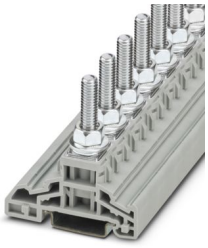
HV M8/1 - High-current connector

3049301

https://www.phoenixcontact.com/us/products/3049301

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High-current connector, nom. voltage: 1000 V, nominal current: 150 A, number of connections: 1, connection method: Bolt connection, Rated cross section: 50 mm^2, mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

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

Commercial data

Item number	3049301
Packing unit	25 pc
Minimum order quantity	25 pc
Sales key	BE42
Product key	BE4211
GTIN	4046356184052
Weight per piece (including packing)	56.58 g
Weight per piece (excluding packing)	50.084 g
Customs tariff number	85369010
Country of origin	CN

Technical data

Product properties

Product type	Bolt connection terminal block
Product family	HV
Pitch	23 mm
Number of connections	1
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	4.73 W

Connection data

Number of connections per level	1
Nominal cross section	50 mm²
Connection method	Bolt connection
Stripping length	The stripping length depends on the specification provided by the cable lug manufacturer.
Connection in acc. with standard	IEC 60947-7-1
Nominal cross section	50 mm²
Nominal current	150 A
Maximum load current	150 A (with 50 mm² conductor cross-section)
Nominal voltage	1000 V

Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	2.5 mm² ... 50 mm²
Cross section range AWG	12 ... 2 (converted acc. to IEC)
Hole diameter	8.4 mm
Width	18 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 12 Nm
Connection in acc. with standard	DIN 46235:1983-07
Cross section	16 mm² ... 35 mm²
Cross section range AWG	6 ... 2 (converted acc. to IEC)
Hole diameter	8.4 mm
Width	20 mm
Bolt diameter	8 mm

Screw thread	M8
Tightening torque	6 ... 12 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	2.5 mm² ... 6 mm²
Cross section range AWG	12 ... 8 (converted acc. to IEC)
Hole diameter	8.4 mm
Width	14 mm
Bolt diameter	8 mm
Screw thread	M8
Tightening torque	6 ... 12 Nm

Dimensions

Width	21 mm
End cover width	2 mm
Height	64 mm
Depth	63.5 mm
Depth on NS 35/7,5	65.8 mm
Depth on NS 35/15	73.3 mm
Bolt length	31.5 mm
Pitch	23 mm

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °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
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 50 mm²	6 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

Mechanical properties

Mechanical data

Open side panel	No

Mechanical tests

Mechanical strength

Result	Test passed

Attachment on the carrier

DIN rail/fixing support	NS 35
Test force setpoint	10 N
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):2018-05
Spectrum	Long life test category 1, class B, body mounted
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
ASD level	0.964 (m/s²)²/Hz
Acceleration	5.72g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

Shocks

Pulse shape	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
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, not exceeding 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

Mounting

Mounting type	NS 35/7,5
	NS 35/15

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3049301

CSA
Approval ID: 13631

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
C				
	1000 V	150 A	-	-

cUL Recognized
Approval ID: FILE E 60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
C				
	1000 V	150 A	-	-

EAC
Approval ID: RU C-DE.BL08.B.00540

Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

ETIM

ETIM 10.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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%

EF3.1 Climate Change

CO2e kg	0.735 kg CO2e

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