

# UKH 70-F - High-current terminal block



3247051

<https://www.phoenixcontact.com/us/products/3247051>

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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<sup>2</sup>, cross section: 16 mm<sup>2</sup> - 95 mm<sup>2</sup>, mounting type: direct screw connection, color: gray

## 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
- Tested for railway applications
- Screw locking by means of spring-loaded elements in the clamping part

## Commercial data

Item number	3247051
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE13
Product key	BE1311
Catalog page	Page 191 (C-1-2019)
GTIN	4046356607247
Weight per piece (including packing)	165.04 g
Weight per piece (excluding packing)	151.9 g
Customs tariff number	85369010
Country of origin	CN

# UKH 70-F - High-current terminal block



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## Technical data

### 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 <sup>2</sup>

### 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 <sup>2</sup> ... 95 mm <sup>2</sup>
Cross section AWG	4 ... 3/0 (converted acc. to IEC)
Conductor cross section flexible	25 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	2 ... 2/0 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	16 mm <sup>2</sup> ... 70 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	16 mm <sup>2</sup> ... 70 mm <sup>2</sup>
2 conductors with same cross section, solid	16 mm <sup>2</sup> ... 25 mm <sup>2</sup>
2 conductors with same cross section, flexible	16 mm <sup>2</sup> ... 25 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	16 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Nominal current	192 A
Maximum load current	192 A (with 70 mm <sup>2</sup> 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.

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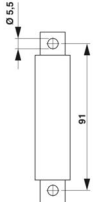


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Nominal cross section	70 mm <sup>2</sup>
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## Dimensions

Dimensional drawing	
Width	20.3 mm
Height	103.4 mm
Depth	80 mm
Hole diameter	5.5 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
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

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 70 mm <sup>2</sup>	8.4 kA
Result	Test passed

### Power-frequency withstand voltage

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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

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross section/weight	16 mm <sup>2</sup> / 2.9 kg
	70 mm <sup>2</sup> /10.4 kg
	95 mm <sup>2</sup> /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 <sup>2</sup> ) <sup>2</sup> /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

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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 %

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
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## Mounting

Mounting type	direct screw connection
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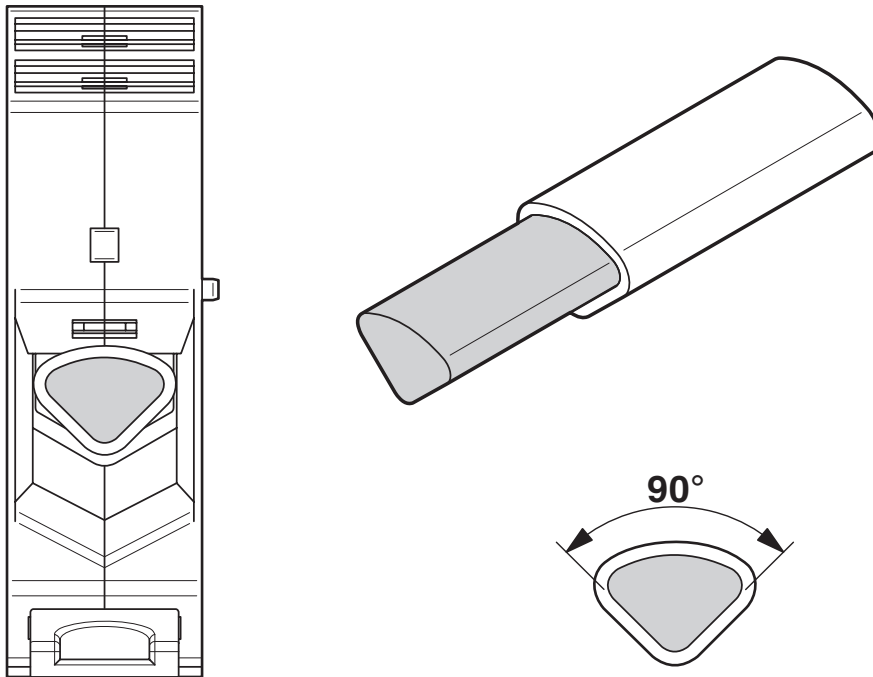
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## Drawings

Schematic diagram



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

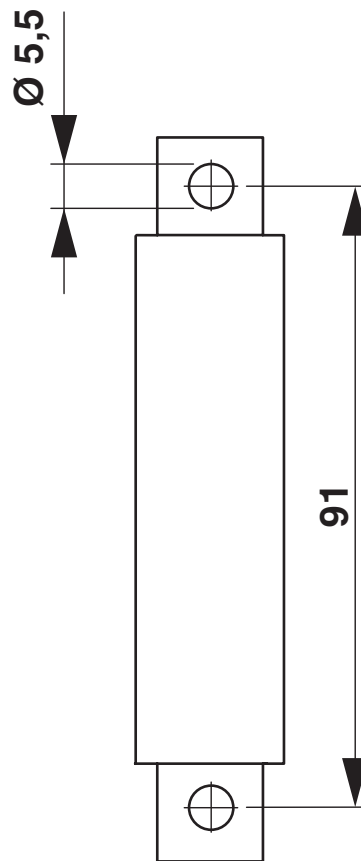
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Dimensional drawing



Circuit diagram



# UKH 70-F - High-current terminal block



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3247051>



**EAC**

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



**cULus Recognized**

Approval ID: E60425

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group C				
	1000 V	192 A	6 - 3/0	-
Use group E				
	1000 V	192 A	6 - 3/0	-



**IECEx**

Approval ID: IECEx SEV12.0008U

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



**ATEX**

Approval ID: SEV12ATEX0168U

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



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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

### ETIM

ETIM 8.0	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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## Accessories

**i** 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

**i** Max. current carrying capacity: 192 A

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### 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

**i** Max. current carrying capacity: 192 A

# UKH 70-F - High-current terminal block

3247051

<https://www.phoenixcontact.com/us/products/3247051>




## FBI 2-20 N EX - Fixed bridge

3213210

<https://www.phoenixcontact.com/us/products/3213210>



Fixed bridge, number of positions: 2, color: silver

 Max. current carrying capacity: 180 A

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## FBI 3-20 N EX - Fixed bridge

3213211

<https://www.phoenixcontact.com/us/products/3213211>



Fixed bridge, number of positions: 3, color: silver

 Max. current carrying capacity: 180 A

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

3001763

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



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

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## 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

# UKH 70-F - High-current terminal block

3247051

<https://www.phoenixcontact.com/us/products/3247051>



## 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

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## 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

# UKH 70-F - High-current terminal block



3247051

<https://www.phoenixcontact.com/us/products/3247051>

## 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

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## 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

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## 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

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## 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



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

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<https://www.phoenixcontact.com/us/products/3247051>



## 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

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## 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

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

3247051

<https://www.phoenixcontact.com/us/products/3247051>



### 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

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### 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

# UKH 70-F - High-current terminal block

3247051

<https://www.phoenixcontact.com/us/products/3247051>



## 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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## 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

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## 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

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## WS-2K - Warning label

1004513

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

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<https://www.phoenixcontact.com/us/products/3247051>



## WS-4K - Warning label

1004584

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

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



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## 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



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