

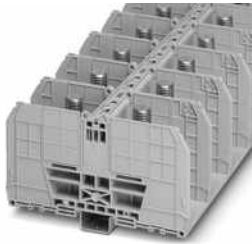
# Bolt connection terminal block - RBO 16



3244630

<https://www.phoenixcontact.com/de/produkte/3244630>

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Bolt connection terminal block, nom. voltage: 1000 V, nominal current: 520 A, connection method: Bolt connection, 1 level, Rated cross section: 300 mm<sup>2</sup>, 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	A1 - Reihenklemmen
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

## Technical Data

### Product properties

Product type	Bolt connection terminal block
Number of positions	1
Pitch	54.8 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	16.22 W

### Connection data

Number of connections per level	2
Nominal cross section	300 mm <sup>2</sup>

#### 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	520 A
Maximum load current	520 A (At a conductor cross section of 300 mm <sup>2</sup> )
Nominal voltage	1000 V
Nominal cross section	300 mm <sup>2</sup>

#### Cable lug connection DIN 46234:1980-03

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

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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	□ 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 mm <sup>2</sup>
Ex temperature increase	40 K (520 A / 300 mm <sup>2</sup> )
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

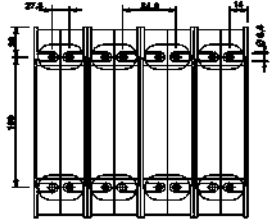
Torque range	25 Nm ... 35 Nm
Nominal cross section	300 mm <sup>2</sup>
Rated cross section AWG	600 kcmil
Connection capacity rigid	25 mm <sup>2</sup> ... 300 mm <sup>2</sup>
Connection capacity AWG	4 ... 600 kcmil
Connection capacity flexible	25 mm <sup>2</sup> ... 300 mm <sup>2</sup>
Connection capacity AWG	4 ... 600 kcmil
2 conductors with same cross section, solid	25 mm <sup>2</sup> ... 300 mm <sup>2</sup>
2 conductors with the same cross-section AWG rigid	4 ... 600 kcmil
2 conductors with same cross section, stranded	25 mm <sup>2</sup> ... 300 mm <sup>2</sup>
2 conductors with the same cross-section AWG flexible	4 ... 600 kcmil

## Dimensions

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Dimensional drawing	
Width	54.8 mm
Height NS 35/15	99.3 mm
Height NS 35/7,5	91.8 mm
Length	164 mm
Bolt length	45 mm
Pitch	54.8 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 300 mm <sup>2</sup>	36 kA
Result	Test passed

### Power-frequency withstand voltage

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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 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 ... 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)

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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
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## Mounting

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

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## Drawings

### Circuit diagram

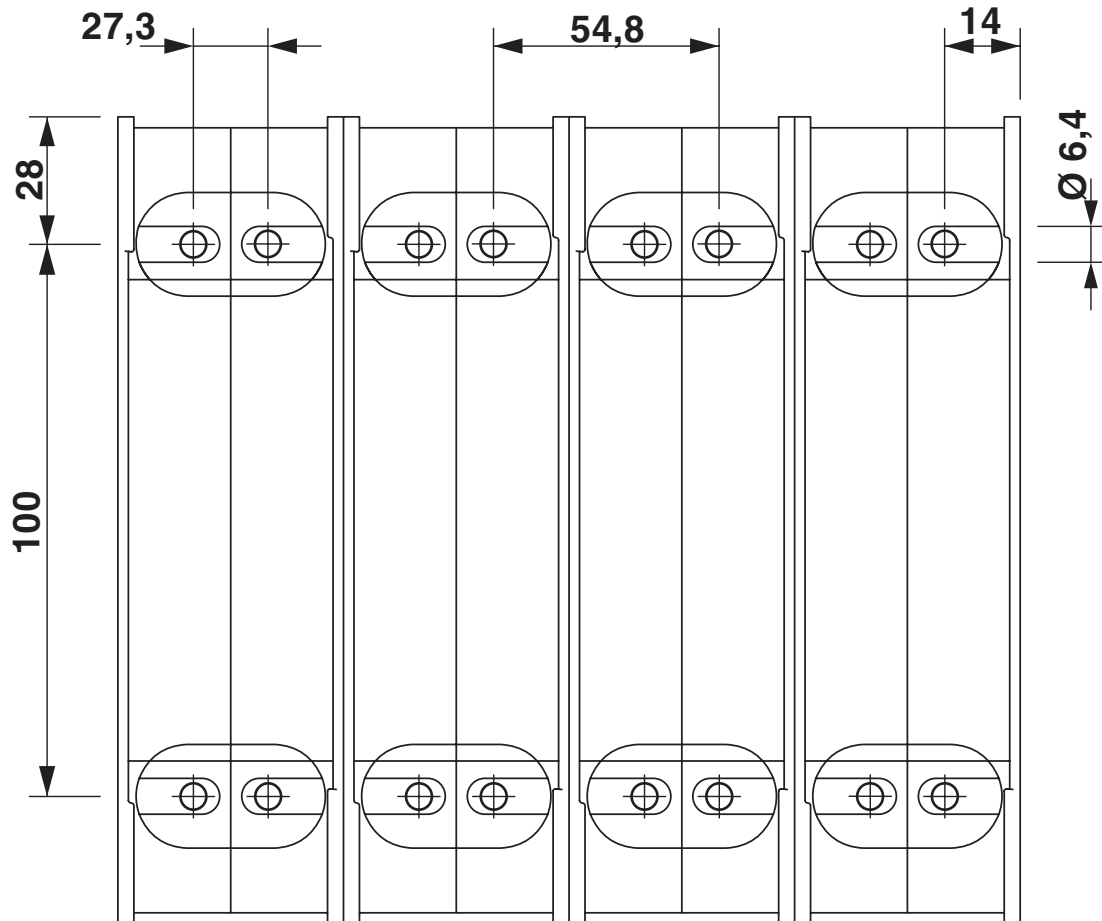


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Dimensional drawing




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## Approvals


 <b>CSA</b> 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	-


 <b>UL Recognized</b> 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	-


<b>DNV</b> Approval ID: TAE00004G1				
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 <b>EAC Ex</b> Approval ID: RU C-DE.HA91.B.00066				
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 <b>IECEx</b> 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

 <b>ATEX</b> Approval ID: SEV13ATEX0132U				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
	1100 V	520 A	-	25 - 300

 <b>CCC</b> Approval ID: 2020322313000627				
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 <b>NEPSI</b> Approval ID: GYJ20.1202U				
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**UKCA-EX**

Approval ID: CML 22UKEX1230U

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

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