

UKH 150 - High-current terminal block



3010110

<https://www.phoenixcontact.com/in/products/3010110>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 309 A, number of connections: 2, connection method: Screw connection, Rated cross section: 150 mm², cross section: 35 mm² - 150 mm², mounting type: NS 35/15, NS 32, color: gray

Your advantages

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

Commercial Data

Item number	3010110
Packing unit	3 pc
Minimum order quantity	3 pc
Sales Key	BE1
Product Key	BE1311
Catalog Page	Page 197 (C-1-2019)
GTIN	4017918091842
Weight per Piece (including packing)	381.37 g
Weight per Piece (excluding packing)	348.12 g
Customs tariff number	85369010
Country of origin	IN

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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
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	9.55 W

Connection data

Number of connections per level	2
Nominal cross section	150 mm ²

Level 1 above 1 below 1

Screw thread	M10
Note	Screws with hexagonal socket
Tightening torque	25 ... 30 Nm
Stripping length	40 mm
Internal cylindrical gage	B14
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	35 mm ² ... 150 mm ²
Cross section AWG	2 ... 300 kcmil (converted acc. to IEC)
Conductor cross section flexible	50 mm ² ... 150 mm ²
Conductor cross section, flexible [AWG]	1/0 ... 300 kcmil (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	50 mm ² ... 150 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	50 mm ² ... 150 mm ²
Cross-section with insertion bridge, rigid	150 mm ²
Cross-section with insertion bridge, flexible	120 mm ²
2 conductors with same cross section, solid	25 mm ² ... 50 mm ²
2 conductors with same cross section, flexible	35 mm ² ... 50 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	25 mm ² ... 50 mm ²

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Nominal current	309 A
Maximum load current	309 A (with 150 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	150 mm ²

Ex data

Rated data (ATEX/IECEX)

Identification	□ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	1201947 VDE-ISS 8 1201659 E/AL-NS 32 1201662 E/AL-NS 35
List of bridges	Insertion bridge / EB 2-31/UKH / 0201388 Insertion bridge / EB 3-31/UKH / 0201391
Bridge data	195.5 A / 150 mm ²
Ex temperature increase	40 K (281.5 A / 150 mm ²)
Rated voltage	1100 V
at bridging with insertion bridge	880 V
Rated insulation voltage	1000 V
output	(Permanent)

Ex level General

Rated current	256 A
Maximum load current	256 A
Contact resistance	0.06 mΩ

Ex connection data General

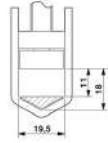
Torque range	25 Nm ... 30 Nm
Nominal cross section	150 mm ²
Rated cross section AWG	300 kcmil
Connection capacity rigid	35 mm ² ... 150 mm ²
Connection capacity AWG	2 ... 300 kcmil
Connection capacity flexible	50 mm ² ... 150 mm ²
Connection capacity AWG	1/0 ... 300 kcmil
2 conductors with same cross section, solid	25 mm ² ... 50 mm ²
2 conductors with the same cross-section AWG rigid	4 ... 1/0
2 conductors with same cross section, stranded	35 mm ² ... 50 mm ²
2 conductors with the same cross-section AWG flexible	2 ... 1/0

Dimensions

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Dimensional drawing	
Width	31 mm
Height	107.3 mm
Height NS 35/15	118.5 mm
Height	4.665 "
Height NS 32	116 mm
Length	100 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

Result	Test passed
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Temperature-rise test

Requirement temperature-rise test	Increase in temperature \leq 45 K
Result	Test passed
Short-time withstand current 150 mm ²	18 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
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross section/weight	35 mm ² / 6.8 kg
	50 mm ² / 9.5 kg
	150 mm ² / 15 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):2018-05
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):2018-05
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 ... 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 35/15
	NS 32

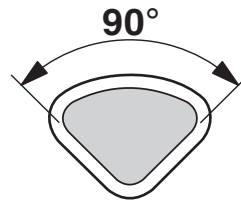
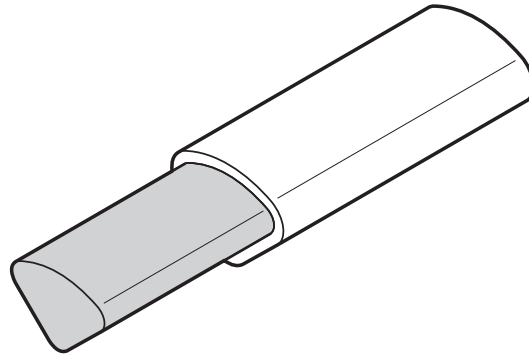
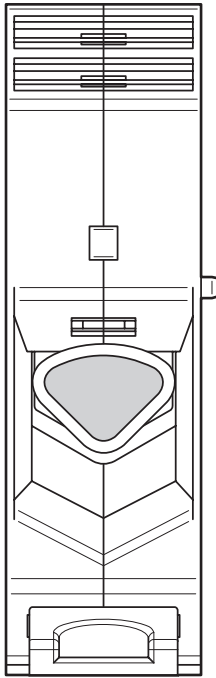
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Drawings

Schematic diagram



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

Circuit diagram



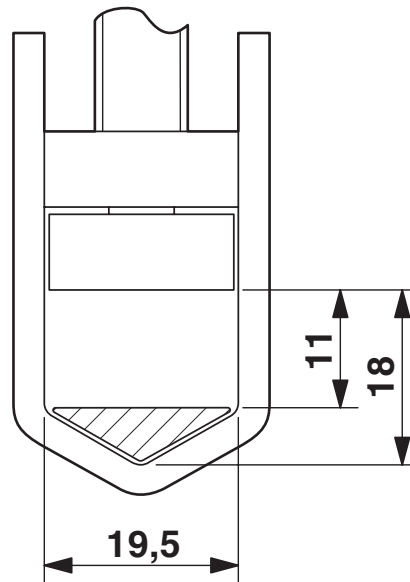
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Dimensional drawing




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Approvals


 CSA Approval ID: 13631				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B	600 V	275 A	2 - 300	-
Use group C	600 V	275 A	2 - 300	-


 EAC Approval ID: RU C-DE.AI30.B.01102				
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 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	285 A	2 - 300	-
Multi-conductor connection	600 V	285 A	4 - 1/0	-
Use group C	600 V	285 A	2 - 300	-
Multi-conductor connection	600 V	285 A	4 - 1/0	-

 RS Approval ID: 22.44.01.00083.250				
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 EAC Approval ID: RU C-DE.BL08.B.00534				
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 ATEX Approval ID: KEMA99ATEX8332U				
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 cUL Recognized Approval ID: E192998				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	600 V	285 A	2 - 300	-

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EAC Ex

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



IEC Ex

Approval ID: IECEx KEM 06.0030U



UL Recognized

Approval ID: E192998

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	600 V	285 A	2 - 300	-



CCC

Approval ID: 2020322313000623



NEPSI

Approval ID: GYJ20.1195U



UKCA-EX

Approval ID: DEKRA 21UKEX0309U

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Classifications

ECLASS

ECLASS-11.0

27141120

ETIM

ETIM 8.0

EC000897

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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Accessories

 Note: Applying some accessories below might limit this product.


EB 3-31/UKH - Insertion bridge

0201391

<https://www.phoenixcontact.com/in/products/0201391>



Insertion bridge, pitch: 31 mm, number of positions: 3, color: gray

 Max. current carrying capacity: 232 A

EB 2-31/UKH - Insertion bridge

0201388

<https://www.phoenixcontact.com/in/products/0201388>



Insertion bridge, pitch: 31 mm, number of positions: 2, color: gray

 Max. current carrying capacity: 232 A

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WS-2K - Warning label

1004513

<https://www.phoenixcontact.com/in/products/1004513>

Adhesive warning plate, self-adhesive, black print: lightning flash with mixed version - "Vorsicht Spannung - Attention Danger" size of label: 32 x 26 mm



UKH 150/240 EP - Insertion profile

3009244

<https://www.phoenixcontact.com/in/products/3009244>

Insertion profile, color: silver



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AGK 10-UKH 150/240 - Pick-off terminal

3003554

<https://www.phoenixcontact.com/in/products/3003554>



Pick-off terminal, nom. voltage: 1000 V, nominal current: 57 A, number of connections: 1, connection method: Screw connection, Rated cross section: 10 mm², cross section: 0.5 mm² - 10 mm², mounting type: on base element, color: gray

SF-THEX 8-200 - Screwdriver

1212643

<https://www.phoenixcontact.com/in/products/1212643>



T-handle screwdriver, for Allen screws, hexagonal (with chamfer), size: hex 8 x 200 mm, ergonomically shaped handle, matt chrome-plated

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NS 32 PERF 2000MM-VPE 10 - DIN rail perforated

1201002

<https://www.phoenixcontact.com/in/products/1201002>



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, G profile, color: silver, Pack of 10 (20 m)

NS 32 UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201015

<https://www.phoenixcontact.com/in/products/1201015>



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, G profile, color: silver, Pack of 10 (20 m)

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NS 35/15 PERF 2000MM - DIN rail perforated

1201730

<https://www.phoenixcontact.com/in/products/1201730>



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver, Pack of 25 (50 m)

NS 35/15 UNPERF 2000MM - DIN rail, unperforated

1201714

<https://www.phoenixcontact.com/in/products/1201714>



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver, Pack of 25 (50 m)

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NS 35/15 WH PERF 2000MM - DIN rail perforated

0806602

<https://www.phoenixcontact.com/in/products/0806602>



DIN rail perforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white, Pack of 25 (50 m)

NS 35/15 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204135

<https://www.phoenixcontact.com/in/products/1204135>



DIN rail, unperforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver, Pack of 10 (20 m)

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NS 35/15 AL UNPERF 2000MM - DIN rail, unperforated

1201756

<https://www.phoenixcontact.com/in/products/1201756>



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

NS 35/15 ZN PERF 2000MM - DIN rail perforated

1206599

<https://www.phoenixcontact.com/in/products/1206599>



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver, Pack of 25 (50 m)

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NS 35/15 ZN UNPERF 2000MM - DIN rail, unperforated

1206586

<https://www.phoenixcontact.com/in/products/1206586>



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver, Pack of 25 (50 m)

NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

<https://www.phoenixcontact.com/in/products/1201895>



DIN rail, unperforated, similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored, Pack of 10 (20 m)

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NS 35/15 CAP - End cap

1206573

<https://www.phoenixcontact.com/in/products/1206573>

DIN rail end piece, for DIN rail NS 35/15



ZB 22:UNBEDRUCKT - Zack marker strip

0811862

<https://www.phoenixcontact.com/in/products/0811862>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 22 mm, lettering field size: 10.5 x 21.8 mm, Number of individual labels: 4

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ZB 22 CUS - Zack marker strip

0824949

<https://www.phoenixcontact.com/in/products/0824949>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 22 mm, lettering field size: 10.5 x 21.8 mm, Number of individual labels: 4

ZB 22,LGS:L1-N,PE - Zack marker strip

0811875

<https://www.phoenixcontact.com/in/products/0811875>



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snapped, for terminal block width: 22 mm, lettering field size: 10.5 x 21.8 mm, Number of individual labels: 50

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ZB 25:UNPRINTED - Zack marker strip

0802751

<https://www.phoenixcontact.com/in/products/0802751>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Marker pen, mounting type: snapped, for terminal block width: 25 mm, lettering field size: 25 x 10 mm, Number of individual labels: 4

ZB 25 CUS - Zack marker strip

0802752

<https://www.phoenixcontact.com/in/products/0802752>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 25 mm, lettering field size: 25 x 10 mm, Number of individual labels: 4

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TMT 10 R - Marker for terminal blocks

0816210

<https://www.phoenixcontact.com/in/products/0816210>



Marker for terminal blocks, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, perforated, mounting type: snapped, snap into flat marker groove, for terminal block width: 10.2 mm, lettering field size: 6.35 x 10.15 mm, Number of individual labels: 10000

TMT 10 R CUS - Marker for terminal blocks

0824500

<https://www.phoenixcontact.com/in/products/0824500>



Marker for terminal blocks, can be ordered: by line, white, labeled according to customer specifications, mounting type: snap into universal marker groove, snap into flat marker groove, for terminal block width: 10.2 mm, lettering field size: 6.35 x 10.15 mm

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E/AL-NS 32 - End clamp

1201659

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End clamp, for end support of UKH 50 - UKH 240, is pushed onto DIN rail NS 32 and fixed with 2 screws, width: 10 mm, color: Aluminum

E/AL-NS 35 - End clamp

1201662

<https://www.phoenixcontact.com/in/products/1201662>



End clamp, for end support of UKH 50 to UKH 240, is pushed onto DIN rail NS 35 and fixed with 2 screws, width: 10 mm, color: aluminum

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PHOENIX CONTACT (I) Pvt. Ltd.
A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420
info@phoenixcontact.co.in