

# ST 4-PE - Spring-cage protective conductor terminal block



3031380

<https://www.phoenixcontact.com/us/products/3031380>

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Spring-cage protective conductor terminal block, number of connections: 2, connection method: Spring-cage connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green-yellow

## Your advantages

- Simple wiring of very small, flexible conductors
- No restriction on cross-sections when using conductors with ferrules
- Meet the requirements of DIN EN 60947-7-2 or IEC 60947-7-2 for protective conductor connections
- High level of safety thanks to the low-resistance connection to the ground potential via the top-hat rail
- Direct contacting with the DIN rail enables fast, error-free grounding without additional wiring effort.
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories

## Commercial data

Item number	3031380
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2121
GTIN	4017918186852
Weight per piece (including packing)	12.69 g
Weight per piece (excluding packing)	12.2 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Product properties

Product type	Ground terminal block
Product family	ST
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	2
Number of rows	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

Grounding foot	Yes
Number of connections per level	2
Nominal cross section	4 mm <sup>2</sup>
Connection method	Spring-cage connection
Note	Please observe the current carrying capacity of the DIN rails.
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A4
Connection in acc. with standard	IEC 60947-7-2
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 ultrasound-compressed	0.34 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section, flexible [AWG] ultrasound-compressed	22 ... 10 (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>
Nominal cross section	4 mm <sup>2</sup>

### Ex data

#### Rated data (ATEX/IECEx)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 85 °C

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Ex-certified accessories	3030420 D-ST 4
	1204517 SZF 1-0,6X3,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
output	(Permanent)

## 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	56 mm
Depth on NS 35/7,5	36.5 mm
Depth on NS 35/15	44 mm

## Material specifications

Color	green-yellow
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

## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Environmental and real-life conditions

### Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2022-06
Spectrum	Long life test category 2, bogie-mounted

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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	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, 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 60947-7-2
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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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## Approvals


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 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	-	-	28 - 10	-
C	-	-	28 - 10	-
D	-	-	28 - 10	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-62971_M1				
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 <b>KR</b> Approval ID: HMB17372-EL002				
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 <b>NK</b> Approval ID: 09 ME 140				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40010331				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine	-	-	-	0.2 - 4

 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	-	-	28 - 10	-
C	-	-	28 - 10	-

 <b>ATEX</b> Approval ID: KEMA00ATEX2129U				
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**IECEX**

Approval ID: IECEx KEM 06.0050U



**CCC**

Approval ID: 2020322313000621



**EAC Ex**

Approval ID: KZ 7500525010101950

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## Classifications

### ECLASS

ECLASS-13.0	27250103
ECLASS-15.0	27250103

### ETIM

ETIM 10.0	EC000901
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### 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	0.259 kg CO2e
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)