

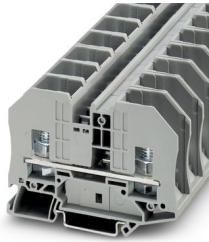
# RTO 8 - Bolt connection terminal block



3049343

<https://www.phoenixcontact.com/us/products/3049343>

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 125 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 35 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- Four bridge shafts per terminal block
- Terminal point always freely accessible

## Commercial data

Item number	3049343
Packing unit	25 pc
Minimum order quantity	25 pc
Sales key	BE43
Product key	BE4312
Catalog page	Page 385 (C-1-2019)
GTIN	4046356140058
Weight per piece (including packing)	80.432 g
Weight per piece (excluding packing)	79.4 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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### Product properties

Product type	Bolt connection terminal block
Product family	RTO
Number of positions	1
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	4.06 W

### Connection data

Number of connections per level	2
Nominal cross section	35 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	125 A
Maximum load current	125 A (with 35 mm <sup>2</sup> conductor cross section)
Nominal voltage	1000 V
Nominal cross section	35 mm <sup>2</sup>

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

Connection in acc. with standard	DIN 46234:1980-03
Cross section	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm
Width	16 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 10 Nm
Connection in acc. with standard	DIN 46235:1983-07

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3049343

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Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm
Width	14 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 10 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm
Width	14 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 10 Nm
Identification color of ring cable lugs : blue	2.5 mm <sup>2</sup>
Identification color of ring cable lugs : yellow	6 mm <sup>2</sup>

## Ex data

### Rated data (ATEX/IECEx)

Identification	⊕ II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3049194 D-RT 8 3003062 TPN-UK 1209923 SHN 13 3022276 CLIPFIX 35-5
List of bridges	Plug-in bridge / FBS 2-10 / 3005947 Plug-in bridge / FBS 5-10 / 3005948
Bridge data	57 A / 10 mm <sup>2</sup>
Ex temperature increase	40 K (123 A / 35 mm <sup>2</sup> )
Rated voltage	690 V
for bridging with bridge	690 V
Rated insulation voltage	630 V
output	(Permanent)

### Ex level General

Rated current	123 A
Maximum load current	123 A
Contact resistance	0.09 mΩ

### Ex connection data General

Torque range	6 Nm ... 10 Nm
Nominal cross section	35 mm <sup>2</sup>
Rated cross section AWG	2
Connection capacity rigid	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>

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Connection capacity AWG	14 ... 2
Connection capacity flexible	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Connection capacity AWG	14 ... 2

## Dimensions

Width	20.3 mm
End cover width	2.2 mm
Height	84 mm
Depth on NS 35/7,5	62.2 mm
Depth on NS 35/15	69.7 mm

## Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °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
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
	Test passed
Short-time withstand current 35 mm <sup>2</sup>	4.2 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

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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	10 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):2022-06
Spectrum	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s <sup>2</sup> )/Hz
Acceleration	3.12g
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	30g
Shock duration	18 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, 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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