

Double-level terminal block - PTTB 2,5



3210567

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Double-level terminal block, nom. voltage: 500 V, nominal current: 22 A, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 2.5 mm², cross section: 0.14 mm² - 4 mm², 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 facility in the double function shaft, all terminal blocks provide an additional test connection
- Tested for railway applications

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Technical Data

Product properties

Area of application	Railway industry
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	0.77 W

Connection data

Number of connections per level	2
Nominal cross section	2.5 mm ²
Rated cross section AWG	12

1st and 2nd level

Stripping length	8 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section solid	0.14 mm ² ... 4 mm ²
Cross section AWG	26 ... 12
Conductor cross section flexible	0.14 mm ² ... 4 mm ²
Conductor cross section, flexible [AWG]	26 ... 14
Flexible conductor cross section flexible (ferrule, w/o plastic sleeve)	0.14 mm ² ... 2.5 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm ² ... 2.5 mm ²
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ²
Nominal current	22 A (with 2.5 mm ² conductor connection cross section)
Maximum load current	26 A (with 4 mm ² conductor cross section, rigid)
Nominal voltage	500 V
Nominal cross section	2.5 mm ²

1st and 2nd level Connection cross sections directly pluggable

Conductor cross section solid	0.34 mm ² ... 4 mm ²
Flexible conductor cross section flexible (ferrule, w/o plastic sleeve)	0.34 mm ² ... 2.5 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm ² ... 2.5 mm ²

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Ex data

Rated data (ATEX/IECEX)

ATEX certificate	PTB 09 ATEX 1111 U
IEC Ex certificate	IECEX PTB 10.0021 U
Identification	Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3211634 D-PTTB 2,5
	3030747 ATP-STTB 4
	1204517 SZF 1-0,6X3,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
	Plug-in bridge / FBS 2-5 / 3030161
	Plug-in bridge / FBS 3-5 / 3030174
	Plug-in bridge / FBS 4-5 / 3030187
	Plug-in bridge / FBS 5-5 / 3030190
	Plug-in bridge / FBS 10-5 / 3030213
Bridge data	Plug-in bridge / FBS 20-5 / 3030226
	Plug-in bridge / FBS 50-5 / 3038930
Bridge data	16 A / 2.5 mm ²
Ex temperature increase	40 K (18 A / 2.5 mm ²)
Rated voltage	-
for bridging with bridge	440 V
- At bridging between non-adjacent terminal blocks	352 V
- At cut-to-length bridging	166 V
- At cut-to-length bridging with cover	352 V
- At cut-to-length bridging with partition plate	440 V
Rated insulation voltage	400 V

Ex level General

Rated current	18 A
Maximum load current	22 A

Ex connection data General

Nominal cross section	2.5 mm ²
Rated cross section AWG	14
Connection capacity rigid	0.14 mm ² ... 4 mm ²
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm ² ... 2.5 mm ²
Connection capacity AWG	26 ... 14

Ex level Level 1

Contact resistance	1.2 mΩ
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Ex level Level 2

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Contact resistance	0.92 mΩ
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Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	45.8 mm
Height NS 35/15	55 mm
Height NS 35/7,5	47.5 mm
Height	1.87 "
Length	68 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 ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm ²	0.3 kA
Short-time withstand current 4 mm ²	0.48 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

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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	1 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.14 mm ² / 0.2 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 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	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s ²) ² /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

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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 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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Drawings

Circuit diagram



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