

RBO 6/WA70 - High-current connector



2130213

<https://www.phoenixcontact.com/in/products/2130213>

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High-current connector with bolt connection, screw thread: M6, load current max.: 150 A, connection cross section up to 50 mm² copper and 70 mm² aluminum

Commercial data

Item number	2130213
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE4
Product key	BE4412
GTIN	4055626016047
Weight per piece (including packing)	99.99 g
Weight per piece (excluding packing)	99.99 g
Country of origin	IN

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Technical data

Product properties

Product type	Bolt connection terminal block
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
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Connection data

Nominal cross section	50 mm ²
Tightening torque	6 ... 8 Nm
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	150 A
Maximum load current	150 A (with 50 mm ² conductor cross section)
Nominal voltage	1000 V
Nominal cross section	50 mm ²

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	10 mm ² ... 50 mm ²
Cross section range AWG	8 ... 0 (converted acc. to IEC)
Hole diameter	6.5 mm
Width	18 mm
Bolt diameter	6 mm
Screw thread	M6
Tightening torque	6 ... 8 Nm
Connection in acc. with standard	DIN 46235:1983-07
Cross section	16 mm ² ... 25 mm ²
Cross section range AWG	6 ... 4 (converted acc. to IEC)
Hole diameter	6.5 mm
Width	14 mm
Bolt diameter	6 mm
Screw thread	M6
Tightening torque	6 ... 8 Nm
Identification color of ring cable lugs : blue	2.5 mm ² 6 mm ²

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Dimensions

Width	37 mm
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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
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 50 mm ²	6 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
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Mechanical tests

Mechanical strength

Result	Test passed
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Attachment on the carrier

DIN rail/fixing support	NS 32/NS 35
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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	50 mm ² / 9.5 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	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s ²) 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):2022-06
Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 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
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Mounting

Mounting type	NS 35/15
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Drawings

Circuit diagram

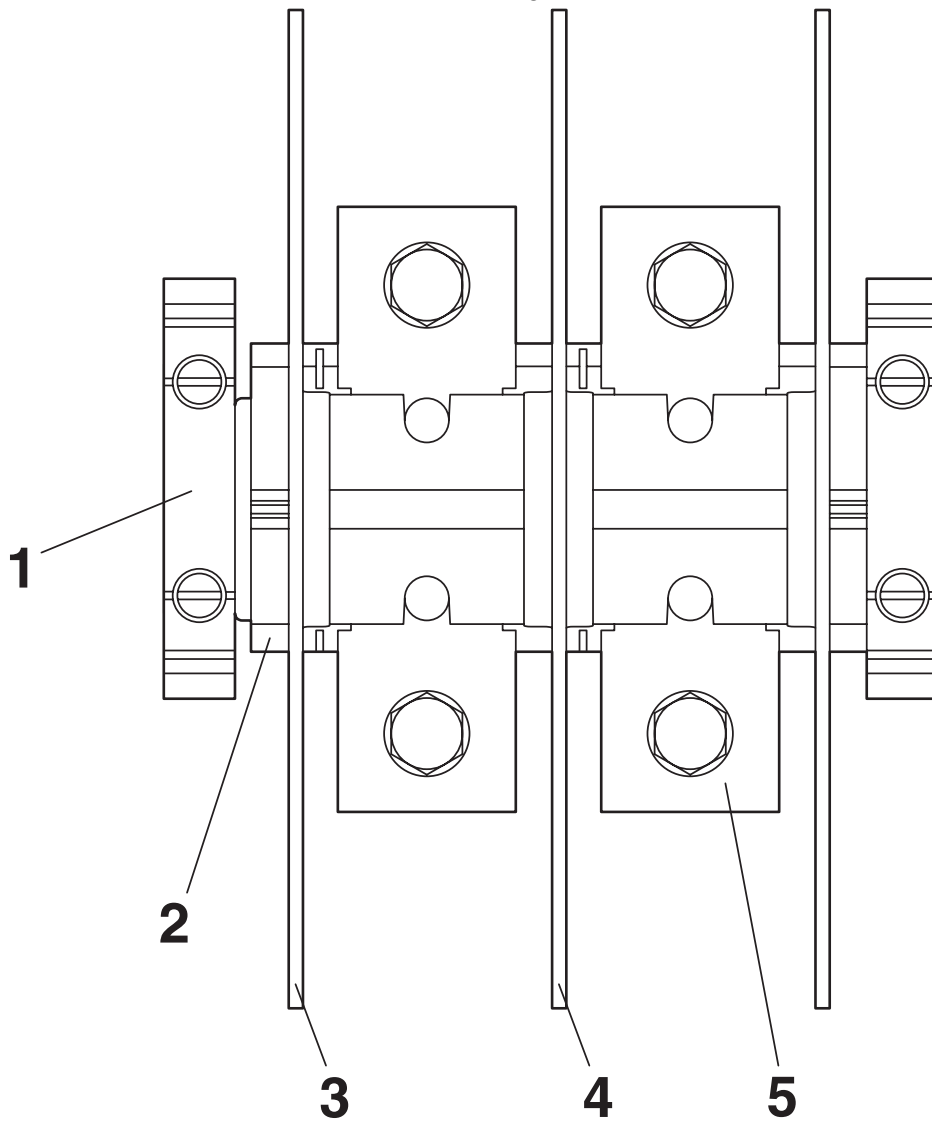


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Schematic diagram



- 1 = E/AL-NS 35 end bracket
- 2 = UHV -E flange
- 3 = RBO-WA TP1
- 4 = RBO-WA TP1
- 5 = RBO high-current connector

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/2130213>

cUL 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	150 A	- 1/0	-
Use group C				
	600 V	150 A	- 1/0	-

cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	600 V	150 A	- 1/0	-
Use group C				
	600 V	150 A	- 1/0	-

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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

ETIM

ETIM 8.0	EC000897
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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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Accessories

ZB 10:UNBEDRUCKT - Zack marker strip

1053001

<https://www.phoenixcontact.com/in/products/1053001>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 10.5 x 10.15 mm, Number of individual labels: 10

ZB 10 CUS - Zack marker strip

0824941

<https://www.phoenixcontact.com/in/products/0824941>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10,15 x 10,5 mm, Number of individual labels: 10

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ZB10,LGS:FORTL.ZAHLEN - Zack marker strip

1053014

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Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 10,15 x 10,5 mm, Number of individual labels: 10

ZB10,QR:FORTL.ZAHLEN - Zack marker strip

1053027

<https://www.phoenixcontact.com/in/products/1053027>



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 10,15 x 10,5 mm, Number of individual labels: 10

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ZB10,LGS:L1-N,PE - Marker for terminal blocks

1053412

<https://www.phoenixcontact.com/in/products/1053412>



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 10,15 x 10,5 mm, Number of individual labels: 10

ZB10,LGS:U-N - Marker for terminal blocks

1053438

<https://www.phoenixcontact.com/in/products/1053438>



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: U, V, W, N, GND, U, V, W, N, GND, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 10,15 x 10,5 mm, Number of individual labels: 10

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UC-TM 10 - Marker for terminal blocks

0818069

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Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

UC-TM 10 CUS - Marker for terminal blocks

0824605

<https://www.phoenixcontact.com/in/products/0824605>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

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UCT-TM 10 - Marker for terminal blocks

0829142

<https://www.phoenixcontact.com/in/products/0829142>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

UCT-TM 10 CUS - Marker for terminal blocks

0829623

<https://www.phoenixcontact.com/in/products/0829623>



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

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