

PTTBS 2,5-PV - Double-level terminal block



3210211

<https://www.phoenixcontact.com/sg/products/3210211>

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Double-level terminal block, with equipotential bonder, nom. voltage: 500 V, nominal current: 22 A, connection method: Push-in connection, 1 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

- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- 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

Commercial data

Item number	3210211
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	*****
Product key	BE2214
Catalog page	Page 85 (C-1-2019)
GTIN	4046356330107
Weight per piece (including packing)	12.966 g
Weight per piece (excluding packing)	12.966 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Product properties

Product type	Multi-level terminal block
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	0.77 W

Connection data

Number of connections per level	2
Nominal cross section	2.5 mm ²

1 level

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 (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 current	22 A
Maximum load current	26 A (with 4 mm ² conductor cross section, rigid)
Nominal voltage	500 V
Nominal cross section	2.5 mm ²

1 level Connection cross sections directly pluggable

Conductor cross section rigid	0.34 mm ² ... 4 mm ²
Conductor cross-section flexible (ferrule without 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

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	3038503 D-STTBS 2,5
	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	16.5 A / 2.5 mm ²
Ex temperature increase	40 K (20 A / 2.5 mm ²)
Rated voltage	440 V
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	137.5 V
- At cut-to-length bridging with cover	352 V
Rated insulation voltage	400 V
output	(Permanent)

Ex level General

Rated current	20 A
Maximum load current	23 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

Contact resistance	1.3 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	1.3 mΩ
output	(Permanent)

Ex level PV connection

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Contact resistance	1.2 mΩ
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Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	78 mm
Depth on NS 35/7,5	55 mm
Depth on NS 35/15	62.5 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
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °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)	27,5 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

Mechanical properties

Mechanical data

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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
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

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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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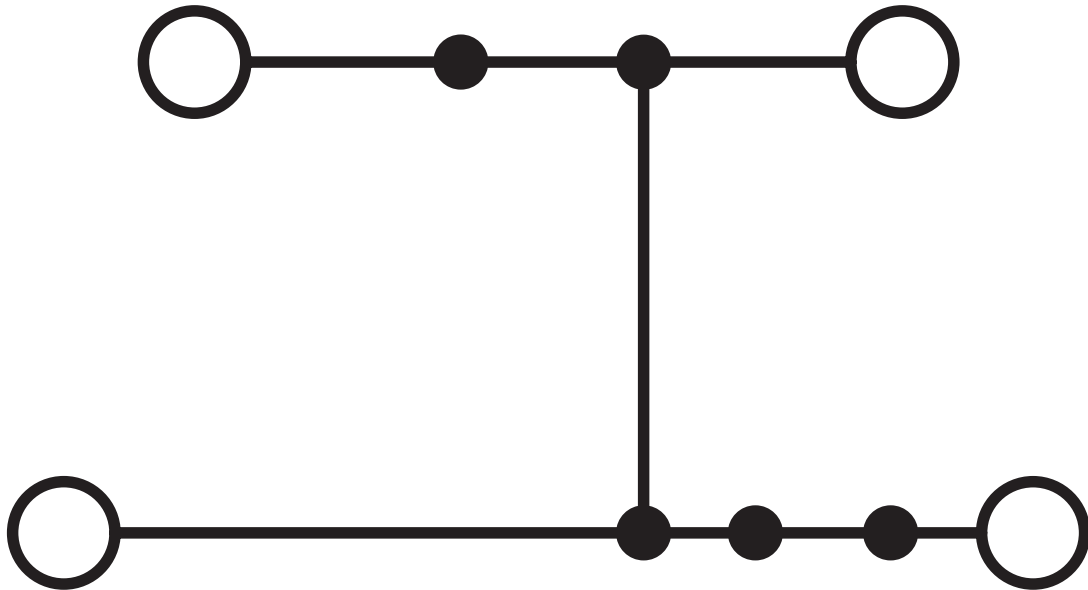


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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3210211>

 CSA Approval ID: 2030668				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	20 A	26 - 12	-
Use group C	300 V	20 A	26 - 12	-
Use group D	600 V	5 A	26 - 12	-

 IECEE CB Scheme Approval ID: DE1-66980				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	500 V	22 A	-	0.2 - 2.5

 EAC Approval ID: RU C-DE.BL08.B.00644				
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 cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	20 A	24 - 12	-
Use group C	300 V	20 A	24 - 12	-

 LR Approval ID: LR2371832TA				
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 NK Approval ID: 14ME0912				
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 VDE approval of drawings Approval ID: 40032222				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	500 V	22 A	-	0.2 - 2.5

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ABS

Approval ID: 21-2192245-PDA

DNV

Approval ID: TAE000010T



cUL Recognized

Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	20 A	24 - 12	-



IECEx

Approval ID: IECEx SEV13.0005U



UL Recognized

Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	20 A	24 - 12	-



ATEX

Approval ID: SEV13ATEX0159U



CCC

Approval ID: 2020322313000631

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250102

ETIM

ETIM 9.0	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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105 Eunos Avenue 3, #04-00
Singapore 409836
+65 6228 4900
marketing@phoenixcontact.com.sg