

# ST 16 - Feed-through terminal block



3036149

<https://www.phoenixcontact.com/gb/products/3036149>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 76 A, number of connections: 2, connection method: Spring-cage connection, Rated cross section: 16 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 25 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- The double bridge shaft not only enables individual chain bridging, but also reducing bridging to spring-cage terminal blocks with smaller cross sections
- The flexible options for reducing bridging in the CLIPLINE complete system can be found in "Accessories for the CLIPLINE complete modular terminal block system"

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## Technical data

### Product properties

Product type	Feed-through terminal block
Product family	ST
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	2.43 W

### Connection data

Number of connections per level	2
Nominal cross section	16 mm <sup>2</sup>
Stripping length	18 mm
Internal cylindrical gage	A7 B6
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Cross section AWG	24 ... 4 (converted acc. to IEC)
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	24 ... 6 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Nominal current	76 A
Maximum load current	90 A (with 25 mm <sup>2</sup> conductor cross section)
Nominal voltage	1000 V
Nominal cross section	16 mm <sup>2</sup>

### Ex data

#### Rated data (ATEX/IECEx)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3036657 D-ST 16 1206612 SZF 3-1,0X5,5 3022276 CLIPFIX 35-5

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	3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-12 / 3005950
Bridge data	60 A / 16 mm <sup>2</sup>
Ex temperature increase	40 K (71.3 A / 16 mm <sup>2</sup> )
Rated voltage	550 V
for bridging with bridge	550 V
Rated insulation voltage	500 V
output	(Permanent)

## Ex level General

Rated current	64.5 A
Maximum load current	81.5 A
Contact resistance	0.34 mΩ

## Ex connection data General

Nominal cross section	16 mm <sup>2</sup>
Rated cross section AWG	6
Connection capacity rigid	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Connection capacity AWG	16 ... 4
Connection capacity flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Connection capacity AWG	16 ... 6

## Dimensions

Width	12.2 mm
End cover width	2.2 mm
Height	80 mm
Depth on NS 35/7,5	51.5 mm
Depth on NS 35/15	59 mm

## Material specifications

Color	gray
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

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## 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 16 mm <sup>2</sup>	1.92 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 32/NS 35
Test force setpoint	5 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross section/weight	0.2 mm <sup>2</sup> / 0.2 kg
	16 mm <sup>2</sup> / 2.9 kg
	25 mm <sup>2</sup> / 4.5 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

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Specification	DIN EN 50155 (VDE 0115-200):2022-06
Spectrum	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
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):2022-06
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 (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
	NS 35/15

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