

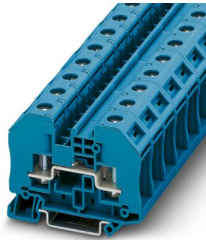
# RT 5 BU - Bolt connection terminal block



3049123

<https://www.phoenixcontact.com/sg/products/3049123>

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Feed-through terminal block with bolt connection technology, cross section: 0.1 ... 6 mm<sup>2</sup>, AWG: 26 ... 10, width 16.3 mm, color: blue

## Your advantages

- The special clamping nuts can be actuated with a normal screwdriver
- Large-surface labeling options in the terminal center and above the terminal points
- Easy bridging and potential distribution using the patented plug-in bridges from the CLIPLINE complete system
- 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	3049123
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	0100*
Product key	BE4313
Catalog page	Page 381 (C-1-2019)
GTIN	4046356140805
Weight per piece (including packing)	39.98 g
Weight per piece (excluding packing)	37.18 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).
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
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	6 kV
Maximum power dissipation for nominal condition	1.31 W

### Connection data

Number of connections per level	2
Nominal cross section	6 mm <sup>2</sup>

#### Level 1 above 1 below 1

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	41 A
Maximum load current	41 A (with 6 mm <sup>2</sup> conductor cross section)
Nominal voltage	1000 V (Rated voltage for open disconnect point 500 V)
Nominal cross section	6 mm <sup>2</sup>

#### Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section range AWG	20 ... 10 (converted acc. to IEC)
Hole diameter	5.3 mm

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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 mm² ... 6 mm²
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 mm²
Identification color of ring cable lugs : blue	2.5 mm²
Identification color of ring cable lugs : yellow	6 mm²
Connection in acc. with standard	DIN 46235:1983-07
Cross section	6 mm² ... 10 mm²
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	Ex 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
Bridge data	41 A / 6 mm²
Ex temperature increase	40 K (41 A at 6 mm²)
Rated voltage	550 V

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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 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 <sup>2</sup>
Rated cross section AWG	10
Connection capacity rigid	0.1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Connection capacity AWG	26 ... 10
Connection capacity flexible	0.1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Connection capacity AWG	26 ... 10

## Dimensions

Width	16.3 mm
End cover width	2.2 mm
Height	66 mm
Depth	50.4 mm
Depth on NS 35/7,5	51 mm
Depth on NS 35/15	58.5 mm

## Material specifications

Color	blue (RAL 5015)
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

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Smoke gas toxicity NFPA 130 (SMP 800C)	passed
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## Electrical tests

### Surge voltage test

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
Short-time withstand current 6 mm <sup>2</sup>	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	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 <sup>2</sup> )/Hz
Acceleration	0.8g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

### Shocks

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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



### EAC

Approval ID: RU C-DE.BL08.B.00540



### VDE approval of drawings

Approval ID: 40022553

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	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 $\text{mm}^2$
Use group B				
	600 V	30 A	-	-
Use group C				
	600 V	30 A	-	-



### IECEx

Approval ID: IECExPTB08.0063U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	550 V	41 A	-	0.1 - 6



### ATEX

Approval ID: PTB09ATEX1003U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	550 V	41 A	-	0.1 - 6



### CCC

Approval ID: 2020322313000627



### UKCA-EX

Approval ID: CSAE 22UKEX1085U



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**EAC Ex**

Approval ID: KZ 7500525010101950

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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

### 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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