

High Current Connectors - HV M12/1 - 3049505

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High Current Connectors, Connection method: Bolt connection, Cross section: 6 mm² - 120 mm², AWG: 10 - 250 kcmil, Width: 32 mm, Height: 73.5 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

Why buy this product

- Comprehensive, supplementary accessories
- For connecting up to four conductors

Key Commercial Data

Packing unit	10 STK
GTIN	 4 046356 184090
Weight per Piece (excluding packing)	98.27 g
Custom tariff number	85369010
Country of origin	Germany

Technical data

General

Number of levels	1
Number of connections	1
Nominal cross section	120 mm ²
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
Connection in acc. with standard	IEC 60947-7-1
Nominal current I _N	269 A
Maximum load current	269 A
Nominal voltage U _N	1000 V
Open side panel	No
Result of surge voltage test	Test passed

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Technical data

General

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
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	10 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 1, class B, body mounted
Test frequency	f ₁ = 5 Hz to f ₂ = 150 Hz
ASD level	0.02 g ² /Hz
Acceleration	0,8 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	5 g
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))	125 °C
Static insulating material application in cold	-60 °C
Behavior in fire for rail vehicles (DIN 5510-2)	Test passed
Flame test method (DIN EN 60695-11-10)	V0
Oxygen index (DIN EN ISO 4589-2)	>32 %
NF F16-101, NF F10-102 Class I	2
NF F16-101, NF F10-102 Class F	2
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)	27,5 MJ/kg

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General

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	67 mm
Width	32 mm
Height	73.5 mm
Height NS 35/7,5	76 mm
Height NS 35/15	83.5 mm
Bolt length	40.5 mm

Connection data

Conductor cross section solid min.	6 mm ²
Conductor cross section solid max.	120 mm ²
Conductor cross section flexible min.	6 mm ²
Conductor cross section flexible max.	120 mm ²
Conductor cross section AWG min.	10
Conductor cross section AWG max.	250 kcmil
Cable lug connection according to standard	DIN 46234
Min. cross section for cable lug connection	6 mm ²
Max. cross section for cable lug connection	120 mm ²
Bolt length	40.5 mm
Bolt diameter	12 mm
Tightening torque, min	14 Nm
Tightening torque max	31 Nm
Cable lug connection according to standard	DIN 46235
Min. cross section for cable lug connection	10 mm ²
Max. cross section for cable lug connection	95 mm ²
Bolt length	40.5 mm
Bolt diameter	12 mm
Tightening torque, min	14 Nm
Tightening torque max	31 Nm
Cable lug connection according to standard	DIN 46237
Bolt length	40.5 mm
Bolt diameter	12 mm
Tightening torque, min	14 Nm
Tightening torque max	31 Nm
Screw thread	M12
Tightening torque, min	14 Nm
Tightening torque max	31 Nm

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Connection data

Connection method	Bolt connection
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Standards and Regulations

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

Classifications

eCl@ss

eCl@ss 4.0	27141120
eCl@ss 4.1	27141120
eCl@ss 5.0	27141120
eCl@ss 5.1	27141120
eCl@ss 6.0	27141120
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

UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410

Approvals

Approvals

Approvals

CSA / CSAus / EAC / EAC / cCSAus


Ex Approvals

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Approvals

Approvals submitted

Approval details

CSA 	
mm ² /AWG/kcmil	00
Nominal current I _N	220 A
Nominal voltage U _N	1000 V

CSAus	
mm ² /AWG/kcmil	00
Nominal current I _N	220 A
Nominal voltage U _N	1000 V

EAC

EAC

cCSAus

Accessories

Accessories

Bridge

Connection element - HV M12/1-VS 2 - 3049631



Connection element, Number of positions: 2, Color: silver

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Accessories

Connection element - HV M12/1-VS 3 - 3049644



Connection element, Number of positions: 3, Color: silver

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



DIN rail

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



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

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



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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



DIN rail 35 mm (NS 35)

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Accessories

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



DIN rail 35 mm (NS 35)

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



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver

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



DIN rail, material: Galvanized, perforated, height 7.5 mm, width 35 mm, length: 2 m

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



DIN rail, material: Galvanized, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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Accessories

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

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



End block

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

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

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

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: 10.5 x 12.15 mm

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Accessories

Marker for terminal blocks - ZB 12,LGS:L1-N,PE - 0812146



Marker for terminal blocks, 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: 10.5 x 12.15 mm

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: 11.45 x 10.5 mm

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: 10.8 x 9.6 mm

Partition plate

Separating plate - HV M12/2-TP - 3049709



Separating plate, Length: 156 mm, Width: 2 mm, Color: gray

Terminal marking

Zack marker strip - ZB 12:UNPRINTED - 0812120



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 12.2 mm, Lettering field: 12 x 10.5 mm

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Accessories

Marker for terminal blocks - UC-TM 12 - 0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 11.45 x 10.5 mm

Marker for terminal blocks - UCT-TM 12 - 0829144



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 10.8 x 9.6 mm
