

# STS 4-QUATTRO - Feed-through terminal block



3031681

<https://www.phoenixcontact.com/us/products/3031681>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 32 A, number of connections: 4, connection method: Spring-cage connection, Rated cross section: 4 mm<sup>2</sup>, 1 level, cross section: 0.08 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- Ground terminal blocks of the same shape are available

## Commercial data

Item number	3031681
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2113
GTIN	4017918193331
Weight per piece (including packing)	13.468 g
Weight per piece (excluding packing)	12.403 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Product properties

Product type	Multi-conductor terminal block
Product family	STS
Number of connections	4
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	1.02 W

### Connection data

Number of connections per level	4
Nominal cross section	4 mm <sup>2</sup>

#### 1 level

Connection method	Spring-cage connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.08 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section AWG	28 ... 10 (converted acc. to IEC)
Conductor cross-section flexible	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	28 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 4 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 mm <sup>2</sup>
Nominal cross section	4 mm <sup>2</sup>
Nominal current	32 A (with 6 mm <sup>2</sup> conductor cross-section)
Maximum load current	38 A (In the case of a 6 mm <sup>2</sup> conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors)
Nominal voltage	800 V

### Ex data

#### Rated data (ATEX/IECEx)

Identification	⊕ II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C

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Ex-certified accessories	3031704 D-ST5 4
	1204517 SZF 1-0,6X3,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
Ex temperature increase	40 K (28.5 A / 4 mm <sup>2</sup> )
Rated insulation voltage	500 V
output	(Permanent)

## Ex level General

Rated voltage	550 V
Rated current	28.5 A
Maximum load current	35 A
Contact resistance	0.84 mΩ

## Ex connection data General

Nominal cross section	4 mm <sup>2</sup>
Rated cross section AWG	12
Connection capacity rigid	0.08 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Connection capacity AWG	28 ... 10
Connection capacity flexible	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	28 ... 12

## Dimensions

Width	6.2 mm
End cover width	2.2 mm
Height	64.5 mm
Depth on NS 35/7,5	43 mm
Depth on NS 35/15	50.5 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

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Smoke gas toxicity NFPA 130 (SMP 800C)	passed
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## 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 4 mm <sup>2</sup>	0.48 kA
Short-time withstand current 6 mm <sup>2</sup>	0.72 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 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	0.08 mm <sup>2</sup> / 0.1 kg
	4 mm <sup>2</sup> / 0.9 kg
	6 mm <sup>2</sup> / 1.4 kg
Result	Test passed

## Environmental and real-life conditions

### Aging

Temperature cycles	192
Result	Test passed

### Needle-flame test

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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	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
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):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 %

## 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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## Drawings

### Circuit diagram



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## Classifications

### ECLASS

ECLASS-13.0

27250101

### ETIM

ETIM 9.0

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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### EF3.1 Climate Change

CO2e kg	0.039 kg CO2e
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