PWO 16-POT - Panel feed-through terminal block

1705653

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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^2 - 16 mm^2, 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	1705653
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA28
Product key	AA1DEB
GTIN	4046356790840
Weight per piece (including packing)	29.143 g
Weight per piece (excluding packing)	29.143 g
Customs tariff number	85369010
Country of origin	CN

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 mm²

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 mm² ... 16 mm²
Conductor cross-section flexible	1.5 mm² ... 16 mm²
Conductor cross-section flexible, with ferrule without plastic sleeve	1.5 mm² ... 16 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	1.5 mm² ... 16 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm² ... 4 mm²
Stripping length	18 mm

Conductor connection interior

Connection method	Cable lug connection

Connection direction of the conductor to plug-in direction	0 °

Mounting

Panel 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

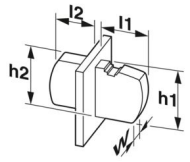
Color (Housing)	gray (7042)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the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

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

Dimensional drawing	
Pitch	12.1 mm
Width [w]	12 mm

External dimensions

Height [h1]	44.4 mm
Length [l1]	39.7 mm

Internal dimensions

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 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N
	16 mm² / solid / > 100 N
	16 mm² / 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

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
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
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

Application	Internal part not molded
	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

Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (Depending on the current carrying

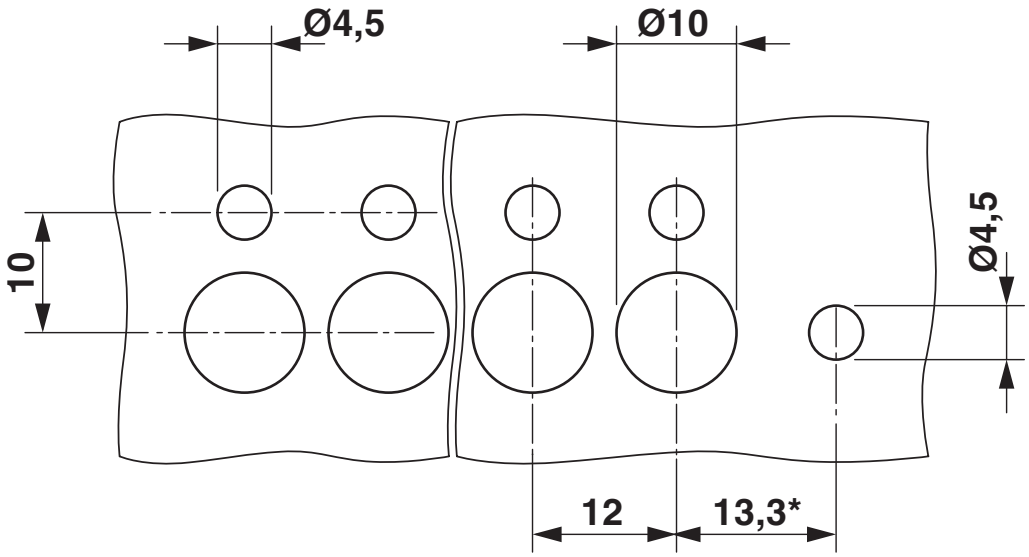
	capacity/derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard

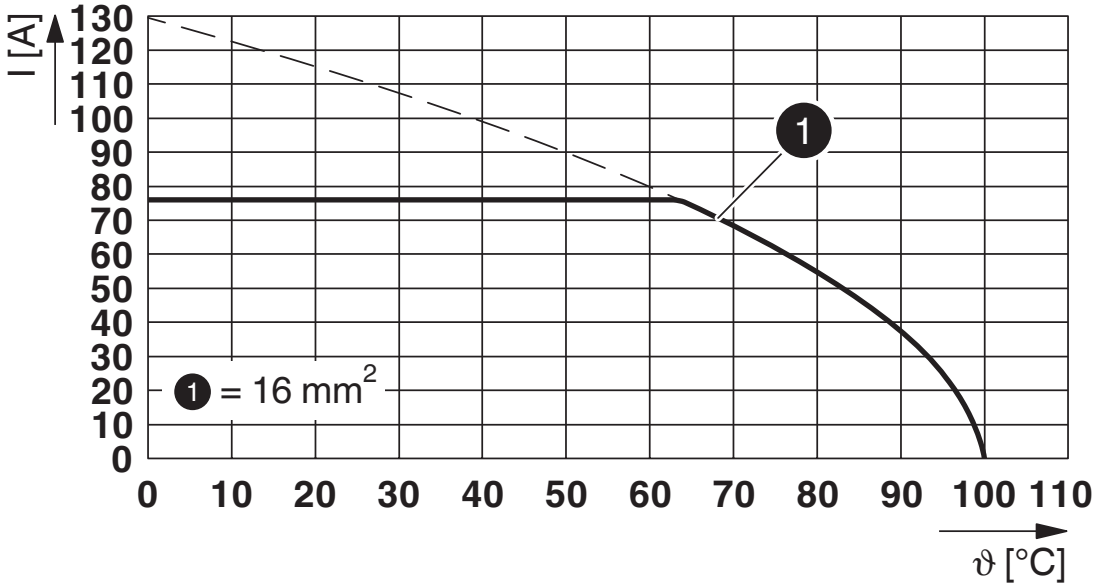
Drawings

Dimensional drawing



*Only when using the PWO 16-F flange plate

Diagram



Type: PWO 16-POT(/S)

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1705653

CSA
Approval ID: 13631

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
C				
	600 V	66 A	14 - 4	-

cULus Recognized
Approval ID: E60425-20100423

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	600 V	66 A	14 - 4	-
C				
	600 V	66 A	14 - 4	-

VDE report with production monitoring
Approval ID: 40039989

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
Reports with production monitoring	1000 V	76 A	-	1.5 - 16

Classifications

ECLASS

ECLASS-13.0	27141134
ECLASS-15.0	27141134

ETIM

ETIM 9.0	EC001283

UNSPSC

UNSPSC 21.0	39121400

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	0.456 kg CO2e

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