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

3208540

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Double-level terminal block, with equipotential bonder, nom. voltage: 500 V, nominal current: 16 A, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 1.5 mm^2, cross section: 0.14 mm^2 - 1.5 mm^2, 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

Technical data

Product properties

Product type	Multi-level terminal block
Area of application	Railway industry
	Machine building
	Plant engineering
Number of connections	4
Number of rows	2
Potentials	1

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 mm²

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 mm² ... 1.5 mm²
Cross section AWG	26 ... 16 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section, flexible [AWG]	26 ... 16 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm² ... 1.5 mm²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm² ... 1 mm² 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 mm²

1st and 2nd level Connection cross sections directly pluggable

Conductor cross section rigid	0.25 mm² ... 1.5 mm²
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm² ... 1.5 mm²
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm² ... 1 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx 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 mm²
Ex temperature increase	40 K (14.5 A / 1.5 mm²)
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 mm²
Rated cross section AWG	16
Connection capacity rigid	0.14 mm² ... 1.5 mm²
Connection capacity AWG	26 ... 16
Connection capacity flexible	0.14 mm² ... 1.5 mm²
Connection capacity AWG	26 ... 16
output	(Permanent)

Ex level Level 1

Contact resistance	1.4 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	1.3 mΩ
output	(Permanent)

Ex level PV connection

Contact resistance	1.7 mΩ

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
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
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 ≤ 45 K
Result	Test passed
Short-time withstand current 1.5 mm²	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

Mechanical tests

Mechanical strength

Result	Test passed

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 mm² / 0.2 kg
	1.5 mm² / 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	Service life test category 2, bogie-mounted
Frequency	f_1 = 5 Hz to f_2 = 250 Hz
ASD level	11.83 (m/s²)²/Hz
Acceleration	4.25g
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.)
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

Mounting

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

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