

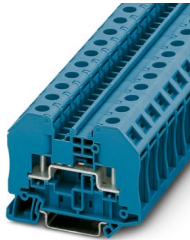
RT 3 BU - Bolt connection terminal block



3049110

<https://www.phoenixcontact.com/us/products/3049110>

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Feed-through terminal block with bolt connection technology, cross section: 0.1 ... 2.5 mm², AWG: 26 ... 14, width 12.3 mm, color: blue

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
- The screws are secured against loosening by captive spring-loaded spacers
- 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.
- Testing with the standardized test adapters and test plugs of the CLIPLINE complete system
- 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
- Tested for railway applications

Commercial data

Item number	3049110
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE43
Product key	BE4313
Catalog page	Page 379 (C-1-2019)
GTIN	4046356140157
Weight per piece (including packing)	25.74 g
Weight per piece (excluding packing)	25 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. DIN 46237:1970-07 and for uninsulated cable lugs acc. DIN 46234:1980-03 with shrink sleeve.
	The rated insulation voltage applies to insulated cable lugs acc. DIN 46237:1970-07 and for uninsulated cable lugs acc. DIN 46234:1980-03 with shrink sleeve. When using uninsulated cable lugs with shrink sleeve the min. required air clearances and creepage distances have to be ensured by the enduser.
	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
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 mm ²

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 mm ² conductor cross section)
Nominal voltage	1000 V (Rated voltage for open disconnect point 500 V)

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Nominal cross section	2.5 mm ²
Cable lug connection DIN 46234:1980-03	
Connection in acc. with standard	DIN 46234:1980-03
Cross section	0.5 mm ² ... 2.5 mm ²
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 mm ² ... 2.5 mm ²
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 mm ²
Identification color of ring cable lugs : blue	2.5 mm ²

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
	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 mm ²
Ex temperature increase	40 K (24 A / 2.5 mm ²)
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

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- 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 mm ²
Rated cross section AWG	14
Connection capacity rigid	0.1 mm ² ... 2.5 mm ²
Connection capacity AWG	26 ... 14
Connection capacity flexible	0.1 mm ² ... 2.5 mm ²
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	blue
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

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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
	Test passed
Short-time withstand current 2.5 mm ²	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
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Mechanical tests

Mechanical strength

Result	Test passed
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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/s ²) ² /Hz
Acceleration	0.8g
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

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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, no longer than 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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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

ETIM

ETIM 9.0	EC000897
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e No hazardous substances above threshold values
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