

## High Current Connectors - HV M10/2 - 3049563

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High Current Connectors, nom. voltage: 1000 V, nominal current: 269 A, connection method: Bolt connection, number of connections: 2, width: 32 mm, height: 74.6 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

### Your advantages

- ✓ Comprehensive range of accessories for safe and user-friendly wiring of conductors up to 120 mm<sup>2</sup>
- ✓ Two different partition plates can be used for the range of single and double-bolt terminal blocks
- ✓ 2 and 3-pos. connection rails can be used for potential distribution
- ✓ Secure connection of up to 4 conductors with cable lugs according to DIN 46234, 46235, and 46237 in a small amount of space
- ✓ Spring washers are used to prevent hexagonal nuts from loosening
- ✓ The feed-through window provided in the partition plates can be easily removed for mounting the connection rails

RoHS

### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	 4 046356 310314
GTIN	4046356310314
Weight per Piece (excluding packing)	223.030 g
Custom tariff number	39269097
Country of origin	China

### Technical data

#### General

Number of levels	1
Number of connections	2
Nominal cross section	120 mm <sup>2</sup>

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## Technical data

### General

Color	gray
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	8.68 W
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
Connection in acc. with standard	IEC 60947-7-1
Nominal current $I_N$	269 A
Maximum load current	269 A (with 120 mm <sup>2</sup> conductor cross section)
Nominal voltage $U_N$	1000 V
Open side panel	No
Result of surge voltage test	Test passed
Surge voltage test setpoint	9.8 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	2.2 kV
Result of the test for mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	15 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed
Conductor cross section short circuit testing	120 mm <sup>2</sup>
Short-time current	14.4 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):2018-05

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### General

Test spectrum	Service life test category 1, class B, body mounted
Test frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$0.964 \text{ (m/s}^2\text{)}^2\text{/Hz}$
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):2018-05
Shock form	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
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
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
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

Length	90.5 mm
Width	32 mm
Height	74.6 mm
Height NS 35/7,5	75.3 mm
Height NS 35/15	82.8 mm
Bolt length	31 mm

### Connection data

Connection method	Bolt connection
Cable lug connection according to standard	DIN 46234:1980-03
Min. cross section for cable lug connection	6 mm <sup>2</sup>
Max. cross section for cable lug connection	120 mm <sup>2</sup>
Hole diameter, min.	10.5 mm

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## Technical data

### Connection data

Cable lug width, max.	24 mm
Bolt length	31 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque, min	10 Nm
Tightening torque max	20 Nm
Cable lug connection according to standard	DIN 46235:1983-07
Min. cross section for cable lug connection	16 mm <sup>2</sup>
Max. cross section for cable lug connection	95 mm <sup>2</sup>
Hole diameter, min.	10.5 mm
Cable lug width, max.	32 mm
Bolt length	31 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque, min	10 Nm
Tightening torque max	20 Nm
Cable lug connection according to standard	DIN 46237:1970-07
Max. cross section for cable lug connection	6 mm <sup>2</sup>
Hole diameter, min.	10.5 mm
Cable lug width, max.	18 mm
Bolt length	31 mm
Bolt diameter	10 mm
Screw thread	M10
Tightening torque, min	10 Nm
Tightening torque max	20 Nm

### Standards and Regulations

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

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

# High Current Connectors - HV M10/2 - 3049563

Circuit diagram



## 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 2.0	EC000897
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

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## Approvals


### Approvals


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


### Ex Approvals


### Approval details

EAC			RU C- DE.A*30.B.01742
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CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	158887
		C	
Nominal voltage UN		1000 V	
Nominal current IN		269 A	

EAC			RU C- DE.BL08.B.00540
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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		269 A	

cULus Recognized			
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## High Current Connectors - HV M10/2 - 3049563

### Accessories

#### Accessories

#### Bridge

##### Connection element - HV M10/1-VS 2 - 3049466



Connection element, length: 62 mm, width: 25 mm, height: 4 mm, number of positions: 2, color: silver

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##### Connection element - HV M10/1-VS 3 - 3049479



Connection element, length: 96 mm, width: 25 mm, height: 4 mm, number of positions: 3, color: silver

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#### Cover profile

##### Cover profile - HV M10/1-AP - 3049495

Cover profile, for single-bolt terminal block M10, length: 156 mm, width: 32 mm, height: 6.5 mm, color: gray



#### Cover profile carrier

##### Cover profile carrier - APH-HV - 1069621



Cover profile carrier, width: 4.5 mm, height: 88.4 mm, material: PA, length: 50 mm, color: gray

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## High Current Connectors - HV M10/2 - 3049563

### Accessories

Cover profile carrier - APH-HV-M - 1136699



Cover profile carrier, width: 4.5 mm, height: 35 mm, material: PA, length: 50.2 mm, color: gray

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### DIN rail

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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## High Current Connectors - HV M10/2 - 3049563

### Accessories

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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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



End block

## High Current Connectors - HV M10/2 - 3049563

### Accessories

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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### Labeled terminal marker

Warning label - WS-4K - 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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Warning label - WS-2K - 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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Zack marker strip - ZB 12 CUS - 0824942



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 12.2 mm, lettering field size: 10.5 x 12.15 mm, Number of individual labels: 5

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Zack marker strip - ZB 12,LGS:L1-N,PE - 0812146



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 12.2 mm, lettering field size: 10.5 x 12.15 mm, Number of individual labels: 5

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## High Current Connectors - HV M10/2 - 3049563

### Accessories

#### Marker for terminal blocks - UC-TM 12 CUS - 0824613



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: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

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#### Marker for terminal blocks - UCT-TM 12 CUS - 0829630



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: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

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#### Partition plate

##### Separating plate - HV M12/2-TP - 3049709



Separating plate, length: 156 mm, width: 2 mm, color: gray

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#### Pick-off terminal block

##### Pick-off terminal block - AGK PT 4X6/M10 - 1017448



Pick-off terminal block, nom. voltage: 1000 V, nominal current: 41 A, connection method: Push-in connection, Bolt connection, number of connections: 5, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, AWG: 20 - 8, width: 31 mm, height: 32.3 mm, color: gray, mounting type: on base element

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##### Pick-off terminal block - AGK PT 8X6/M10 - 1017450



Pick-off terminal block, nom. voltage: 1000 V, nominal current: 41 A, connection method: Push-in connection, Bolt connection, number of connections: 9, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, AWG: 20 - 8, width: 31 mm, height: 32.3 mm, color: gray, mounting type: on base element

## High Current Connectors - HV M10/2 - 3049563

### Accessories

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#### Terminal marking

##### Zack marker strip - ZB 12:UNPRINTED - 0812120



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: 12.2 mm, lettering field size: 12 x 10.5 mm, Number of individual labels: 5

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##### Marker for terminal blocks - UC-TM 12 - 0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

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##### Marker for terminal blocks - UCT-TM 12 - 0829144



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: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

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