

# PTTB 1,5/S - Double-level terminal block



3208511

<https://www.phoenixcontact.com/us/products/3208511>

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Double-level terminal block, nom. voltage: 500 V, nominal current: 16 A, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 1.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, mounting type: 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
- The compact design and front connection enable wiring in a confined space
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- Tested for railway applications

## Commercial data

Item number	3208511
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE22
Product key	BE2214
Catalog page	Page 39 (C-1-2019)
GTIN	4046356564540
Weight per piece (including packing)	6.906 g
Weight per piece (excluding packing)	6.906 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Product properties

Product type	Multi-level terminal block
Product family	PT
Area of application	Railway industry
	Machine building
	Plant engineering
Number of connections	4
Number of rows	2
Potentials	2

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	0.56 W

### Connection data

Number of connections per level	2
Nominal cross section	1.5 mm <sup>2</sup>

#### 1st and 2nd level

Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A1 / B1
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section AWG	26 ... 16 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 16 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> Using the AI-S 1-8 TQ ferrule, Item No. 1200293, is recommended
Nominal current	16 A
Maximum load current	16 A
Nominal voltage	500 V
Nominal cross section	1.5 mm <sup>2</sup>

#### 1st and 2nd level Connection cross sections directly pluggable

Conductor cross section rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 1 mm <sup>2</sup>

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## Ex data

### Rated data (ATEX/IECEx)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3208579 D-PTTB 1,5/S 3030747 ATP-STTB 4 1204504 SZF 0-0,4X2,5 3022276 CLIPFIX 35-5 3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-3,5 / 3213014 Plug-in bridge / FBS 3-3,5 / 3213027 Plug-in bridge / FBS 4-3,5 / 3213030 Plug-in bridge / FBS 5-3,5 / 3213043 Plug-in bridge / FBS 10-3,5 / 3213056 Plug-in bridge / FBS 20-3,5 / 3213069
Bridge data	13.5 A / 1.5 mm <sup>2</sup>
Ex temperature increase	40 K (14.5 A / 1.5 mm <sup>2</sup> )
Rated voltage	352 V
for bridging with bridge	352 V
- At bridging between non-adjacent terminal blocks	220 V
- At bridging between non-adjacent terminal blocks via PE terminal block	220 V
- At cut-to-length bridging	166 V
- At cut-to-length bridging with cover	275 V
- At cut-to-length bridging with partition plate	352 V
Rated insulation voltage	320 V
output	(Permanent)

### Ex level General

Rated current	14.5 A
Maximum load current	14.5 A

### Ex connection data General

Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	16
Connection capacity rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Connection capacity AWG	26 ... 16
Connection capacity flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Connection capacity AWG	26 ... 16
output	(Permanent)

### Ex level Level 1

Contact resistance	1.4 mΩ
output	(Permanent)

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## Ex level Level 2

Contact resistance	1.3 mΩ
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## Dimensions

Width	3.5 mm
End cover width	2.2 mm
Height	65.4 mm
Depth	41.1 mm
Depth on NS 35/7,5	42.6 mm
Depth on NS 35/15	50.1 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))	130 °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)	28 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 1.5 mm <sup>2</sup>	0.18 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

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## 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	1 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.14 mm <sup>2</sup> / 0.2 kg 1.5 mm <sup>2</sup> / 0.4 kg
Result	Test passed

## Environmental and real-life conditions

### Aging

Result	Test passed
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### Needle-flame test

Time of exposure	30 s
Result	Test passed

### Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2008-03
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> ) <sup>2</sup> /Hz
Acceleration	3.12g
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	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

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## 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
	NS 35/15

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250102

### ETIM

ETIM 9.0	EC000897
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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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