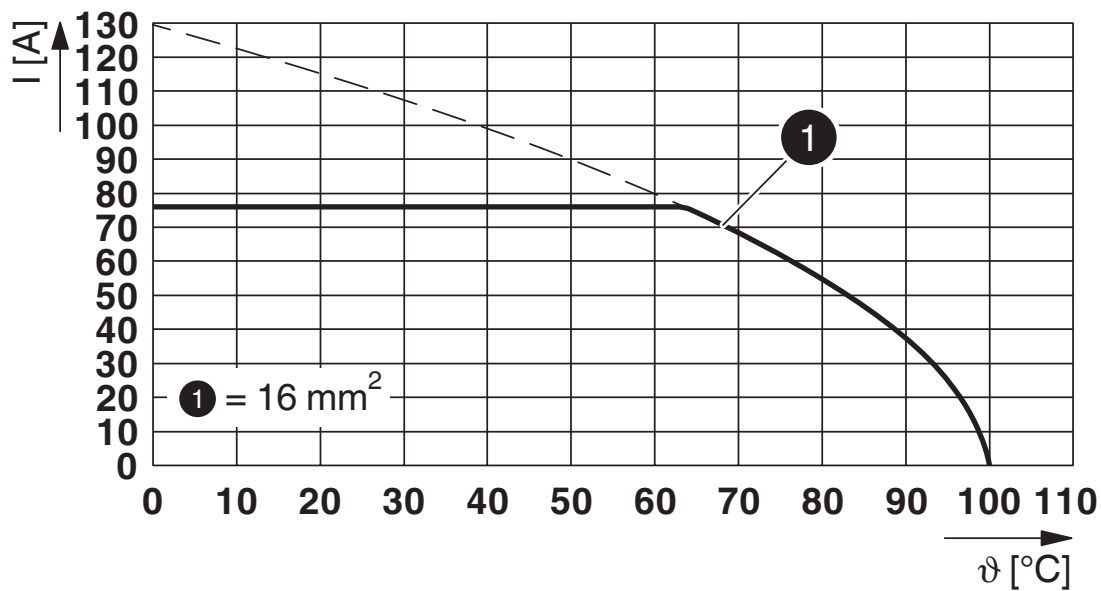
## Drawings

Dimensional drawing



\*Only when using the PWO 16-F flange plate

Diagram



Type: PWO 16-POT(/S)

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1705654>

 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
C				
	600 V	66 A	14 - 4	-

 <b>cULus Recognized</b> Approval ID: E60425-20100423				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	600 V	66 A	14 - 4	-
C				
	600 V	66 A	14 - 4	-

 <b>VDE report with production monitoring</b> Approval ID: 40039989				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
Reports with production monitoring	1000 V	76 A	-	1.5 - 16

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## Classifications

### ECLASS

ECLASS-13.0	27141134
ECLASS-15.0	27141134

### ETIM

ETIM 9.0	EC001283
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%
EF3.0 Climate Change	
CO2e kg	0.454 kg CO2e

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