RBO 8-FE - Bolt connection terminal block

3213139

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

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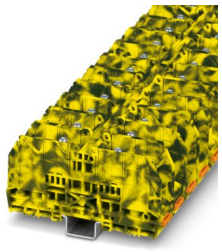


Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 192 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 70 mm^2, mounting type: NS 35/7,5, NS 35/15, direct screw connection, color: black/yellow

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	5 pc
Sales key	BE44
Product key	BE4412
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

Technical data

Notes

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.

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 mm²
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 mm²
Nominal current	192 A
Maximum load current	192 A (with 70 mm² conductor cross-section)
Nominal voltage	1000 V

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	2.5 mm² ... 70 mm²
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 mm² ... 70 mm²
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 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	Ⓔx 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)
for bridging with bridge	690 V
Rated insulation voltage	630 V
output	(Permanent)

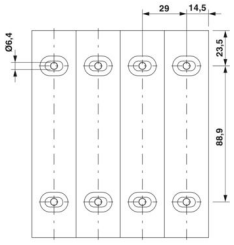
Ex level General

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 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

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 (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
Short-time withstand current 70 mm²	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

Mechanical tests

Mechanical strength

Result	Test passed

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 mm²/10.4 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	Long life test category 2, bogie-mounted
Frequency	f_1 = 5 Hz to f_2 = 250 Hz
ASD level	6.12 (m/s²)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
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

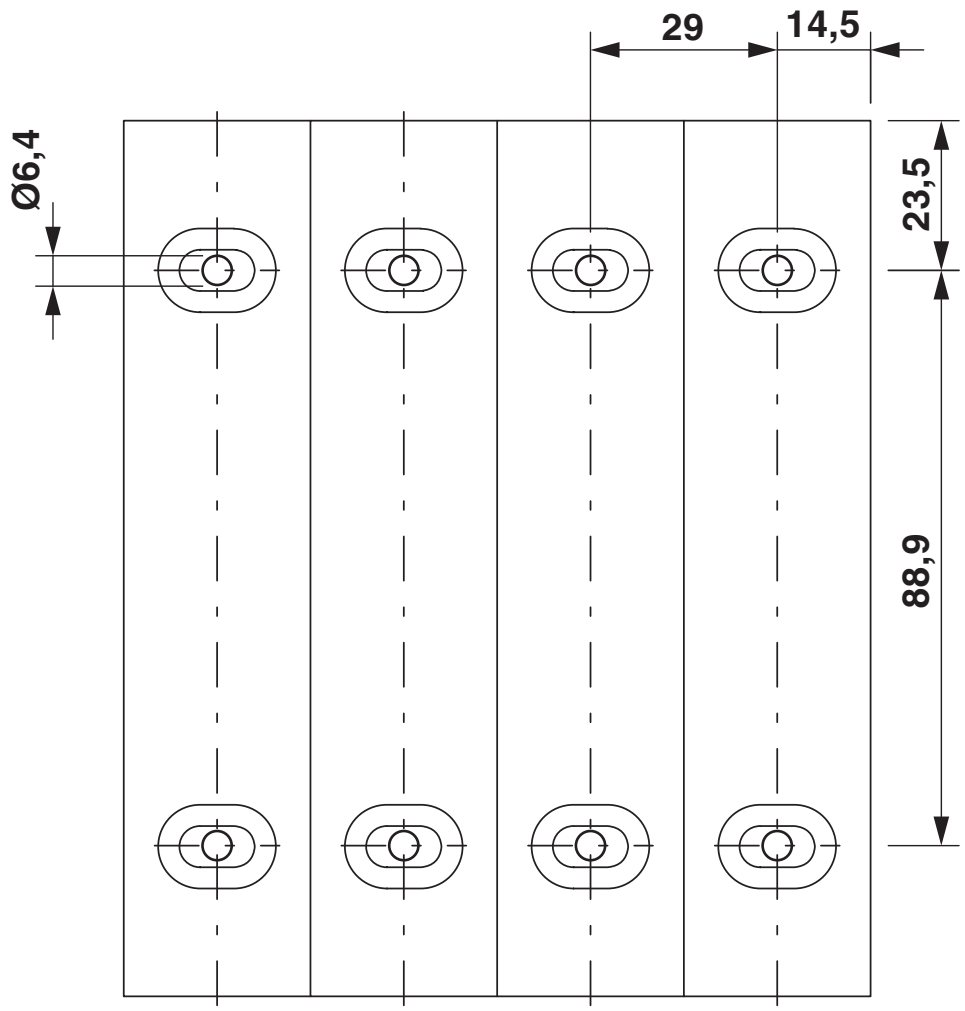
Connection in acc. with standard	IEC 60947-7-1

Mounting

Mounting type	NS 35/7,5
	NS 35/15
	direct screw connection

Drawings

Dimensional drawing



Circuit diagram

Approvals

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

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 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 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 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

Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

ETIM

ETIM 10.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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%

EF3.1 Climate Change

CO2e kg	1.377 kg CO2e

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com