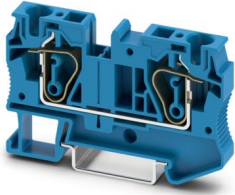


# ST 6 BU - Feed-through terminal block

3031490

<https://www.phoenixcontact.com/ie/products/3031490>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 41 A, number of connections: 2, connection method: Spring-cage connection, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- Simple wiring of very small, flexible conductors
- Enables one-handed wiring
- No restriction on cross-sections when using conductors with ferrules
- Reliable vibration resistance thanks to spring-loaded contact elements
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories

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## Technical data

### Product properties

Product type	Feed-through terminal block
Product family	ST
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	2
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	1.31 W

### Connection data

Number of connections per level	2
Nominal cross section	6 mm <sup>2</sup>
Connection method	Spring-cage connection
Stripping length	12 mm
Internal cylindrical gage	A5
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Cross section AWG	24 ... 8 (converted acc. to IEC)
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	24 ... 10 (converted acc. to IEC)
Conductor cross-section flexible ultrasound-compressed	0.34 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross-section, flexible [AWG] ultrasound-compressed	22 ... 8 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal cross section	6 mm <sup>2</sup>
Nominal current	41 A
Maximum load current	52 A (with 10 mm <sup>2</sup> conductor cross-section)
Nominal voltage	1000 V

### Ex data

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## Rated data (ATEX/IECEX)

Identification	Ⓜ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 85 °C
Ex-certified accessories	3030433 D-ST 6
	3024481 ATP-ST 6
	1204520 SZF 2-0,8X4,0
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-8 / 3030284
	Plug-in bridge / FBS 3-8 / 3030297
	Plug-in bridge / FBS 4-8 / 3030307
	Plug-in bridge / FBS 5-8 / 3030310
	Plug-in bridge / FBS 10-8 / 3030323
Bridge data	35 A (6 mm <sup>2</sup> )
Ex temperature increase	40 K (40.4 A / 6 mm <sup>2</sup> )
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	440 V
- At bridging between non-adjacent terminal blocks via PE terminal block	440 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 voltage	550 V
Rated current	36.5 A
Maximum load current	45 A
Contact resistance	0.56 mΩ

## Ex connection data General

Nominal cross section	6 mm <sup>2</sup>
Rated cross section AWG	10
Connection capacity rigid	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Connection capacity AWG	24 ... 8
Connection capacity flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Connection capacity AWG	24 ... 10

## Dimensions

Width	8.2 mm
End cover width	2.2 mm
Height	69.5 mm
Depth on NS 35/7,5	43.5 mm
Depth on NS 35/15	51 mm

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## Material specifications

Color	blue (RAL 5015)
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	9.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
Short-time withstand current 6 mm <sup>2</sup>	0.72 kA
Short-time withstand current 10 mm <sup>2</sup>	1.2 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 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 35
Test force setpoint	5 N
Result	Test passed

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## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.2 mm <sup>2</sup> / 0.2 kg
	6 mm <sup>2</sup> / 1.4 kg
	10 mm <sup>2</sup> / 2 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	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	11.83 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	4.25g
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.)
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 %

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## 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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