

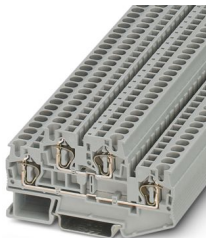
STTB 4 - Double-level spring-cage terminal block



3031429

<https://www.phoenixcontact.com/au/products/3031429>

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Double-level spring-cage terminal block, nom. voltage: 500 V, nominal current: 30 A, connection method: Spring-cage connection, 1st and 2nd level, Rated cross section: 4 mm², cross section: 0.08 mm² - 6 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Compact design for maximum space savings
- Connect the levels using FBS ...-PV bridges
- Tested for railway applications

Commercial data

Item number	3031429
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE2114
Product key	BE2114
Catalog page	Page 230 (C-1-2019)
GTIN	4017918186920
Weight per piece (including packing)	15.434 g
Weight per piece (excluding packing)	15.434 g
Customs tariff number	85369010
Country of origin	DE

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Technical data

Product properties

Product type	Multi-level terminal block
Product family	ST
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	4
Number of rows	2
Potentials	2

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	1.02 W

Connection data

Number of connections per level	2
Nominal cross section	4 mm ²

1st and 2nd level

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 ² ... 6 mm ²
Cross section AWG	28 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm ² ... 4 mm ²
Conductor cross section, flexible [AWG]	28 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm ² ... 4 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm ² ... 4 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 1 mm ²
Nominal current	30 A (with 4 mm ² conductor cross section)
Maximum load current	32 A (with 6 mm ² conductor cross section)
Nominal voltage	500 V
Nominal cross section	4 mm ²

Ex data

Rated data (ATEX/IECEx)

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Identification	Ex II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 85 °C
Ex-certified accessories	3030462 D-STTB 4 3030747 ATP-STTB 4 1204517 SZF 1-0,6X3,5 3022276 CLIPFIX 35-5 3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-6 / 3030336 Plug-in bridge / FBS 3-6 / 3030242 Plug-in bridge / FBS 4-6 / 3030255 Plug-in bridge / FBS 5-6 / 3030349 Plug-in bridge / FBS 10-6 / 3030271 Plug-in bridge / FBS 20-6 / 3030365
Bridge data	24 A / 4 mm ²
Ex temperature increase	40 K (29.5 A/4 mm ²)
for bridging with bridge	440 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	220 V
Rated insulation voltage	400 V
output	(Permanent)

Ex level General

Rated voltage	440 V
Rated current	26.5 A
Maximum load current	30 A

Ex connection data General

Nominal cross section	4 mm ²
Rated cross section AWG	12
Connection capacity rigid	0.08 mm ² ... 6 mm ²
Connection capacity AWG	28 ... 10
Connection capacity flexible	0.08 mm ² ... 4 mm ²
Connection capacity AWG	28 ... 12
output	(Permanent)

Ex level Level 1

Contact resistance	0.94 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	0.69 mΩ
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Dimensions

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Width	6.2 mm
End cover width	2.2 mm
Height	83.5 mm
Depth on NS 35/7,5	47.5 mm
Depth on NS 35/15	55 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
Smoke gas toxicity NFPA 130 (SMP 800C)	passed

Electrical tests

Surge voltage test

Test voltage setpoint	7.3 kV
Result	Test passed

Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 4 mm²	0.48 kA
Short-time withstand current 6 mm²	0.72 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

Mechanical properties

Mechanical data

Open side panel	Yes
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Mechanical tests

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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 ² / 0.1 kg
	4 mm ² / 0.9 kg
	6 mm ² / 1.4 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	6.12 (m/s ²) ² /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;
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	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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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/3031429>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	30 A	28 - 10	-
Use group C	300 V	30 A	28 - 10	-

 IECEE CB Scheme Approval ID: DE1-63028_M1				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	500 V	32 A	-	0.2 - 4

 KR Approval ID: HMB17372-EL002				
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 NK Approval ID: 09 ME 140				
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 VDE approval of drawings Approval ID: 40009034				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	500 V	32 A	-	0.2 - 4

 cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	30 A	28 - 10	-
Use group C	300 V	30 A	28 - 10	-

DNV Approval ID: TAE00001CS				
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ATEX

Approval ID: KEMA00ATEX2129U



IECEx

Approval ID: IECEx KEM 06.0050U



CCC

Approval ID: 2020322313000621



UKCA-EX

Approval ID: DEKRA 21UKEX0301U

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Classifications

ECLASS

ECLASS-13.0	27250102
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ETIM

ETIM 9.0	EC000897
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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
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%
EF3.0 Climate Change	
CO2e kg	0.105 kg CO2e

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PHOENIX CONTACT PTY Ltd
Unit 7, 2-8 South Street
Rydalmere NSW 2116
1300 786 411
customerservice@phoenixcontact.com.au