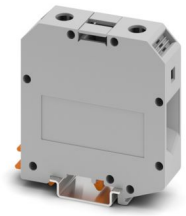
# UKH 50 - High-current terminal block

3009118

https://www.phoenixcontact.com/us/products/3009118

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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 mm$^2$, cross section: 16 mm$^2$ - 70 mm$^2$, mounting type: NS 35/7,5, NS 35/15, NS 32, NS 35/15-2,3, color: gray

## Your advantages

- Reliable cable connection is ensured by three-point centering of the conductor in the prismatic sleeve base<br/>
- 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 | 3009118 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE13 |
| Product key | BE1311 |
| GTIN | 4017918091644 |
| Weight per piece (including packing) | 120 g |
| Weight per piece (excluding packing) | 113.4 g |
| Customs tariff number | 85369010 |
| Country of origin | IN |

## Technical data

### Notes

General

| | |
|---|---|
| Note | For a reliable contact of multi stranded conductors it is recommended to untwist multi stranded conductors. |

### 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 mm² |
| Connection method | Screw connection |
| Screw thread | M6 |
| Tightening torque | 6 ... 8 Nm |
| Stripping length | 24 mm |
| Internal cylindrical gage | A10 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross-section rigid | 16 mm² ... 70 mm² |
| Cross section AWG | 4 ... 2/0 (converted acc. to IEC) |
| Conductor cross-section flexible | 25 mm² ... 70 mm² |
| Conductor cross-section, flexible [AWG] | 2 ... 2/0 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 16 mm² ... 50 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 16 mm² ... 50 mm² |
| 2 conductors with same cross section, rigid | 10 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible | 10 mm² ... 16 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 10 mm² ... 16 mm² |
| Nominal cross section | 50 mm² |
| Nominal current | 150 A |
| Maximum load current | 150 A (with 50 mm² 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. |

## Ex data

Rated data (ATEX/IECEx)

| | |
|---|---|
| Identification | Ⓔx 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 mm²) |
| Ex temperature increase | 40 K (146.5 A / 50 mm²) |
| for bridging with bridge | 690 V |
| Rated insulation voltage | 630 V |
| output | (Permanent) |

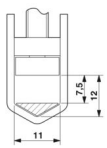
Ex level General

| | |
|---|---|
| Rated voltage | 690 V |
| 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 mm² |
| Rated cross section AWG | 1/0 |
| Connection capacity rigid | 16 mm² ... 50 mm² |
| Connection capacity AWG | 6 ... 1/0 |
| Connection capacity flexible | 25 mm² ... 50 mm² |
| Connection capacity AWG | 4 ... 1/0 |
| 2 conductors with same cross section, solid | 10 mm² ... 16 mm² |
| 2 conductors with the same cross-section AWG rigid | 8 ... 6 |
| 2 conductors with same cross section, stranded | 10 mm² ... 16 mm² |
| 2 conductors with the same cross-section AWG flexible | 8 ... 6 |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |

| | |
|---|---|
| Width | 20 mm |
| Height | 70.5 mm |
| Depth | 76 mm |
| Depth on NS 32 | 81.5 mm |
| Depth on NS 35/7,5 | 76.1 mm |
| Depth on NS 35/15 | 83.6 mm |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| 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 50 mm² | 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 |

## Mechanical tests

### Mechanical strength

| | |
|---|---|
| Result | Test passed |

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

| | |
|---|---|
| Rotation speed | 10 (+/- 2) rpm |
| Revolutions | 135 |
| Conductor cross-section/weight | 16 mm² / 2.9 kg |
| | 50 mm² / 9.5 kg |
| | 70 mm²/10.4 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):2018-05 |
| Spectrum | Long life test category 2, bogie-mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 250 Hz |
| ASD level | 6.12 (m/s²)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

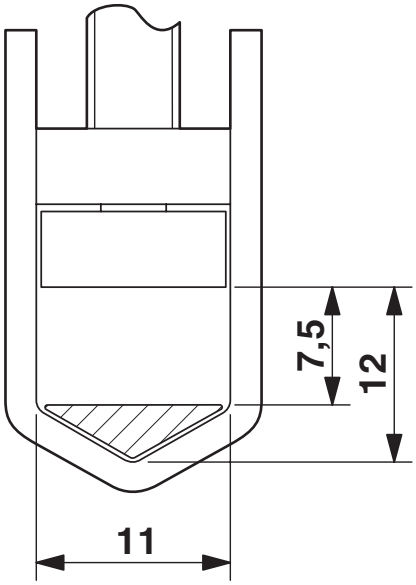
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## Mounting

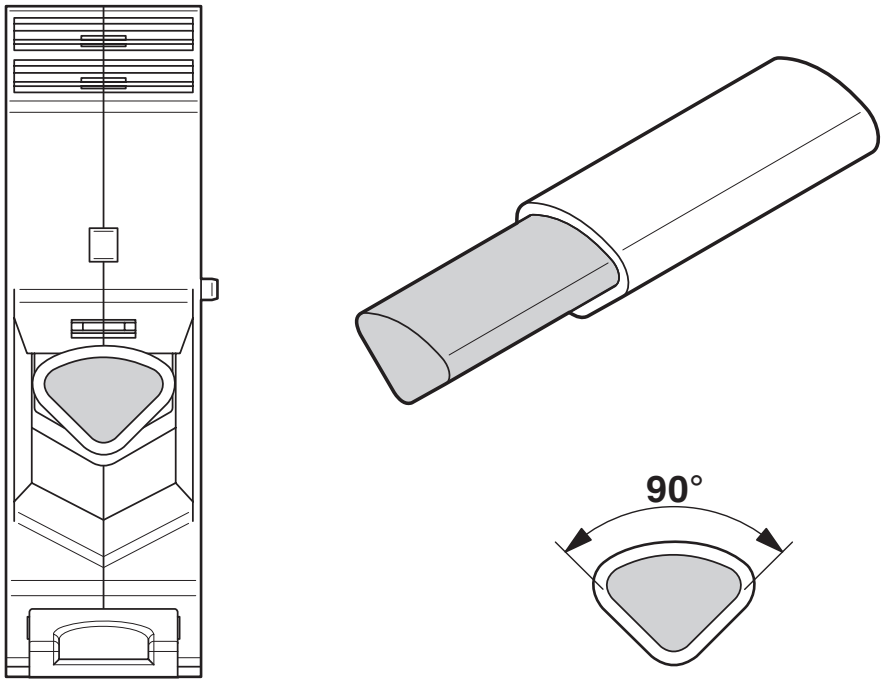
| | |
|---|---|
| Mounting type | NS 35/7,5 |
| | NS 35/15 |
| | NS 32 |
| | NS 35/15-2,3 |

## Drawings

Dimensional drawing




Schematic diagram




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

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3009118

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 600 V | 150 A | 6 - 1/0 | - |
| 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 $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 600 V | 150 A | 6 - 1/0 | - |
| Multi-conductor connection | 600 V | 150 A | 8 - 6 | - |
| C | | | | |
| | 600 V | 150 A | 6 - 1/0 | - |
| Multi-conductor connection | 600 V | 150 A | 8 - 6 | - |

**LR**
Approval ID: LR2420186TA

**VDE Zeichengenehmigung**
Approval ID: 40036368

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 1000 V | 150 A | - | - 50 |

**IECEE CB Scheme**
Approval ID: DE1-62936_M1

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 1000 V | 150 A | - | - 50 |

**DNV**
Approval ID: TAE00001CT

**ATEX**
Approval ID: KEMA98ATEX1786U

**EAC Ex**
Approval ID: KZ 7500525010101950

**IECEx**
Approval ID: KEMA98ATEX1786U

**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 $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 600 V | 150 A | 6 - 1/0 | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC000897 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## 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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