

ST 2,5-TWIN BN - Feed-through terminal block

3031242

<https://www.phoenixcontact.com/us/products/3031242>



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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 3, connection method: Spring-cage connection, Rated cross section: 2.5 mm², cross section: 0.08 mm² - 4 mm², mounting type: NS 35/7,5, NS 35/15, color: brown

Your advantages

- The consistent double function shaft offers every opportunity for time-saving potential distribution and accommodating test accessories
- User-friendly implementation of all potential branching tasks
- Tested for railway applications
- Space-saving and practical multi-conductor connection without additional bridges

Commercial data

Item number	3031242
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	BE02
Product key	BE2112
GTIN	4046356741507
Weight per piece (including packing)	7.94 g
Weight per piece (excluding packing)	7.94 g
Customs tariff number	85366990
Country of origin	DE

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Technical data

Notes

General

Note	The max. load current must not be exceeded by the total current of all connected conductors.
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Product properties

Product type	Multi-conductor terminal block
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	3
Number of rows	1
Potentials	1

Insulation characteristics

Ovvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.77 W

Connection data

Number of connections per level	3
Nominal cross section	2.5 mm ²
Connection method	Spring-cage connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.08 mm ² ... 4 mm ²
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.08 mm ² ... 2.5 mm ²
Conductor cross-section, flexible [AWG]	28 ... 14 (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	24 A (with 4 mm ² conductor cross-section)
Maximum load current	28 A (in case of a 4 mm ² conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	800 V

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Nominal cross section	2.5 mm ²
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Ex data

Rated data (ATEX/IECEx)

Identification	Ex II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 85 °C
Ex-certified accessories	3030488 D-ST 2,5-TWIN 3030789 ATP-ST-TWIN 3036602 DS-ST 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	22.5 A (2.5 mm ²)
Ex temperature increase for bridging with bridge	40 K (23.4 A / 2.5 mm ²) 550 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 with cover	220 V
- At cut-to-length bridging with partition plate	275 V
Rated insulation voltage output	500 V (Permanent)

Ex level General

Rated voltage	550 V
Rated current	21 A
Maximum load current	24.5 A
Contact resistance	1.08 mΩ

Ex connection data General

Nominal cross section	2.5 mm ²
Rated cross section AWG	14
Connection capacity rigid	0.08 mm ² ... 4 mm ²
Connection capacity AWG	28 ... 12
Connection capacity flexible	0.08 mm ² ... 2.5 mm ²
Connection capacity AWG	28 ... 14

Dimensions

Width	5.2 mm
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End cover width	2.2 mm
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Material specifications

Color	brown (RAL 8028)
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

Result	Test passed
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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	2 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 32/NS 35
Result	Test passed

Test for conductor damage and slackening

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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):2008-03
Spectrum	Long life test category 2, bogie-mounted
Frequency	f ₁ = 5 Hz to f ₂ = 250 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

Pulse shape	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

Ambient conditions

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
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NS 35/15

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Drawings

Circuit diagram



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Classifications

ETIM

ETIM 8.0

EC000897

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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