PTTB 2,5 RD - Double-level terminal block

1109053

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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 mm^2, cross section: 0.14 mm^2 - 4 mm^2, mounting type: NS 35/7,5, NS 35/15, color: red

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	1109053
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE22
Product key	BE2214
GTIN	4063151018825
Weight per piece (including packing)	10.963 g
Weight per piece (excluding packing)	10.028 g
Customs tariff number	85369010
Country of origin	CN

Technical data

Product properties

Product type	Multi-level terminal block
Product family	PT
Area of application	Railway industry
	Machine building
	Plant engineering
	Process 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 mm²
Rated cross section AWG	12

1st and 2nd level

Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm² ... 4 mm²
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm² ... 4 mm²
Conductor cross-section, flexible [AWG]	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm² ... 2.5 mm²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm² ... 2.5 mm²
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm²
Nominal cross section	2.5 mm²
Nominal current	22 A
Maximum load current	26 A (with 4 mm² conductor cross-section, rigid)
Nominal voltage	500 V

Cross section AWG	26 ... 12 (converted acc. to IEC)

1st and 2nd level Connection cross sections directly pluggable

Conductor cross-section rigid	0.34 mm² ... 4 mm²
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm² ... 2.5 mm²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.34 mm² ... 2.5 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx II 2 G Ex eb IIC Gb
Operating temperature range (1)	-60 °C ... 85 °C
Operating temperature range (2)	-40 °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
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
	Plug-in bridge / FBS 50-5 / 3038930
Bridge data	16 A / 2.5 mm²
Ex temperature increase	40 K (18 A / 2.5 mm²)
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
output	(Permanent)

Ex level General

Rated voltage	440 V
Rated current	18 A
Maximum load current	22 A

Ex connection data General

Nominal cross section	2.5 mm²
Rated cross section AWG	14
Connection capacity rigid	0.14 mm² ... 4 mm²
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm² ... 2.5 mm²

Connection capacity AWG	26 ... 14
output	(Permanent)

Ex level Level 1

Contact resistance	1.2 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	0.92 mΩ

Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	68 mm
Depth	45.8 mm
Depth on NS 35/7,5	47.5 mm
Depth on NS 35/15	55 mm

Material specifications

Color	red (RAL 3001)
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)	125 °C

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 mm²	0.3 kA
Short-time withstand current 4 mm²	0.48 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 32/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 mm² / 0.2 kg
	2.5 mm² / 0.7 kg
	4 mm² / 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 Hz to f_2 = 250 Hz
ASD level	6.12 (m/s²)²/Hz
Acceleration	30.6 m/s²
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	300 m/s²
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

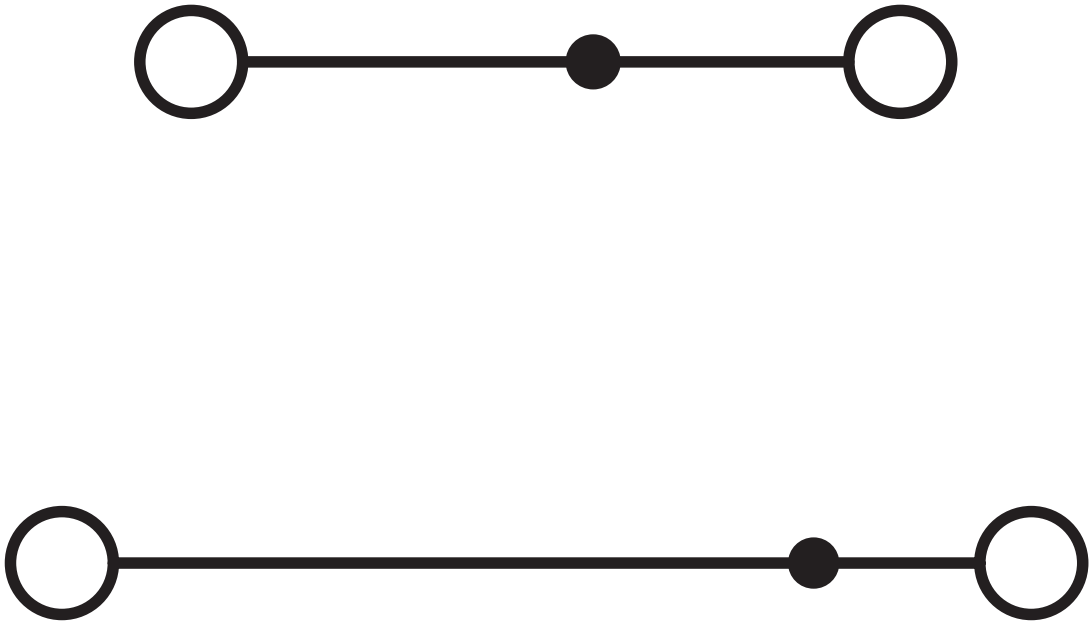
Connection in acc. with standard	IEC 60947-7-1

Mounting

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

Drawings

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1109053

IECEE CB Scheme
Approval ID: DE1-66980

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	500 V	22 A	-	0.2 - 2.5

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

cULus Recognized
Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	20 A	26 - 12	-
C				
	300 V	20 A	26 - 12	-
D				
	600 V	5 A	26 - 12	-

LR
Approval ID: LR2371832TA

NK
Approval ID: 22ME0007

BV
Approval ID: 25278/C1 BV

VDE Zeichengenehmigung
Approval ID: 40032222

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	500 V	22 A	-	0.2 - 2.5

ABS
Approval ID: 21-2192245-PDA

NK
Approval ID: 14ME0912

DNV
Approval ID: TAE000010T

EAC Ex
Approval ID: RU C-DE.AB72.B.02351

IECEx
Approval ID: IECExPTB10.0021U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
Only flexible conductors	440 V	18 A	-	0.14 - 2.5
Only rigid conductors	440 V	22 A	-	0.14 - 4

ATEX
Approval ID: PTB09ATEX1111U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
Only flexible conductors	440 V	18 A	-	0.14 - 2.5
Only rigid conductors	440 V	22 A	-	0.14 - 4

CCC
Approval ID: 2020322313000631

UKCA-EX
Approval ID: CSAE 22UKEX1096U

EAC Ex
Approval ID: KZ 7500525010101950

Classifications

ECLASS

ECLASS-13.0	27250102
ECLASS-15.0	27250102

ETIM

ETIM 10.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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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