

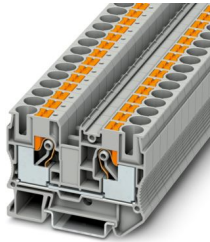
# PT 10 - Feed-through terminal block



3212120

<https://www.phoenixcontact.com/us/products/3212120>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 57 A, number of connections: 2, Rated cross section: 10 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 16 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- Time-saving conductor connection thanks to tool-free direct-connection technology
- Convenient plugging with lower insertion force
- High conductor pull-out forces due to the spring design
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Optimized for manual and automated wiring

## Commercial data

Item number	3212120
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE22
Product key	BE2211
GTIN	4046356494816
Weight per piece (including packing)	26.12 g
Weight per piece (excluding packing)	26.12 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Feed-through terminal block
Product family	PT
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	8 kV
Maximum power dissipation for nominal condition	1.82 W

### Connection data

Number of connections per level	2
Nominal cross section	10 mm <sup>2</sup>
Stripping length	18 mm ... 20 mm
Internal cylindrical gage	A6
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Cross section AWG	20 ... 6 (converted acc. to IEC)
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	20 ... 6 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 10 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>
Nominal cross section	10 mm <sup>2</sup>
Nominal current	57 A
Maximum load current	70 A (with a 16 mm <sup>2</sup> conductor cross-section, rigid)
Nominal voltage	1000 V

### Connection cross sections directly pluggable

Conductor cross-section rigid	1 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross-section flexible (ferrule without plastic sleeve)	4 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	2.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>

### Ex data

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## Rated data (ATEX/IECEX)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range (1)	-60 °C ... 85 °C
Operating temperature range (2)	-40 °C ... 110 °C
Ex-certified accessories	3212057 D-PT 10 1204517 SZF 1-0,6X3,5 3022276 CLIPFIX 35-5 3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-10 / 3005947 Plug-in bridge / FBS 5-10 / 3005948
Bridge data	48 A (10 mm <sup>2</sup> )
Ex temperature increase for bridging with bridge	40 K (52.5 A / 10 mm <sup>2</sup> ) 550 V
Rated insulation voltage output	500 V (Permanent)

## Ex level General

Rated voltage	550 V
Rated current	52.5 A
Maximum load current	61.5 A
Contact resistance	0.43 mΩ

## Ex connection data General

Nominal cross section	10 mm <sup>2</sup>
Rated cross section AWG	8
Connection capacity rigid	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Connection capacity AWG	20 ... 6
Connection capacity flexible	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Connection capacity AWG	20 ... 8

## Dimensions

Width	10.2 mm
End cover width	2.2 mm
Height	67.7 mm
Depth	49.5 mm
Depth on NS 35/7,5	50.5 mm
Depth on NS 35/15	58 mm

## Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °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
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	9.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Short-time withstand current 10 mm <sup>2</sup>	1.2 kA
Short-time withstand current 16 mm <sup>2</sup>	1.92 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 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

DIN rail/fixing support	NS 35
Test force setpoint	5 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross-section/weight	0.5 mm <sup>2</sup> / 0.3 kg
	10 mm <sup>2</sup> / 2 kg
	16 mm <sup>2</sup> / 2.9 kg
Result	Test passed

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## Environmental and real-life conditions

### Service life

Insertion/withdrawal cycles	100
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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):2022-06
Spectrum	Long 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	30.6 m/s <sup>2</sup>
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

### Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Pulse shape	Half-sine
Acceleration	300 m/s <sup>2</sup>
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 ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see 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 (operation)	20 % ... 90 %
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
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NS 35/15

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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3212120>


 <b>CSA</b> Approval ID: 158887				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	600 V	55 A	20 - 6	-
C	600 V	55 A	20 - 6	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-62942				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	1000 V	57 A	-	-

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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 <b>LR</b> Approval ID: LR2371832TA				
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 <b>NK</b> Approval ID: 22ME0007				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40038590				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	1000 V	57 A	-	0.5 - 10

 <b>PRS</b> Approval ID: TE/2107/880590/21				
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<b>ABS</b> Approval ID: 21-2192245-PDA				
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## DNV

Approval ID: TAE000010T



## cULus Recognized

Approval ID: E60425

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	600 V	60 A	20 - 6	-
C	600 V	60 A	20 - 6	-
F	1000 V	60 A	20 - 6	-



## cUL Recognized

Approval ID: E192998

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine	550 V	60 A	20 - 6	-



## EAC Ex

Approval ID: RU C-DE.AB72.B.02351



## IECEX

Approval ID: IECEX SEV13.0005U



## UL Recognized

Approval ID: E192998

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine	550 V	60 A	20 - 6	-



## ATEX

Approval ID: SEV13ATEX0159U



## CCC

Approval ID: 2020322313000631



## EAC Ex

Approval ID: KZ 7500525010101950

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## Classifications

### ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

### ETIM

ETIM 10.0	EC000897
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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
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### 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%
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### EF3.1 Climate Change

CO2e kg	0.139 kg CO2e
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