

# PTU 4-TWIN-MT-P - Knife-disconnect terminal block



1157689

<https://www.phoenixcontact.com/sg/products/1157689>

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Knife-disconnect terminal block, with test socket screws to accommodate 4 mm test plugs, nom. voltage: 500 V, nominal current: 20 A, connection method: Push-in connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, connection method: Screw connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The compact design and front connection enable wiring in a confined space
- The push-in connection is used inside the control cabinet and the universal screw connection is used on the end customer side

## Commercial data

Item number	1157689
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	*****
Product key	BE2231
GTIN	4063151163044
Weight per piece (including packing)	17.69 g
Weight per piece (excluding packing)	17.69 g
Customs tariff number	85369010
Country of origin	RU

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## Technical data

### Notes

#### General

Note	When establishing a connection on the open housing side of a feed-through modular terminal block of the same series and size, the block must be provided with a cover if the expected insulation voltage is >320 V.
	The max. load current must not be exceeded by the total current of all connected conductors.

### Product properties

Product type	Disconnect terminal block
Number of connections	2
Number of rows	1
Potentials	1

#### Data management status

Article revision	02
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#### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
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### Connection data

Type of additional hybrid connection	UT 4
Number of connections per level	2
Nominal cross section	4 mm <sup>2</sup>

#### Level 1 above 1

Stripping length	10 mm ... 12 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section AWG	24 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	24 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>

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Nominal current	20 A
Maximum load current	20 A
Nominal voltage	500 V
Nominal cross section	4 mm <sup>2</sup>

## Level 1 below 1

Screw thread	M3,5
Tightening torque	1 ... 1.2 Nm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section AWG	24 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	24 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with same cross section, solid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Nominal current	20 A
Maximum load current	20 A
Nominal voltage	500 V
Nominal cross section	4 mm <sup>2</sup>

## Level 1 above 1 Connection cross sections directly pluggable

Conductor cross section rigid	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section flexible (ferrule without plastic sleeve)	0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>

## Dimensions

Width	6.2 mm
End cover width	2.2 mm

## Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °C
Relative insulation material temperature index (Elec., UL 746 B)	130 °C

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Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3
Calorimetric heat release NFPA 130 (ASTM E 1354)	27,5 MJ/kg
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Smoke gas toxicity NFPA 130 (SMP 800C)	passed

## Electrical tests

### Surge voltage test

Test voltage setpoint	7.3 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

Result	Test passed
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### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.2 mm <sup>2</sup> / 0.2 kg
	4 mm <sup>2</sup> / 0.9 kg
	6 mm <sup>2</sup> / 1.4 kg
Result	Test passed

## Environmental and real-life conditions

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## Aging

Temperature cycles	192
Result	Test passed

## Needle-flame test

Time of exposure	30 s
Result	Test passed

## Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2018-05
Spectrum	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}/\text{Hz}$
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

## Shocks

Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

## Ambient conditions

Ambient temperature (operation)	-60 °C ... 105 °C (max. short-term operating temperature RTI Elec.)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (storage/transport)	30 % ... 70 %

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
	IEC 60947-7-1

## Mounting

Mounting type	NS 35/7,5
	NS 35/15

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## Classifications

### ECLASS

ECLASS-11.0

27141126

### ETIM

ETIM 8.0

EC000902

### UNSPSC

UNSPSC 21.0

39121400

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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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