

# PTV 4-MT - Knife-disconnect terminal block



1088739

<https://www.phoenixcontact.com/us/products/1088739>

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Knife-disconnect terminal block, nom. voltage: 500 V, nominal current: 20 A, 1 level, 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>, mounting: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- The secure end position of the lever-type disconnect knife ensures that the switching states of the knife disconnect terminal blocks are permanently secured and are always clearly recognizable.
- The circuits can be opened easily with a standard screwdriver.
- Clear wiring, thanks to lateral conductor entry
- The compact design enables wiring in a confined space
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system
- In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection

## Commercial data

Item number	1088739
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	BE23
Product key	BE2331
GTIN	4055626890364
Weight per piece (including packing)	9.54 g
Weight per piece (excluding packing)	8.58 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Disconnect terminal block
Product family	PTV
Area of application	Railway industry
	Machine building
	Plant engineering
Number of connections	2
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	1.02 W

### Connection data

Number of connections per level	2
Nominal cross section	4 mm <sup>2</sup>

#### 1 level

Stripping length	9 mm ... 11 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 ... 10 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.2 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> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Nominal current	20 A
Maximum load current	20 A (with a 2.5 mm <sup>2</sup> conductor cross section)
Nominal voltage	500 V
Nominal cross section	4 mm <sup>2</sup>

#### 1 level Connection cross sections directly pluggable

Conductor cross section rigid	0.75 mm <sup>2</sup> ... 6 mm <sup>2</sup>
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Conductor cross-section flexible (ferrule without plastic sleeve)	1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>

## Dimensions

Width	6.2 mm
End cover width	2.2 mm
Height	63.3 mm
Depth	36.9 mm
Depth on NS 35/7,5	36.8 mm
Depth on NS 35/15	44.3 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
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

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

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## Mechanical strength

Result	Test passed
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## Attachment on the carrier

DIN rail/fixing support	NS 35
Result	Test passed

## 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

### Aging

Temperature cycles	192
	192
Result	Test passed
	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 (m/s <sup>2</sup> )/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)
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	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
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## Mounting

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

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## Approvals

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 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	16 A	26 - 10	-
Use group C	300 V	16 A	26 - 10	-
Use group D	600 V	5 A	26 - 10	-

 <b>EAC</b> Approval ID: RU C-DE.AI30.B.01102				
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 <b>cULus Recognized</b> Approval ID: E60425				
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 <b>IECEE CB Scheme</b> Approval ID: DE1-67139				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	500 V	20 A	-	0.2 - 6

 <b>VDE Zeichengenehmigung</b> Approval ID: 40056318				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	500 V	20 A	-	0.2 - 6

 <b>cULus Recognized</b> Approval ID: E60425				
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## Classifications

### ECLASS

ECLASS-11.0	27141126
ECLASS-12.0	27141126
ECLASS-13.0	27250108

### ETIM

ETIM 8.0	EC000902
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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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)