

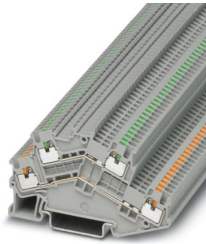
# PTTBS 1,5/S/U-OG/O-GN - Double-level terminal block



3214666

<https://www.phoenixcontact.com/us/products/3214666>

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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: green/orange

## 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
- High space savings thanks to the compact integration of two separate circuits in a single terminal block
- Optimized for manual and automated wiring

## Commercial data

Item number	3214666
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE22
Product key	BE2214
GTIN	4046356694247
Weight per piece (including packing)	8.08 g
Weight per piece (excluding packing)	7.86 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Multi-level terminal block
Product family	PTS
Number of connections	4
Number of rows	2
Potentials	2

### Insulation characteristics

Overvoltage category	III
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### 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

Connection method	Push-in connection
Stripping length	8 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 cross section	1.5 mm <sup>2</sup>
Nominal current	16 A
Maximum load current	16 A
Nominal voltage	500 V

#### 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>

### Ex data

#### Rated data (ATEX/IECEX)

Identification	⊕ II 2 GD Ex eb IIC Gb
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Operating temperature range (1)	-60 °C ... 85 °C
Operating temperature range (2)	-40 °C ... 110 °C
Ex-certified accessories	3214699 D-PTTBS 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 A / 1.5 mm <sup>2</sup>
Ex temperature increase	40 K (14.7 A/1.5 mm <sup>2</sup> )
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
Rated insulation voltage	320 V
output	(Permanent)

## Ex level General

Rated voltage	352 V
Rated current	13.5 A
Maximum load current	13.5 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	1.7 mΩ
output	(Permanent)

## Ex level Level 2

Contact resistance	1.4 mΩ
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## Dimensions

Width	3.5 mm
End cover width	2.2 mm

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Height	78.8 mm
Depth on NS 35/7,5	48.2 mm
Depth on NS 35/15	55.7 mm

## Material specifications

Color	multicolored (RAL -)
	green (RAL 6021)
	orange (RAL 2003)
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

### 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
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

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):2008-03
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> ) <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

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.)
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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

Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3214666>



**EAC**

Approval ID: RU C-DE.BL08.B.00644



**LR**

Approval ID: LR2371832TA



**IECEx**

Approval ID: IECEx SEV13.0005U



**ATEX**

Approval ID: SEV13ATEX0159U



**CCC**

Approval ID: 2020322313000631



**EAC Ex**

Approval ID: KZ 7500525010101950

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## Classifications

### ECLASS

ECLASS-13.0	27250102
ECLASS-15.0	27250102

### 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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