

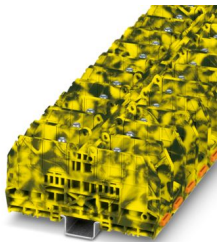
RBO 8-FE - Bolt connection terminal block



3213139

<https://www.phoenixcontact.com/us/products/3213139>

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 192 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 70 mm², 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	3213139
Packing unit	5 pc
Minimum order quantity	10 pc
Sales key	BE44
Product key	BE4412
Catalog page	Page 390 (C-1-2019)
GTIN	4046356719254
Weight per piece (including packing)	177 g
Weight per piece (excluding packing)	141.75 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Product properties

Product type	Bolt connection terminal block
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 ²
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	192 A
Maximum load current	192 A (with 70 mm ² conductor cross section)
Nominal voltage	1000 V
Nominal cross section	70 mm ²

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	2.5 mm ² ... 70 mm ²
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 ² ... 70 mm ²
Cross section range AWG	(converted acc. to IEC)
Hole diameter	8.4 mm

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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 mm² ... 6 mm²
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 mm²
Identification color of ring cable lugs : yellow	6 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	Ex II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3247967 HC-RBO 8
	1209923 SHN 13
	0800886 E/NS 35 N
List of bridges	/ RBO 8-VS 2 / 3213179
	/ RBO 8-VS 3 / 3213182
Bridge data	187 A / 70 mm²
Ex temperature increase	40 K (187 A / 70 mm²)
Rated voltage	690 V
for bridging with bridge	690 V
Rated insulation voltage	630 V
output	(Permanent)

Ex level General

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 mm²
Rated cross section AWG	2/0
Connection capacity flexible	2.5 mm² ... 70 mm²
Connection capacity AWG	12 ... 2/0
2 conductors with same cross section, stranded	2.5 mm² ... 70 mm²
2 conductors with the same cross-section AWG flexible	12 ... 2/0

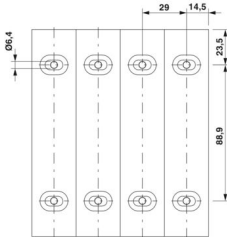
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Dimensions

Dimensional drawing	
Width	29 mm
Height	136 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
	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 ²	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 ² /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):2018-05
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 ²)/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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Drawings

Circuit diagram



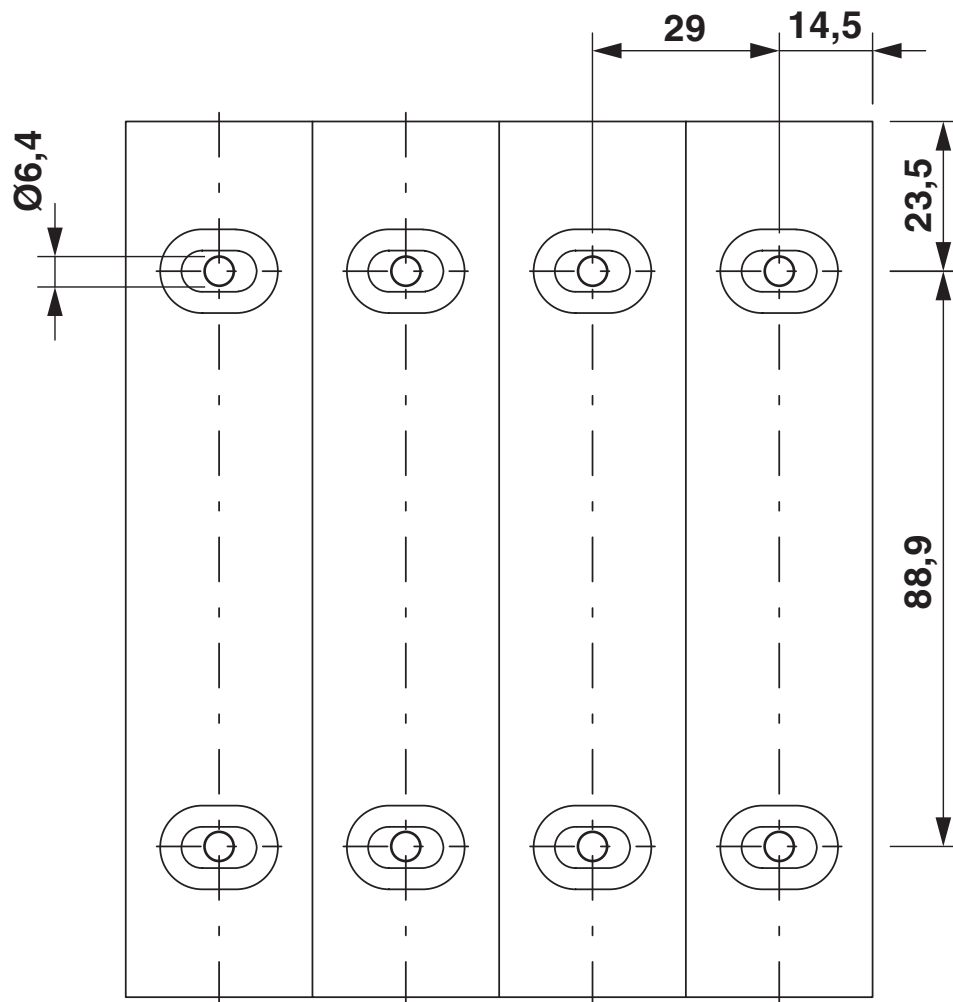
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Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3213139>

UL Recognized Approval ID: FILE E 60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	600 V	175 A	-	-
Use group C	600 V	175 A	-	-

EAC Approval ID: RU C-DE.BL08.B.00540				
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DNV Approval ID: TAE00004G1				
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IECEX Approval ID: IECEXSEV13.0003U				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	690 V	187 A	-	2.5 - 70

ATEX Approval ID: SEV13ATEX0132U				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	690 V	187 A	-	2.5 - 70

CCC Approval ID: 2020322313000627				
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UKCA-EX Approval ID: CML 22UKEX1230U				
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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
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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