

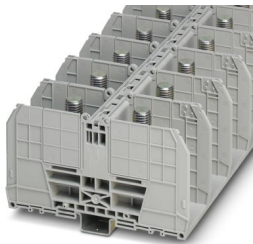
RBO 16 - Bolt connection terminal block



3244630

<https://www.phoenixcontact.com/us/products/3244630>

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 520 A, number of connections: 2, number of positions: 1, connection method: Bolt connection, Rated cross section: 300 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Tested for railway applications

Commercial data

Item number	3244630
Packing unit	5 pc
Minimum order quantity	5 pc
Sales key	BE44
Product key	BE4412
Catalog page	Page 391 (C-1-2019)
GTIN	4046356583961
Weight per piece (including packing)	568 g
Weight per piece (excluding packing)	568 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Notes

General

Note	The rated insulation voltage applies to cable lugs for compression connection acc. to DIN 46235:1983-07 and for uninsulated cable lugs acc. to DIN 46234:1980-03 with path extension.
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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	54.8 mm
Number of connections	2
Number of rows	1
Potentials	1

Data management status

Article revision	06
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Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	16.22 W

Connection data

Number of connections per level	2
Nominal cross section	300 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	520 A
Maximum load current	520 A (At a conductor cross section of 300 mm ²)
Nominal voltage	1000 V
Nominal cross section	300 mm ²

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	25 mm ² ... 300 mm ²

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Cross section range AWG	4 ... 600 kcmil (converted acc. to IEC)
Hole diameter	17 mm
Width	38 mm
Bolt diameter	16 mm
Screw thread	M16
Tightening torque	25 ... 35 Nm
Connection in acc. with standard	DIN 46235:1983-07
Cross section	25 mm² ... 300 mm²
Cross section range AWG	4 ... 600 kcmil (converted acc. to IEC)
Hole diameter	17 mm
Width	48 mm
Bolt diameter	16 mm
Screw thread	M16
Tightening torque	25 ... 35 Nm

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	3247996 HC-RBO 16 0800886 E/NS 35 N
List of bridges	/ RBO 16-VS 2 / 3244685 / RBO 16-VS 3 / 3244698
Bridge data	520 A / 300 mm²
Ex temperature increase	40 K (520 A / 300 mm²)
Rated voltage	1100 V
for bridging with bridge	1100 V
Rated insulation voltage	1000 V
output	(Permanent)

Ex level General

Rated current	520 A
Maximum load current	520 A
Contact resistance	0.02 mΩ

Ex connection data General

Torque range	25 Nm ... 35 Nm
Nominal cross section	300 mm²
Rated cross section AWG	600 kcmil
Connection capacity rigid	25 mm² ... 300 mm²
Connection capacity AWG	4 ... 600 kcmil
Connection capacity flexible	25 mm² ... 300 mm²
Connection capacity AWG	4 ... 600 kcmil
2 conductors with same cross section, solid	25 mm² ... 300 mm²

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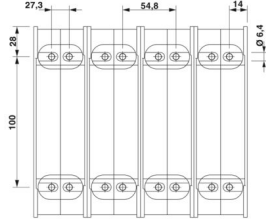


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2 conductors with the same cross-section AWG rigid	4 ... 600 kcmil
2 conductors with same cross section, stranded	25 mm ² ... 300 mm ²
2 conductors with the same cross-section AWG flexible	4 ... 600 kcmil

Dimensions

Dimensional drawing	
Width	54.8 mm
Height	164 mm
Depth on NS 35/7,5	91.8 mm
Depth on NS 35/15	99.3 mm
Bolt length	45 mm
Pitch	54.8 mm

Material specifications

Color	gray (RAL 7042)
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 300 mm ²	36 kA

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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	20 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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$1.857 \text{ (m/s}^2\text{)}^2\text{/Hz}$
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 ... 110 °C (Operating temperature range incl. self-heating;

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	for max. short-term operating temperature, see RTI Elec.)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, no longer than 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

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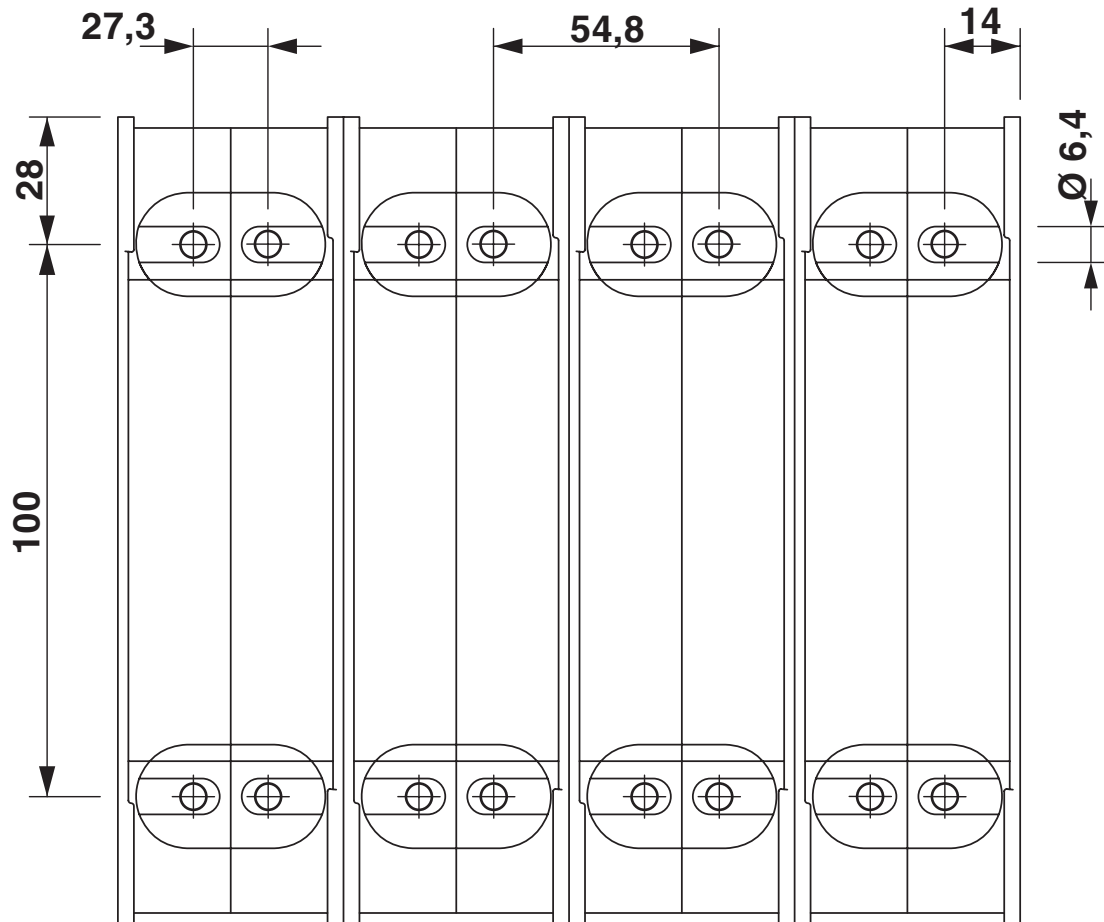
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Drawings

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/3244630>

CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group C				
	1000 V	540 A	4 - 1000	-

UL Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	600 V	540 A	4 - 1000	-
Use group C				
	600 V	540 A	4 - 1000	-
Use group E				
	1000 V	540 A	4 - 1000	-

DNV Approval ID: TAE00004G1				
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EAC Ex Approval ID: RU C-DE.HA91.B.00066				
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IECEx Approval ID: IECExSEV13.0003U				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1100 V	520 A	-	25 - 300

ATEX Approval ID: SEV13ATEX0132U				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1100 V	520 A	-	25 - 300

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