

## Potential collective terminal - UKH 70/4X10 - 3213142

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Potential collective terminal, nom. voltage: 1500 V DC / 1000 V AC, nominal current: 192 A, connection method: Screw connection, Screw connection, number of connections: 5, number of positions: 1, cross section: 16 mm<sup>2</sup> - 95 mm<sup>2</sup>, AWG: 4 - 3/0, width: 20.3 mm, height: 79.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 35/15-2,3, NS 32

### 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



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	 4 046356 813334
GTIN	4046356813334
Weight per Piece (excluding packing)	140.000 g
Custom tariff number	85369010
Country of origin	China

### Technical data

#### General

Number of positions	1
Number of levels	1
Number of connections	5
Potentials	1
Nominal cross section	70 mm <sup>2</sup>
Color	gray

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### Technical data

#### General

Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	8 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	6.27 W
Maximum load current	192 A (in case of a 70 mm <sup>2</sup> conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal current I <sub>N</sub>	192 A
Nominal voltage U <sub>N</sub>	1500 V DC
	1000 V AC
Nominal current I <sub>N</sub>	57 A
Nominal voltage U <sub>N</sub>	1500 V DC
	1000 V AC
Open side panel	No
Ambient temperature (operation)	-60 °C ... 85 °C
Ambient temperature (storage/transport)	-25 °C ... 55 °C (For a short time, not exceeding 24 h, -60 to +70 °C)
Permissible humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Shock protection test specification	DIN EN 50274 (VDE 0660-514):2002-11
Back of the hand protection	guaranteed
Finger protection	guaranteed
Result of surge voltage test	Test passed
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	2.2 kV AC
Result of the test for mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending test	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	25 mm <sup>2</sup> / 4.5 kg
	70 mm <sup>2</sup> /10.4 kg
	95 mm <sup>2</sup> /14 kg
Tensile test result	Test passed
Result of tight fit on support	Test passed

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## Technical data

### General

Tight fit on carrier	NS 35/NS 32
Setpoint	10 N
Result of voltage-drop test	Test passed
Result of temperature-rise test	Test passed
Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Short circuit stability result	Test passed
Conductor cross section short circuit testing	70 mm <sup>2</sup>
Short-time current	1.2 kA
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test spectrum	Service life test category 2, bogie-mounted
Test frequency	$f_1 = 5$ Hz to $f_2 = 250$ Hz
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Static insulating material application in cold	-60 °C
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
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

### Dimensions

## Potential collective terminal - UKH 70/4X10 - 3213142

### Technical data

#### Dimensions

Width	20.3 mm
Length	88.5 mm
Height	79.4 mm
Height NS 35/7,5	80 mm
Height NS 35/15	87.5 mm
Height NS 32	85 mm

#### Connection data

Connection method	Screw connection
Screw thread	M8
Stripping length	24 mm
Tightening torque, min	8 Nm
Tightening torque max	10 Nm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section solid min.	16 mm <sup>2</sup>
Conductor cross section solid max.	95 mm <sup>2</sup>
Conductor cross section AWG min.	4
Conductor cross section AWG max.	3/0
Conductor cross section flexible min.	25 mm <sup>2</sup>
Conductor cross section flexible max.	70 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	3
Max. AWG conductor cross section, flexible	2/0
Conductor cross section flexible, with ferrule without plastic sleeve min.	16 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	70 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	16 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	70 mm <sup>2</sup>
2 conductors with same cross section, solid min.	16 mm <sup>2</sup>
2 conductors with same cross section, solid max.	25 mm <sup>2</sup>
2 conductors with same cross section, stranded min.	16 mm <sup>2</sup>
2 conductors with same cross section, stranded max.	25 mm <sup>2</sup>
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum	16 mm <sup>2</sup>
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum	25 mm <sup>2</sup>
Internal cylindrical gage	A11
Connection method	Screw connection
Screw thread	M4
Stripping length	10 mm

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## Technical data

### Connection data

Tightening torque, min	1.4 Nm
Tightening torque max	1.5 Nm
Conductor cross section solid min.	1.5 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section AWG min.	16
Conductor cross section AWG max.	6
Conductor cross section flexible min.	1.5 mm <sup>2</sup>
Conductor cross section flexible max.	10 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	16
Max. AWG conductor cross section, flexible	6
Conductor cross section flexible, with ferrule without plastic sleeve min.	1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	10 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	6 mm <sup>2</sup>
2 conductors with same cross section, solid min.	1.5 mm <sup>2</sup>
2 conductors with same cross section, solid max.	2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded min.	1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded max.	2.5 mm <sup>2</sup>
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum	1.5 mm <sup>2</sup>
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum	2.5 mm <sup>2</sup>
Internal cylindrical gage	A5

### Standards and Regulations

Connection in acc. with standard	IEC 60947-7-1
Flammability rating according to UL 94	V0

### Environmental Product Compliance

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

## Drawings

Circuit diagram



# Potential collective terminal - UKH 70/4X10 - 3213142

## Classifications

### eCl@ss

eCl@ss 10.0.1	27141120
eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141120
eCl@ss 8.0	27141120
eCl@ss 9.0	27141120

### ETIM

ETIM 3.0	EC000897
ETIM 4.0	EC000897
ETIM 5.0	EC000897
ETIM 6.0	EC000897
ETIM 7.0	EC000897

### UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

## Approvals

### Approvals

Approvals


CSA / UL Recognized / cUL Recognized / EAC / EAC / cULus Recognized


Ex Approvals


## Potential collective terminal - UKH 70/4X10 - 3213142

### Approvals


#### Approval details


CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
		C	
Nominal voltage UN			1000 V
Nominal current IN			176 A
mm <sup>2</sup> /AWG/kcmil			4

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
		C	
Nominal voltage UN			1000 V
Nominal current IN			176 A
mm <sup>2</sup> /AWG/kcmil			4

EAC			RU C- DE.AI30.B.01102
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EAC			RU C- DE.BL08.B.00534
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cULus Recognized			
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### Accessories

Accessories

DIN rail

## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

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## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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End cap - NS 35/15 CAP - 1206573



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

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DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail perforated - NS 32 PERF 2000MM - 1201002



DIN rail perforated, G profile, width: 32 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

DIN rail, unperforated - NS 32 UNPERF 2000MM - 1201015



DIN rail, unperforated, G profile, width: 32 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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### End block

End clamp - E/AL-NS 32 - 1201659



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

End clamp - E/AL-NS 35 - 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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### Mounting material

Insertion profile - UKH 50 EP - 3009228



Insertion profile, color: silver

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### Pick-off terminal block

## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

Pick-off terminal block - AGK 10-UKH 50 - 3001763



Pick-off terminal block, Can only be used in conjunction with UKH 50/70, nom. voltage: 1000 V, nominal current: 57 A, connection method: Screw connection, number of connections: 1, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, AWG: 20 - 8, width: 10.2 mm, height: 34.7 mm, color: gray

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### Screw bridge

Fixed bridge - FBI 2-20 N - 3213195



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

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Fixed bridge - FBI 3-20 N - 3213205



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

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Fixed bridge - FBI 2-20 N EX - 3213210



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

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Fixed bridge - FBI 3-20 N EX - 3213211



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

## Potential collective terminal - UKH 70/4X10 - 3213142

### Accessories

#### Socket spanner

Screwdriver - SF-THEX 6-200 - 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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### Terminal marking

Zack marker strip - ZB 18:UNBEDRUCKT - 0811833



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 10.5 x 17.4 mm, Number of individual labels: 5