

RT 5 - Bolt connection terminal block



3049026

<https://www.phoenixcontact.com/us/products/3049026>

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 41 A, number of connections: 2, connection method: Bolt connection, Rated cross section: 6 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Quick ring cable lug wiring due to the hinged cover
- Secure connection: The screws are secured by captive disk springs
- The hinged cover cover the live metal parts including the insulated cable lugs in the clamping area so that they are touch proof
- High conductor pull-out forces and contact force for high durability
- Space-saving multi-conductor connection possible
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Vibration-resistant conductor connection

Commercial data

Item number	3049026
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE43
Product key	BE4313
GTIN	4046356140799
Weight per piece (including packing)	39.334 g
Weight per piece (excluding packing)	39.334 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Notes

General	Note: the BE-RT... path extension is to be used for non-insulated cable lugs (see accessories).
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General

Note	The rated insulation voltage applies to insulated cable lugs acc. to DIN 46237:1970-07 with or without path extension and for uninsulated cable lugs acc. to DIN 46234:1980-03 with path extension.
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Product properties

Product type	Bolt connection terminal block
Product family	RT
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 ²

Level 1 above 1 below 1

Connection method	Bolt connection
Stripping length	The stripping length depends on the specification provided by the cable lug manufacturer.
Connection in acc. with standard	IEC 60947-7-1
Nominal cross section	6 mm ²
Nominal current	41 A
Maximum load current	41 A (with 6 mm ² conductor cross-section)
Nominal voltage	1000 V

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
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Cross section	0.5 mm ² ... 6 mm ²
Cross section range AWG	20 ... 10 (converted acc. to IEC)
Hole diameter	5.3 mm
Width	10 mm
Bolt diameter	5 mm
Screw thread	M5
Tightening torque	2.5 ... 3 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	1 mm ² ... 6 mm ²
Cross section range AWG	18 ... 10 (converted acc. to IEC)
Hole diameter	5.3 mm
Width	10 mm
Bolt diameter	5 mm
Screw thread	M5
Tightening torque	2.5 ... 3 Nm
Identification color of ring cable lugs : red	1 mm ²
Identification color of ring cable lugs : blue	2.5 mm ²
Identification color of ring cable lugs : yellow	6 mm ²
Connection in acc. with standard	DIN 46235:1983-07
Cross section	6 mm ² ... 10 mm ²
Cross section range AWG	10 ... 8 (converted acc. to IEC)
Hole diameter	5.3 mm
Width	9 mm
Bolt diameter	5 mm
Screw thread	M5
Tightening torque	2.5 ... 3 Nm

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔ II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3049097 D-RT 3/5 0706647 TPNS-UK 3049819 BE-RT 3/5 1205079 SZS 1,0X6,5 VDE 1212553 SF-SL 1,2X6,5-150 3022276 CLIPFIX 35-5
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 6-8 / 3032470 Plug-in bridge / FBS 10-8 / 3030323

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Bridge data	41 A (6 mm ²)
Ex temperature increase	40 K (41 A at 6 mm ²)
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	220 V
- At cut-to-length bridging with cover	220 V
- At cut-to-length bridging with partition plate	550 V
Rated insulation voltage	500 V
output	(Permanent)

Ex level General

Rated voltage	550 V
Rated current	41 A
Maximum load current	41 A
Contact resistance	0.41 mΩ

Ex connection data General

Torque range	2.5 Nm ... 3 Nm
Nominal cross section	6 mm ²
Rated cross section AWG	10
Connection capacity rigid	0.1 mm ² ... 6 mm ²
Connection capacity AWG	26 ... 10
Connection capacity flexible	0.1 mm ² ... 6 mm ²
Connection capacity AWG	26 ... 10

Dimensions

Width	16.3 mm
End cover width	2.2 mm
Height	66 mm
Depth on NS 35/7,5	51 mm
Depth on NS 35/15	58.5 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

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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 ≤ 45 K
Result	Test passed
Short-time withstand current 6 mm ²	0.72 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
Result	Test passed

Environmental and real-life conditions

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 1, class B, body mounted
Frequency	$f_1 = 5$ Hz to $f_2 = 150$ Hz
ASD level	$1.857 (m/s^2)^2/Hz$
Acceleration	0.8g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

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Result	Test passed
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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 60947-7-1
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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

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IECEE CB Scheme

Approval ID: DE1-62814



VDE approval of drawings

Approval ID: 40022553

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	1000 V	41 A	-	0.14 - 6



cULus Recognized

Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	600 V	30 A	-	-
C				
	600 V	30 A	-	-



EAC Ex

Approval ID: KZ 7500525010101950



IECEX

Approval ID: IECEXPTB08.0063U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	550 V	41 A	-	0.1 - 6



ATEX

Approval ID: PTB09ATEX1003U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	550 V	41 A	-	0.1 - 6



CCC

Approval ID: 2020322313000627

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UKCA-EX

Approval ID: CSAE 22UKEX1085U

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Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

ETIM

ETIM 10.0	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
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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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