

# RBO 8-FE-HC - Bolt connection terminal block



3247975

<https://www.phoenixcontact.com/us/products/3247975>

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Bolt connection terminal block, nom. voltage: 1500 V, nominal current: 192 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 70 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, direct screw connection, color: black/yellow

## Your advantages

- Mounting on standard DIN rails or directly in control boxes
- Tested for railway applications

## Commercial data

Item number	3247975
Packing unit	5 pc
Minimum order quantity	5 pc
Sales key	BE44
Product key	BE4412
GTIN	4046356725095
Weight per piece (including packing)	195.6 g
Weight per piece (excluding packing)	176.92 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Bolt connection terminal block
Product family	RBO
Area of application	Railway industry
	Machine building
	Plant engineering
Number of positions	1
Pitch	29 mm
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	6.27 W

### Connection data

Number of connections per level	2
Nominal cross section	70 mm <sup>2</sup>
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	70 mm <sup>2</sup>
Nominal current	192 A
Maximum load current	192 A (with 70 mm <sup>2</sup> conductor cross-section)
Nominal voltage	1500 V

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

Connection in acc. with standard	DIN 46234:1980-03
Cross section	2.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm
Width	22 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 12 Nm
Connection in acc. with standard	DIN 46235:1983-07
Cross section	16 mm <sup>2</sup> ... 70 mm <sup>2</sup>

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Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm
Width	24 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 12 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 ... 12 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 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	0800886 E/NS 35 N
List of bridges	/ RBO 8-VS 2 / 3213179 / RBO 8-VS 3 / 3213182
Bridge data	187 A (70 mm <sup>2</sup> )
Ex temperature increase for bridging with bridge	40 K (187 A / 70 mm <sup>2</sup> ) 690 V
Rated insulation voltage output	630 V (Permanent)

### Ex level General

Rated voltage	690 V
Rated current	187 A
Maximum load current	187 A
Contact resistance	0.06 mΩ

### Ex connection data General

Torque range	6 Nm ... 12 Nm
Nominal cross section	70 mm <sup>2</sup>
Rated cross section AWG	2/0
Connection capacity flexible	2.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Connection capacity AWG	12 ... 2/0
2 conductors with same cross section, stranded	2.5 mm <sup>2</sup> ... 70 mm <sup>2</sup>
2 conductors with the same cross-section AWG flexible	12 ... 2/0

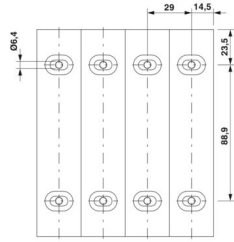
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## Dimensions

Dimensional drawing	
Width	29 mm
Height	184 mm
Depth	66 mm
Depth on NS 35/7,5	67 mm
Depth on NS 35/15	74.5 mm
Bolt length	20.5 mm
Hole diameter	6.4 mm
Pitch	29 mm

## Material specifications

Color	multicolored (RAL -) black (RAL 9005) yellow (RAL 1018)
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

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Short-time withstand current 70 mm <sup>2</sup>	8.4 kA
Result	Test passed

## Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	No
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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

### Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross-section/weight	70 mm <sup>2</sup> /10.4 kg
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	Long 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> ) <sup>2</sup> /Hz
Acceleration	3.12g
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
Acceleration	5g

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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
	direct screw connection

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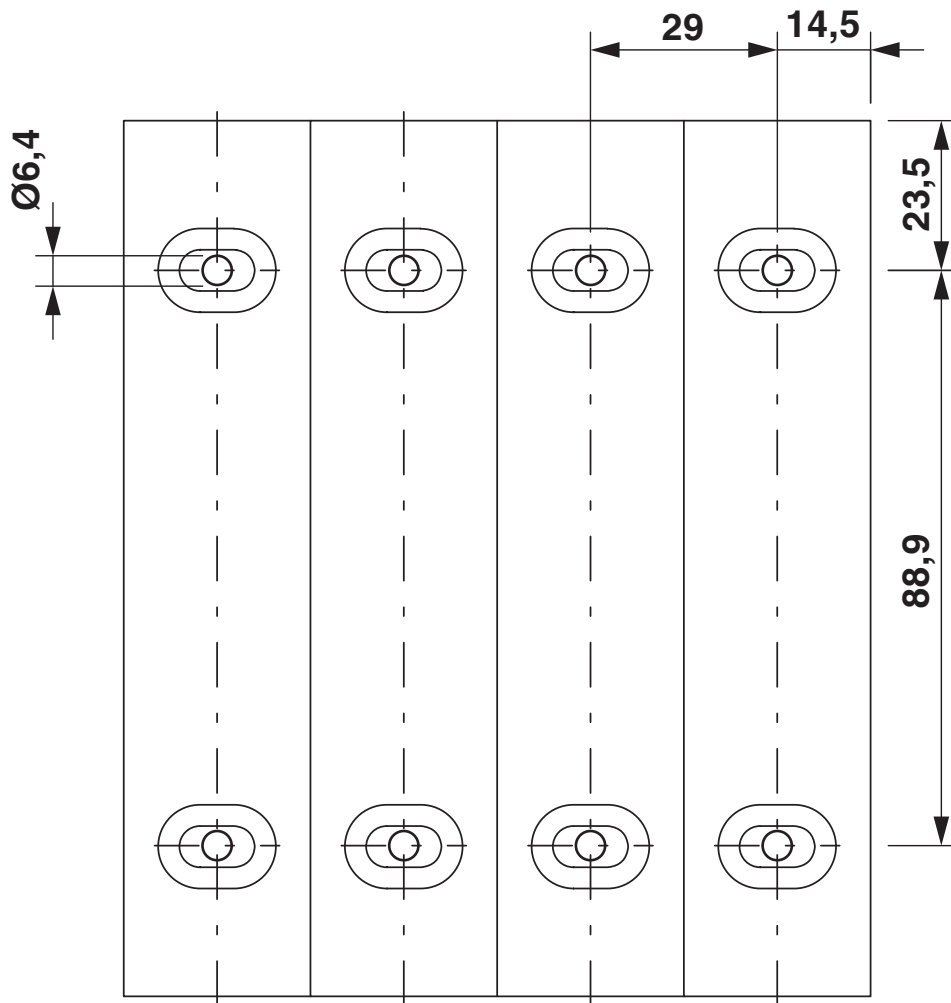


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## Drawings

Dimensional drawing



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Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3247975>



**EAC**

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

**DNV**

Approval ID: TAE00004G1



**cULus Recognized**

Approval ID: E60425

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	600 V	175 A	-	-
C				
	600 V	175 A	-	-



**IECEX**

Approval ID: IECEXSEV13.0003U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	690 V	187 A	-	2.5 - 70



**ATEX**

Approval ID: SEV13ATEX0132U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	690 V	187 A	-	2.5 - 70



**CCC**

Approval ID: 2020322313000627



**UKCA-EX**

Approval ID: CML 22UKEX1230U



**EAC Ex**

Approval ID: KZ 7500525010101950

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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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### EF3.1 Climate Change

CO2e kg	1.521 kg CO2e
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