

UKH 50 BU - High-current terminal block



3009105

<https://www.phoenixcontact.com/sg/products/3009105>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 150 A, number of connections: 2, number of positions: 1, connection method: Screw connection, Rated cross section: 50 mm², cross section: 16 mm² - 70 mm², mounting type: NS 35/7,5, NS 35/15, NS 32, NS 35/15-2,3, color: blue

Your advantages

- Reliable cable connection is ensured by three-point centering of the conductor in the prismatic sleeve base
- 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	3009105
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	0100*
Product key	BE1311
Catalog page	Page 189 (C-1-2019)
GTIN	4017918091637
Weight per piece (including packing)	120.32 g
Weight per piece (excluding packing)	115.1 g
Customs tariff number	85369010
Country of origin	IN

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Technical data

Product properties

Product type	High current terminal block
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	4.73 W

Connection data

Number of connections per level	2
Nominal cross section	50 mm ²
Rated cross section AWG	1/0
Screw thread	M6
Tightening torque	6 ... 8 Nm
Stripping length	24 mm
Internal cylindrical gage	B10
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	16 mm ² ... 70 mm ²
Cross section AWG	4 ... 2/0 (converted acc. to IEC)
Conductor cross section flexible	25 mm ² ... 70 mm ²
Conductor cross section, flexible [AWG]	2 ... 2 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	25 mm ² ... 50 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	25 mm ² ... 50 mm ²
2 conductors with same cross section, solid	10 mm ² ... 16 mm ²
2 conductors with same cross section, flexible	10 mm ² ... 16 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	10 mm ² ... 16 mm ²
Nominal current	150 A
Maximum load current	150 A (with 50 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	50 mm ²

Ex data

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Rated data (ATEX/IECEX)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	1205082 SZS 1,2X8,0 VDE
	1201659 E/AL-NS 32
	1201662 E/AL-NS 35
List of bridges	Fixed bridge / FBI 2-20-EX / 0201113
	Fixed bridge / FBI 3-20-EX / 0201812
Bridge data	130.5 A (50 mm ²)
Ex temperature increase	40 K (133 A / 50 mm ²)
Rated voltage	690 V
for bridging with bridge	690 V
Rated insulation voltage	630 V
output	(Permanent)

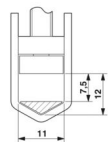
Ex level General

Rated current	133 A
Maximum load current	133 A
Contact resistance	0.1 mΩ

Ex connection data General

Torque range	6 Nm ... 8 Nm
Nominal cross section	50 mm ²
Rated cross section AWG	1/0
Connection capacity rigid	16 mm ² ... 50 mm ²
Connection capacity AWG	6 ... 1/0
Connection capacity flexible	25 mm ² ... 50 mm ²
Connection capacity AWG	4 ... 1/0
2 conductors with same cross section, solid	10 mm ² ... 16 mm ²
2 conductors with the same cross-section AWG rigid	8 ... 6
2 conductors with same cross section, stranded	10 mm ² ... 16 mm ²
2 conductors with the same cross-section AWG flexible	8 ... 6

Dimensions

Dimensional drawing	
Width	20 mm
Height	70.5 mm
Depth	75.8 mm
Depth on NS 32	81 mm
Depth on NS 35/15	83.5 mm

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Material specifications

Color	blue (RAL 5015)
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 \leq 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
Test force setpoint	10 N
Result	Test passed

Test for conductor damage and slackening

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Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross section/weight	16 mm ² / 2.9 kg
	50 mm ² / 9.5 kg
	70 mm ² /10.4 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	$f_1 = 5 \text{ Hz}$ 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, 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

	NS 35/7,5
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Mounting type	NS 35/15
	NS 32
	NS 35/15-2,3

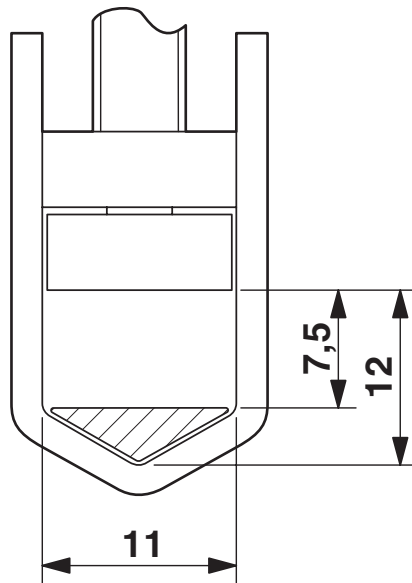
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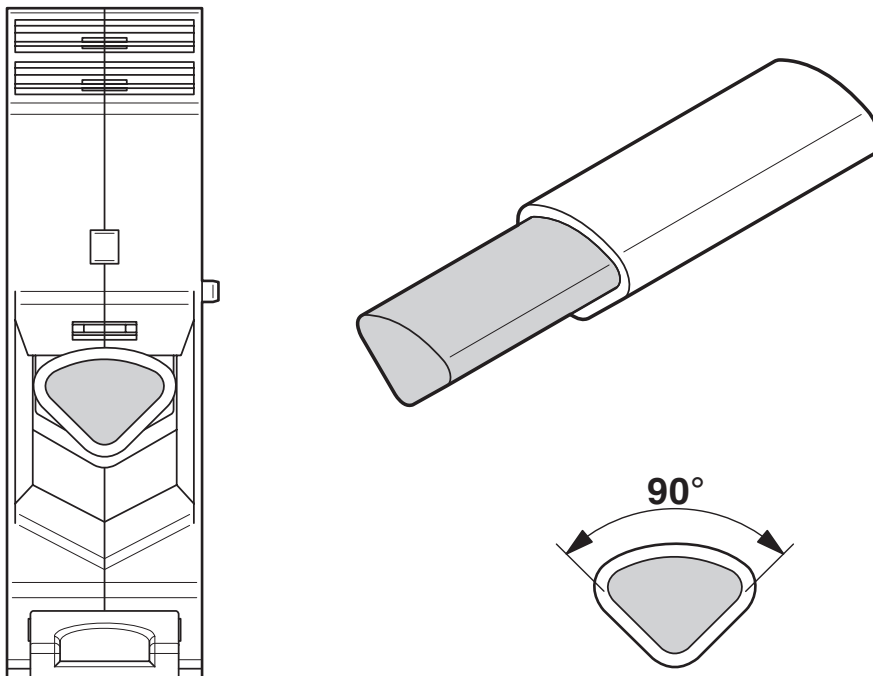
<https://www.phoenixcontact.com/sg/products/3009105>

Drawings

Dimensional drawing



Schematic diagram



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

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Circuit diagram



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Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3009105>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	600 V	150 A	6 - 1/0	-
Use group C	600 V	150 A	6 - 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	6 - 1/0	-
Multi-conductor connection	600 V	150 A	8 - 6	-
Use group C	600 V	150 A	6 - 1/0	-
Multi-conductor connection	600 V	150 A	8 - 6	-

 LR Approval ID: LR2041789TA-02				
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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	150 A	-	- 50

 LR Approval ID: LR2420186TA				
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DNV Approval ID: TAE00001CT				
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 IECEE CB Scheme Approval ID: DE1-62936_M1				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2

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	1000 V	150 A	-	- 50
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ATEX

Approval ID: KEMA98ATEX1786U



EAC Ex

Approval ID: KZ 7500525010101950



IECEx

Approval ID: IECEx KEM 06.0029U



CCC

Approval ID: 2020322313000623



UKCA-EX

Approval ID: DEKRA 21UKEX0307U

UL Comp Hazloc CA US

Approval ID: UL US CA L 192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	600 V	150 A	6 - 1/0	-

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
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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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EF3.0 Climate Change

CO2e kg	0.78 kg CO2e
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