PHŒNIX CONTACT

High Current Connectors - HV M8/1 - 3049301

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High Current Connectors, nom. voltage: 1000 V, nominal current: 150 A, connection method: Bolt connection, number of connections: 1, width: 21 mm, height: 63.5 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

Your advantages

☑ Comprehensive, supplementary accessories

☑ For connecting up to four conductors

RoHS

Key Commercial Data

Packing unit	25 pc
GTIN	4 046356 184052
GTIN	4046356184052
Weight per Piece (excluding packing)	50.080 g
Custom tariff number	85369010
Country of origin	China

Technical data

General

Number of levels	1
Number of connections	1
Nominal cross section	50 mm²
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	4.73 W

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Technical data

General

Ambient temperature (operation)	-60 ... 85 ()
Ambient temperature (storage/transport)	-25 ... 55
Ambient temperature (assembly)	-5 ... 70
Ambient temperature (actuation)	-5 ... 70
Connection in acc. with standard	IEC 60947-7-1
Nominal current I_N	150 A
Maximum load current	150 A (with 50 mm² 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	10 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	$\leq$ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed
Conductor cross section short circuit testing	50 mm²
Short-time current	6 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
Test spectrum	Service life test category 1, class B, body mounted
Test frequency	f_1 = 5 Hz to f_2 = 150 Hz
ASD level	0.964 $(m/s^2)^2/Hz$
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
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

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Technical data

General

Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °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)	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	64 mm
Width	21 mm
Height	63.5 mm
Height NS 35/7,5	65.8 mm
Height NS 35/15	73.3 mm
Bolt length	31.5 mm

Connection data

Connection method	Bolt connection
Cable lug connection according to standard	DIN 46234:1980-03
Min. cross section for cable lug connection	2.5 mm²
Max. cross section for cable lug connection	50 mm²
Hole diameter, min.	8.4 mm
Cable lug width, max.	18 mm
Bolt length	31.5 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque, min	6 Nm
Tightening torque max	12 Nm
Cable lug connection according to standard	DIN 46235:1983-07
Min. cross section for cable lug connection	16 mm²
Max. cross section for cable lug connection	35 mm²
Hole diameter, min.	8.4 mm
Cable lug width, max.	17 mm

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Technical data

Connection data

Bolt length	31.5 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque, min	6 Nm
Tightening torque max	12 Nm
Cable lug connection according to standard	DIN 46237:1970-07
Min. cross section for cable lug connection	2.5 mm²
Max. cross section for cable lug connection	6 mm²
Hole diameter, min.	8.4 mm
Cable lug width, max.	14 mm
Bolt length	31.5 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque, min	6 Nm
Tightening torque max	12 Nm
Stripping length	The stripping length depends on the specification provided by the cable lug manufacturer.

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
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Classifications

eCl@ss

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

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Classifications

ETIM

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

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

Ex Approvals

Approval details

EAC		RU C-DE.A*30.B.01742

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 60425

cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 60425

	C
Nominal voltage UN	1000 V

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Approvals

	C
Nominal current IN	150 A

CSA		http://www.csagroup.org/services-industries/product-listing/	158887

	C
Nominal voltage UN	1000 V
Nominal current IN	150 A

EAC		RU C-DE.BL08.B.00540

cULus Recognized	

Accessories

Accessories

Bridge

Connection element - HV M8/1 M6/1-STL - 3071094

Connection element, number of positions: 2, color: silver

Connection element - HV M8/1-VS 2 - 3049369

Connection element, length: 41 mm, width: 20 mm, height: 4 mm, number of positions: 2, color: silver

Connection element - HV M8/1-VS 3 - 3049372

Connection element, length: 64 mm, width: 20 mm, height: 4 mm, number of positions: 3, color: silver

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Accessories

Cover profile

Cover profile - HV M8/1-AP - 3049398

Cover profile, for single-bolt terminal block M8, length: 75 mm, width: 21 mm, height: 6.5 mm, color: gray

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

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

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

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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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

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Accessories

End clamp - CLIPFIX 35-5 - 3022276

Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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Labeled terminal marker

Warning label - WS-4K - 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

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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

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

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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Accessories

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

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: 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

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

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