

PT 2,5-3L - Multi-level terminal block

3210499

<https://www.phoenixcontact.com/ie/products/3210499>

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Multi-level terminal block, nom. voltage: 500 V, nominal current: 20 A, connection method: Push-in connection, 1st, 2nd and 3rd 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

- 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

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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	6
Number of rows	3
Potentials	3

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

1st, 2nd and 3rd level

Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm ² ... 4 mm ²
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm ² ... 4 mm ²
Conductor cross-section, flexible [AWG]	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible ultrasound-compressed	0.34 mm ² ... 4 mm ²
Conductor cross-section, flexible [AWG] ultrasound-compressed	22 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without 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
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ²
Nominal cross section	2.5 mm ²
Nominal current	20 A
Maximum load current	24 A (with 4 mm ² conductor cross-section, rigid)
Nominal voltage	500 V

1st, 2nd and 3rd level Connection cross sections directly pluggable

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Conductor cross-section rigid	0.34 mm ² ... 4 mm ²
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm ² ... 2.5 mm ²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.34 mm ² ... 2.5 mm ²

Ex data

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	3211647 D-PT 2,5-3L 1204517 SZF 1-0,6X3,5 3022276 CLIPFIX 35-5 3022218 CLIPFIX 35
List of bridges	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 Plug-in bridge / FBS 20-5 / 3030226
Bridge data	14.5 A / 2.5 mm ²
Ex temperature increase	40 K (17 A / 2.5 mm ²)
for bridging with bridge	440 V
- At bridging between non-adjacent terminal blocks	352 V
- At bridging between non-adjacent terminal blocks via PE terminal block	352 V
- At cut-to-length bridging	166 V
- At cut-to-length bridging with cover	352 V
Rated insulation voltage	400 V
output	(Permanent)

Ex level General

Rated voltage	440 V
Rated current	17 A
Maximum load current	21 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
output	(Permanent)

Ex level Level 1

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Contact resistance	1.2 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	1.1 mΩ
output	(Permanent)

Ex level Level 3

Contact resistance	0.8 mΩ
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Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	102.2 mm
Depth	56.5 mm
Depth on NS 35/7,5	58 mm
Depth on NS 35/15	65.5 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
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 \leq 45 K
Result	Test passed
	Test passed
Short-time withstand current 2.5 mm ²	0.3 kA
Result	Test passed

Power-frequency withstand voltage

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Test voltage setpoint	1.89 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	1 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 (+/- 2) 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):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 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
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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
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Mounting

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

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