

HV M8/2 - High-current connector

3049550

<https://www.phoenixcontact.com/us/products/3049550>

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High-current connector, nom. voltage: 1000 V, nominal current: 150 A, number of connections: 2, connection method: Bolt connection, Rated cross section: 50 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Comprehensive range of accessories for safe and user-friendly wiring of conductors up to 120 mm²
- 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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3049550 |
| Packing unit | 25 pc |
| Minimum order quantity | 25 pc |
| Sales key | BE42 |
| Product key | BE4212 |
| GTIN | 4046356310307 |
| Weight per piece (including packing) | 133 g |
| Weight per piece (excluding packing) | 119.412 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|-----------------------|--------------------------------|
| Product type | Bolt connection terminal block |
| Product family | HV |
| Pitch | 23 mm |
| Number of connections | 2 |
| 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 | 2 |
| Nominal cross section | 50 mm ² |
| 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 mm ² |
| Nominal current | 150 A |
| Maximum load current | 150 A (with 50 mm ² 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 mm ² ... 50 mm ² |
| 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 mm ² ... 35 mm ² |
| Cross section range AWG | 6 ... 2 (converted acc. to IEC) |
| Hole diameter | 8.4 mm |
| Width | 20 mm |
| Bolt diameter | 8 mm |

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| | |
|----------------------------------|---|
| Screw thread | M8 |
| Tightening torque | 6 ... 12 Nm |
| Connection in acc. with standard | DIN 46237:1970-07 |
| Cross section | 2.5 mm ² ... 6 mm ² |
| 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 | 67 mm |
| Depth | 65.1 mm |
| Depth on NS 35/7,5 | 65.8 mm |
| Depth on NS 35/15 | 73.3 mm |
| Bolt length | 22 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 |

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| | |
|---|-------------|
| Short-time withstand current 50 mm ² | 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 | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$ |
| ASD level | 0.964 (m/s ²)/Hz |
| Acceleration | 5.72g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

| | |
|--------------------------------|-------------------------------------|
| Specification | DIN EN 50155 (VDE 0115-200):2018-05 |
| 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

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| | |
|--|--|
| 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 |

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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3049550>

|  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 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000897 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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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 | 1.608 kg CO2e |
|---------|---------------|

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