# UKH 70-F BU - High-current terminal block

3247063

https://www.phoenixcontact.com/us/products/3247063

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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 $mm^2$, cross section: 16 $mm^2$ - 70 $mm^2$, mounting type: direct screw connection, color: blue

## Your advantages

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

## Commercial data

| | |
|---|---|
| Item number | 3247063 |
| Packing unit | 1 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE13 |
| Product key | BE1311 |
| GTIN | 4046356733311 |
| Weight per piece (including packing) | 166.72 g |
| Weight per piece (excluding packing) | 151.9 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

# 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 |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| 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

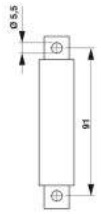
| | |
|---|---|
| Number of connections per level | 2 |
| Nominal cross section | 70 mm² |

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 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] | 3 ... 2/0 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 16 mm² ... 70 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 16 mm² ... 70 mm² |
| 2 conductors with same cross section, solid | 16 mm² ... 25 mm² |
| 2 conductors with same cross section, flexible | 16 mm² ... 25 mm² |
| 2 conductors with same cross section, flexible, with ferrule | 16 mm² ... 25 mm² |

| | |
|---|---|
| without plastic sleeve | |
| Nominal current | 192 A |
| Maximum load current | 192 A (with 70 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. |
| Nominal cross section | 70 mm² |

## Dimensions

| | |
|---|---|
| Dimensional drawing |   |
| Width | 20.3 mm |
| Height | 70.5 mm |
| Depth | 80 mm |
| Hole diameter | 5.5 mm |

## Material specifications

| | |
|---|---|
| Color | blue |
| Flammability rating according to UL 94 | V0 |
| Insulating material group | I |
| Insulating material | PA |
| Static insulating material application in cold | -60 °C |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 130 °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 |
| Short-time withstand current 70 mm² | 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 |

## Mechanical tests

Mechanical strength

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

Attachment on the carrier

| | |
|---|---|
| Test force setpoint | 10 N |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|---|---|
| Conductor cross section/weight | 25 mm² / 4.5 kg |
| | 70 mm²/10.4 kg |
| | 95 mm²/14 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):2008-03 |
| Spectrum | Service life test category 1, class B, body mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 150 Hz |
| ASD level | 1.857 (m/s²)²/Hz |
| Acceleration | 0.8g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2008-03 |
| 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 ... 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) |
| Ambient temperature (assembly) | -5 °C ... 70 °C |
| Ambient temperature (actuation) | -5 °C ... 70 °C |
| Permissible humidity (storage/transport) | 30 % ... 70 % |

## Standards and regulations

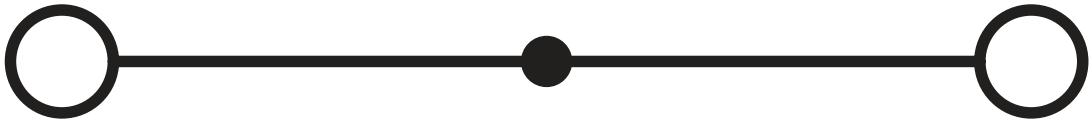
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## Mounting

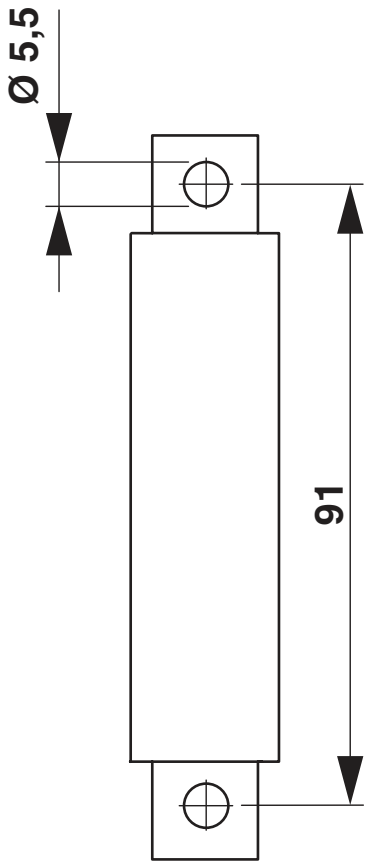
| | |
|---|---|
| Mounting type | direct screw connection |

## Drawings

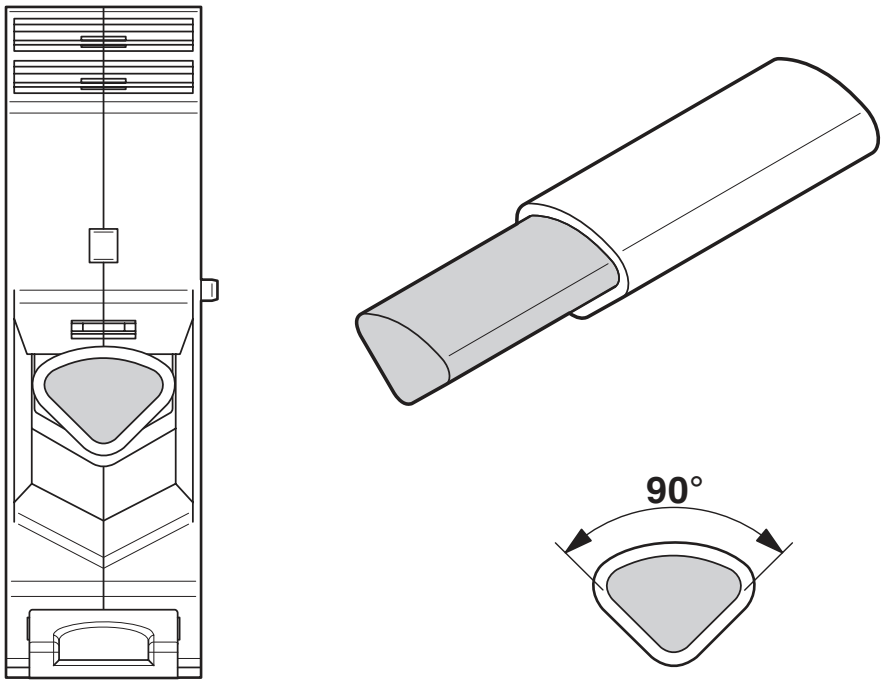
Circuit diagram



Dimensional drawing




Schematic diagram




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

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3247063

**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 | - |

**EAC**
Approval ID: RU C-DE.AI30.B.01102

**EAC**
Approval ID: RU C-DE.BL08.B.00534

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250101 |

### ETIM

| | |
|---|---|
| ETIM 8.0 | EC000897 |

### UNSPSC

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

## Environmental product compliance

| | |
|---|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

## Accessories

Note: Applying some accessories below might limit this product.

### FBI 2-20 N - Fixed bridge

3213195

https://www.phoenixcontact.com/us/products/3213195

Fixed bridge, pitch: 20 mm, number of positions: 2, color: silver

Max. current carrying capacity: 192 A

### FBI 3-20 N - Fixed bridge

3213205

https://www.phoenixcontact.com/us/products/3213205

Fixed bridge, pitch: 20 mm, number of positions: 3, color: silver

Max. current carrying capacity: 192 A

## AGK 10-UKH 50 - Pick-off terminal

3001763

https://www.phoenixcontact.com/us/products/3001763

Pick-off terminal, nom. voltage: 1000 V, nominal current: 57 A, number of connections: 1, connection method: Screw connection, Rated cross section: 10 $mm^2$, cross section: 0.5 $mm^2$ - 10 $mm^2$, color: gray

## UKH 50 EP - Insertion profile

3009228

https://www.phoenixcontact.com/us/products/3009228

Insertion profile, color: silver

## X-PEN 0,35 - Marker pen

0811228

https://www.phoenixcontact.com/us/products/0811228

Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

## SF-THEX 6-200 - Screwdriver

1212642

https://www.phoenixcontact.com/us/products/1212642

T-handle screwdriver, for Allen screws, hexagonal (with chamfer), size: hex 6 x 200 mm, ergonomically shaped handle, matt chrome-plated

## WS-2K - Warning label

1004513

https://www.phoenixcontact.com/us/products/1004513

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

## WS-4K - Warning label

1004584

https://www.phoenixcontact.com/us/products/1004584

Adhesive warning plate, self-adhesive, black print: lightning flash with mixed verson - "Vorsicht Spannung - Attention Danger" size of label: 13 x 23.5 mm

## VDE-ISS 6 - Tool

1201934

https://www.phoenixcontact.com/us/products/1201934

Allen wrench, fully insulated, safety tool in accordance with EN 60900, length: 200 mm, handle width: 110 mm, for all terminal blocks with 8 mm Allen screw

## ZB 10:UNBEDRUCKT - Zack marker strip

1053001

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

## ZB10,LGS:FORTL.ZAHLEN - Zack marker strip

1053014

https://www.phoenixcontact.com/us/products/1053014

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/us/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

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

1053412

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

## UC-TM 10 - Marker for terminal blocks

0818069

https://www.phoenixcontact.com/us/products/0818069

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/us/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

## UCT-TM 10 - Marker for terminal blocks

0829142

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

## TMT 10 R - Marker for terminal blocks

0816210

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

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## TMT 10 R CUS - Marker for terminal blocks

0824500

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