

UKH 70 - High-current terminal block



3213140
<https://www.phoenixcontact.com/za/products/3213140>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 192 A, number of connections: 2, number of positions: 1, connection method: Screw connection, Rated cross section: 70 mm², cross section: 16 mm² - 95 mm², mounting type: NS 35/7,5, NS 35/15, NS 35/15-2,3, NS 32, color: gray

Your advantages

- Reliable cable connection is ensured by three-point centering of the conductor in the prismatic sleeve base
- Tested for railway applications
- Low contact resistance of the contact surface due to ribbing
- Screw locking by means of spring-loaded elements in the clamping part

Commercial data

Item number	3213140
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	010
Product key	BE1311
Catalog page	Page 191 (C-1-2019)
GTIN	4046356549202
Weight per piece (including packing)	153,59 g
Weight per piece (excluding packing)	147,225 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Notes

General

Note	For a reliable contact of multi stranded conductors it is recommended to untwist multi stranded conductors.
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Product properties

Product type	High current terminal block
Area of application	Railway industry
	Machine building
	Plant engineering
Number of positions	1
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 mm ²

Level 1 above 1 below 1

Screw thread	M8
Tightening torque	8 ... 10 Nm
Stripping length	24 mm
Internal cylindrical gage	A11
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	16 mm ² ... 95 mm ²
Cross section AWG	4 ... 3/0 (converted acc. to IEC)
Conductor cross section flexible	25 mm ² ... 70 mm ²
Conductor cross section, flexible [AWG]	2 ... 2/0 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	16 mm ² ... 70 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	16 mm ² ... 70 mm ²
2 conductors with same cross section, solid	16 mm ² ... 25 mm ²
2 conductors with same cross section, flexible	16 mm ² ... 25 mm ²
2 conductors with same cross section, flexible, with ferrule	16 mm ² ... 25 mm ²

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without plastic sleeve	
Nominal current	192 A
Maximum load current	192 A (with 70 mm ² conductor cross section)
Nominal voltage	1000 V
Note	Note: Product releases, connection cross sections and notes on connecting aluminum cables can be found in the download area.
Nominal cross section	70 mm ²

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	1201934 VDE-ISS 6
	1201659 E/AL-NS 32
	1201662 E/AL-NS 35
List of bridges	/ FBI 2-20 N EX / 3213210
	/ FBI 3-20 N EX / 3213211
Bridge data	180 A / 70 mm ²
Ex temperature increase	40 K (180 A / 70 mm ²)
Rated voltage	880 V (NS 35)
Rated insulation voltage	800 V (NS 35)
	630 V (NS 32)
output	(Permanent)

Ex level General

Rated current	180 A
Maximum load current	180 A
Contact resistance	0.08 mΩ

Ex connection data General

Torque range	8 Nm ... 10 Nm
Nominal cross section	70 mm ²
Rated cross section AWG	2/0
Connection capacity rigid	16 mm ² ... 95 mm ²
Connection capacity AWG	4 ... 3/0
Connection capacity flexible	25 mm ² ... 70 mm ²
Connection capacity AWG	3 ... 2/0
2 conductors with same cross section, solid	16 mm ² ... 25 mm ²
2 conductors with the same cross-section AWG rigid	4 ... 3
2 conductors with same cross section, stranded	16 mm ² ... 25 mm ²
2 conductors with the same cross-section AWG flexible	4 ... 3

Dimensions

Width	20.3 mm
Height	70.5 mm

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Depth	78.3 mm
Depth on NS 32	85 mm
Depth on NS 35/7,5	80 mm
Depth on NS 35/15	87.5 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
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 70 mm ²	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
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Mechanical tests

Mechanical strength

Result	Test passed
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Attachment on the carrier

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DIN rail/fixing support	NS 32/NS 35
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	16 mm ² / 2.9 kg
	70 mm ² /10.4 kg
	95 mm ² /14 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	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, 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 %

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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
	NS 35/15-2,3
	NS 32

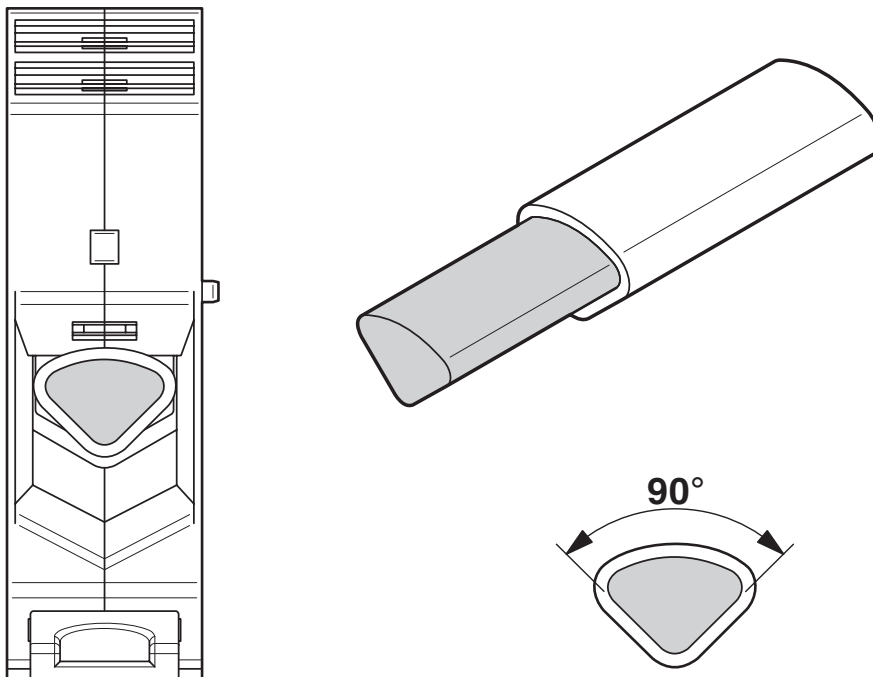
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Drawings

Schematic diagram



Connecting aluminum cables. Further notes can be found in the download area

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/za/products/3213140>

CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	1000 V	192 A	6 - 3/0	-
Use group C	600 V	192 A	6 - 3/0	-

CB IECEE CB Scheme Approval ID: DE1-62936_M1				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1000 V	192 A	-	- 70

EAC Approval ID: RU C-DE.BL08.B.00534				
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cULus cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group C	1000 V	192 A	6 - 3/0	-
Use group E	1000 V	192 A	6 - 3/0	-

LR Approval ID: LR2420186TA				
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VDE Zeichengenehmigung Approval ID: 40036368				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	1000 V	192 A	-	- 70

DNV Approval ID: TAE00001CT				
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cUL Recognized
Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	880 V	192 A	6 - 3/0	-



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



IECEX
Approval ID: IECEX SEV12.0008U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Mounting on NS 32	690 V	180 A	-	25 - 70
Mounting on NS 35	880 V	180 A	-	25 - 70



UL Recognized
Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	880 V	192 A	6 - 3/0	-



ATEX
Approval ID: SEV12ATEX0168U

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Mounting on NS 32	690 V	180 A	-	25 - 70
Mounting on NS 35	880 V	180 A	-	25 - 70



CCC
Approval ID: 2020322313000623



UKCA-EX
Approval ID: CML 22UKEX1225U

cULus Recognized

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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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