RBO 10-FE-HC - Bolt connection terminal block

3247978

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Bolt connection terminal block, nom. voltage: 1500 V, nominal current: 309 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 150 mm², 1 level, mounting type: NS 35/7,5, NS 35/15, direct screw connection, color: black/yellow

Your advantages

- Tested for railway applications

Commercial data

Item number	3247978
Packing unit	5 pc
Minimum order quantity	10 pc
Sales key	BE44
Product key	BE4412
GTIN	4046356725125
Weight per piece (including packing)	330.86 g
Weight per piece (excluding packing)	275.84 g
Customs tariff number	85369010
Country of origin	IN

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	41 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	9.55 W

Connection data

Number of connections per level	2
Nominal cross section	150 mm²

1 level

Connection method	Bolt connection
Screw thread	M10
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	150 mm²
Nominal current	309 A
Maximum load current	309 A (with 150 mm² 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	6 mm² ... 150 mm²
Cross section range AWG	(converted acc. to IEC)
Hole diameter	10.5 mm
Width	30 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque	10 ... 20 Nm
Connection in acc. with standard	DIN 46235:1983-07
Cross section	16 mm² ... 150 mm²
Cross section range AWG	(converted acc. to IEC)
Hole diameter	10.5 mm
Width	34 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque	10 ... 20 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	6 mm² ... 6 mm²
Cross section range AWG	(converted acc. to IEC)
Hole diameter	10.5 mm
Width	18 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque	10 ... 20 Nm
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	0800886 E/NS 35 N
List of bridges	/ RBO 10-VS 2 / 3244643
	/ RBO 10-VS 3 / 3244656
Bridge data	309 A (150 mm²)
Ex temperature increase	40 K (309 A / 150 mm²)
for bridging with bridge	1100 V
Rated insulation voltage	1000 V
output	(Permanent)

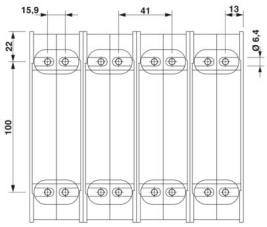
Ex level General

Rated voltage	1100 V
Rated current	309 A
Maximum load current	309 A
Contact resistance	0.05 mΩ

Ex connection data General

Torque range	10 Nm ... 20 Nm
Nominal cross section	150 mm²
Rated cross section AWG	300 kcmil
Connection capacity rigid	6 mm² ... 150 mm²
Connection capacity AWG	10 ... 300 kcmil
Connection capacity flexible	6 mm² ... 150 mm²
Connection capacity AWG	10 ... 300 kcmil
2 conductors with same cross section, solid	6 mm² ... 150 mm²
2 conductors with the same cross-section AWG rigid	10 ... 300 kcmil
2 conductors with same cross section, stranded	6 mm² ... 150 mm²
2 conductors with the same cross-section AWG flexible	10 ... 300 kcmil

Dimensions

Dimensional drawing	
Width	41 mm
Height	235 mm
Depth on NS 35/7,5	77 mm
Depth on NS 35/15	84.5 mm
Hole diameter	6.4 mm
Pitch	41 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

Result	Test passed

Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 150 mm²	18 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
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross-section/weight	150 mm² / 15 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 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

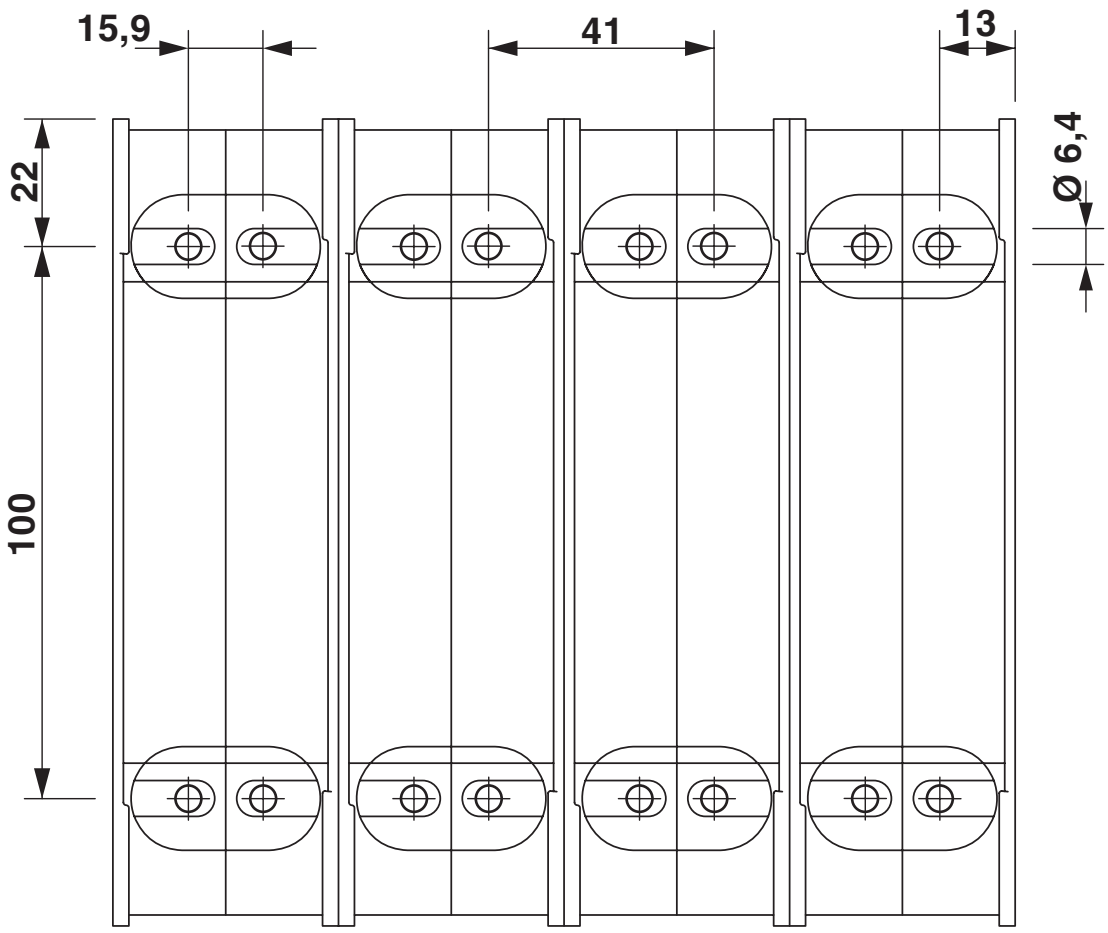
Connection in acc. with standard	IEC 60947-7-1

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/3247978

CSA
Approval ID: 13631

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	600 V	310 A	10 - 350	-
C				
	1000 V	310 A	10 - 350	-
E				
	600 V	310 A	10 - 350	-

UL Recognized
Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	600 V	310 A	10 - 350	-
C				
	600 V	310 A	10 - 350	-
E				
	1000 V	310 A	10 - 350	-

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

DNV
Approval ID: TAE00004G1

IECEx
Approval ID: IECExSEV13.0003U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	1100 V	309 A	-	6 - 150

ATEX
Approval ID: SEV13ATEX0132U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	1100 V	309 A	-	6 - 150

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%

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