Bolt connection terminal block - RBO 8

3213137

https://www.phoenixcontact.com/de/produkte/3213137

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 192 A, connection method: Bolt connection, 1 level, Rated cross section: 70 mm^2, mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Mounting on standard DIN rails or directly in control boxes
- Optional snap-on shock protection
- Potential distribution with connection rails
- Tested for railway applications

Commercial Data

Item number	3213137
Packing unit	5 pc
Minimum order quantity	5 pc
Sales Key	A1 - Reihenklemmen
Product Key	BE4412
Catalog Page	Page 390 (C-1-2019)
GTIN	4046356549196
Weight per Piece (including packing)	176,03 g
Weight per Piece (excluding packing)	63,12 g
Customs tariff number	85369010
Country of origin	CN

Technical Data

Product properties

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

1 level

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 (in case of a 70 mm² conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	1000 V
Nominal cross section	70 mm²

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
	6 mm²

Ex data

Rated data (ATEX/IECEx)

Identification	☐ 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

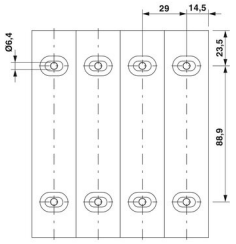
Rated current	187 A
Maximum load current	187 A
Contact resistance	0.06 mΩ

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

Dimensions

Dimensional drawing	
Width	29 mm
End cover width	2.2 mm
Height NS 35/15	74.5 mm
Height NS 35/7,5	67 mm
Length	136 mm
Bolt length	20.5 mm
Pitch	29 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
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °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)	28 MJ/kg
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 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):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/s²)²/Hz
Acceleration	0.8g
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 ... 105 °C (max. short-term operating temperature 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 (storage/transport)	30 % ... 70 %

Standards and regulations

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

Mounting

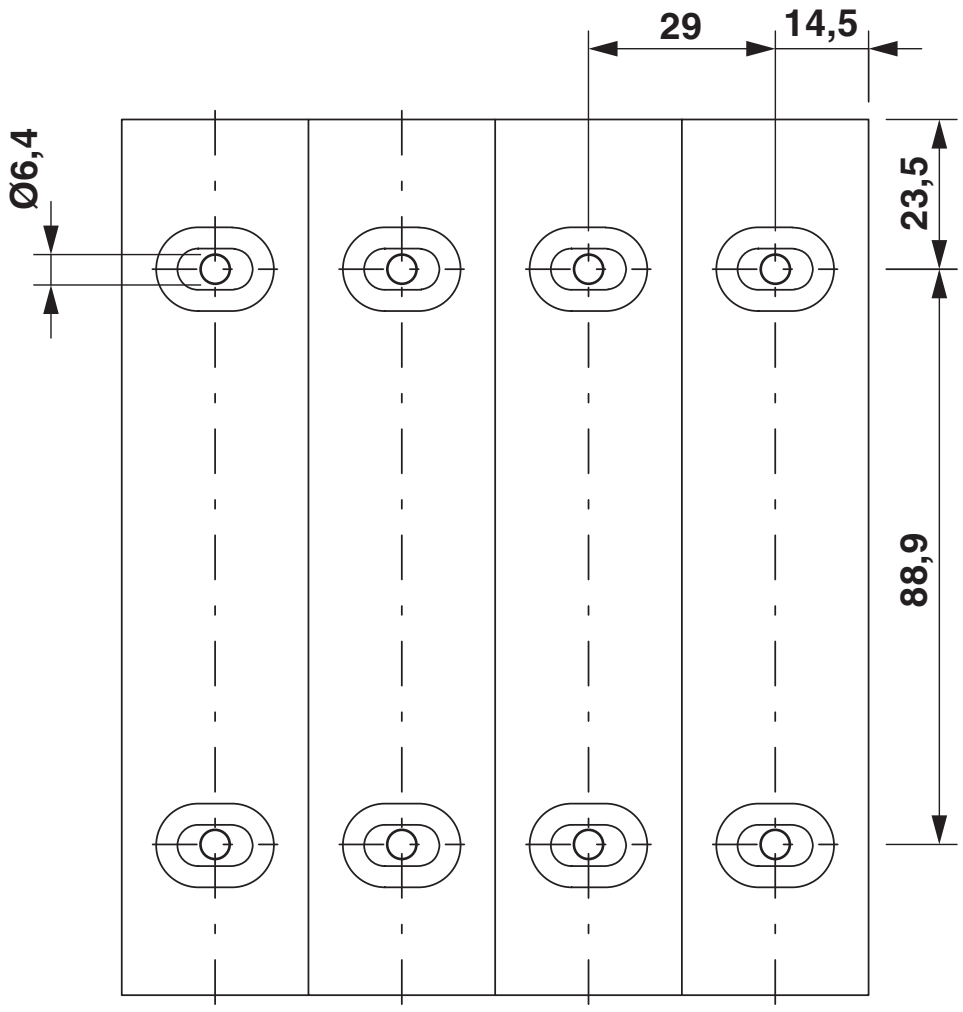
Mounting type	NS 35/7,5
	NS 35/15

Drawings

Circuit diagram



Dimensional drawing



Approvals

CSA
Approval ID: 13631

	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	-	-

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

DNV
Approval ID: TAE00004G1

EAC Ex
Approval ID: RU C-DE.HA91.B.00066

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

NEPSI
Approval ID: GYJ20.1202U

UKCA-EX
Approval ID: CML 22UKEX1230U

Classifications

ECLASS

ECLASS-9.0	27141120
ECLASS-10.0.1	27141120
ECLASS-11.0	27141120

ETIM

ETIM 8.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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