RT 3 - Bolt connection terminal block

3049013

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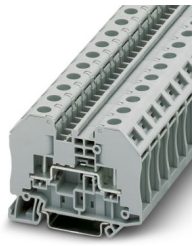


Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 24 A, number of connections: 2, connection method: Bolt connection, 1 level, Rated cross section: 2.5 mm^2, mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- The special clamping nuts can be actuated with a normal screwdriver
- Easy bridging and potential distribution using the patented plug-in bridges from the CLIPLINE complete system
- Large-surface labeling options in the terminal center and above the terminal points
- Quick and easy connection with fold-up hinged covers which hold the clamping nuts captive. With the covers folded open, the bolt is free to accept the cable lugs
- After closing and engaging the covers, the clamping nut automatically aligns with the threaded bolt and can be tightened easily.
- The screws are secured against loosening by captive spring-loaded spacers
- The hinged cover cover the live metal parts including the insulated cable lugs in the clamping area so that they are touch proof
- The use of the switching lock effectively prevents unintentional switching
- Testing with the standardized test adapters and test plugs of the CLIPLINE complete system
- Tested for railway applications

Commercial data

Item number	3049013
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	0180*
Product key	BE4313
Catalog page	Page 379 (C-1-2019)
GTIN	4046356140140
Weight per piece (including packing)	25.68 g
Weight per piece (excluding packing)	23.717 g
Customs tariff number	85369010
Country of origin	CN

Technical data

Notes

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

General

Note	The rated insulation voltage applies to insulated cable lugs acc. to DIN 46237:1970-07 and for uninsulated cable lugs acc. to DIN 46234:1980-03 with path extension.

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	0.77 W

Connection data

Number of connections per level	2
Nominal cross section	2.5 mm²
Rated cross section AWG	14

1 level

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 current	24 A
Maximum load current	24 A (with a 2.5 mm² conductor cross section)
Nominal voltage	1000 V (Rated voltage for open disconnect point 500 V)
Nominal cross section	2.5 mm²

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	0.5 mm² ... 2.5 mm²

Cross section range AWG	20 ... 14 (converted acc. to IEC)
Hole diameter	3.2 mm
Width	6 mm
Bolt diameter	3 mm
Screw thread	M3
Tightening torque	0.6 ... 0.8 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	1 mm² ... 2.5 mm²
Cross section range AWG	18 ... 14 (converted acc. to IEC)
Hole diameter	3.2 mm
Width	6 mm
Bolt diameter	3 mm
Screw thread	M3
Tightening torque	0.6 ... 0.8 Nm
Identification color of ring cable lugs : red	1 mm²
Identification color of ring cable lugs : blue	2.5 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx 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
	1205053 SZS 0,6X3,5
	3022276 CLIPFIX 35-5
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
	Plug-in bridge / FBS 50-6 / 3032224
Bridge data	24 A / 2.5 mm²
Ex temperature increase	40 K (24 A / 2.5 mm²)
Rated voltage	550 V
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	352 V
- At cut-to-length bridging with cover	275 V
- At cut-to-length bridging with partition plate	550 V
Rated insulation voltage	500 V
output	(Permanent)

Ex level General

Rated current	24 A
Maximum load current	24 A
Contact resistance	0.62 mΩ

Ex connection data General

Torque range	0.6 Nm ... 0.8 Nm
Nominal cross section	2.5 mm²
Rated cross section AWG	14
Connection capacity rigid	0.1 mm² ... 2.5 mm²
Connection capacity AWG	26 ... 14
Connection capacity flexible	0.1 mm² ... 2.5 mm²
Connection capacity AWG	26 ... 14

Dimensions

Width	12.3 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))	130 °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)	28 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	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 2.5 mm²	0.3 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

Mechanical tests

Mechanical strength

Result	Test passed

Attachment on the carrier

DIN rail/fixing support	NS 32/NS 35
Test force setpoint	1 N
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	Service life test category 1, class B, body mounted
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
ASD level	1.857 (m/s²)²/Hz
Acceleration	0.8g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

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.)

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

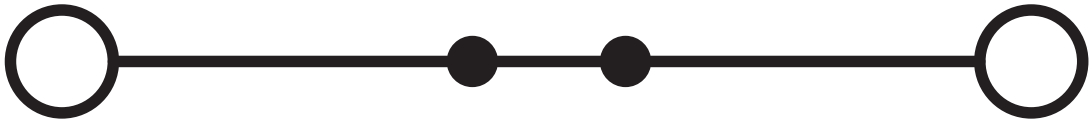
Connection in acc. with standard	IEC 60947-7-1

Mounting

Mounting type	NS 35/7,5
	NS 35/15

Drawings

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/sg/products/3049013

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
	1000 V	24 A	-	0.14 - 2.5

cULus Recognized
Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	600 V	30 A	-	-
Use group 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
	550 V	24 A	-	0.1 - 2.5

ATEX
Approval ID: PTB09ATEX1003U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	550 V	24 A	-	0.1 - 2.5

CCC
Approval ID: 2020322313000627

UKCA-EX
Approval ID: CSAE 22UKEX1085U

Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

ETIM

ETIM 9.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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%

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