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

3031254

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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 mm^2, cross section: 0.08 mm^2 - 4 mm^2, mounting type: NS 35/7,5, NS 35/15, color: blue

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

Technical data

Notes

General

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

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

Overvoltage 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 mm²
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 mm² ... 4 mm²
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm² ... 2.5 mm²
Conductor cross section, flexible [AWG]	28 ... 14 (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
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm²
Nominal current	24 A (with 4 mm² conductor cross section)
Maximum load current	28 A (in case of a 4 mm² conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	800 V
Nominal cross section	2.5 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °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 mm²
Ex temperature increase	40 K (23.4 A / 2.5 mm²)
Rated voltage	550 V
for bridging with bridge	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	500 V
output	(Permanent)

Ex level General

Rated current	21 A
Maximum load current	24.5 A
Contact resistance	1.08 mΩ

Ex connection data General

Nominal cross section	2.5 mm²
Rated cross section AWG	14
Connection capacity rigid	0.08 mm² ... 4 mm²
Connection capacity AWG	28 ... 12
Connection capacity flexible	0.08 mm² ... 2.5 mm²
Connection capacity AWG	28 ... 14

Dimensions

Width	5.2 mm
End cover width	2.2 mm

Height	60.5 mm
Depth on NS 35/7,5	36.5 mm
Depth on NS 35/15	44 mm

Material specifications

Color	blue
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

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	2 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

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):2008-03
Spectrum	Service 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	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 (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, no longer than 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

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