

HDC insert HDC HA 3 MS

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The small and slim HA series can be used wherever space is limited.

The wire connection level is designed for screw connections.

Pole count: 3 - 4

Rated current: 16 A

Rated voltage: 400 V

Rated voltage acc. to UL/CSA: 600 V AC/DC

TOP screw connection

General ordering data

| | |
|------------|--------------------------------------------------------------------------|
| Type | HDC HA 3 MS |
| Order No. | 149810000 |
| Version | HDC insert, Pin, 400 V, 16 A, No. of poles: 3, Screw connection, Size: 1 |
| GTIN (EAN) | 4008190048747 |
| Qty. | 1 pc(s). |

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Technical data**Dimensions and weights**

| | | | |
|------------|---------|-----------------|------------|
| Width | 21 mm | Width (inches) | 0.827 inch |
| Height | 36.5 mm | Height (inches) | 1.437 inch |
| Depth | 21 mm | Depth (inches) | 0.827 inch |
| Net weight | 15 g | | |

Temperatures

| | |
|-------------------|-------------------|
| Limit temperature | -40 °C ... 125 °C |
|-------------------|-------------------|

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

General data

| | | | |
|--------------------------------------|---------------------|------------------------------|-------------------------------------------------------------|
| Conductor cross-section | 2.5 mm ² | Insulating material | PC glass-fibre reinforced (UL-listed and railway-certified) |
| Insulating material group | IIIa | Insulation strength | 10 ¹⁰ Ω |
| Material | Copper alloy | Max. torque for main contact | 0.5 Nm |
| No. of poles | 3 | Plugging cycles, silver | ≥ 500 |
| Pollution severity | 3 | Rated current (DIN EN 61984) | 16 A |
| Rated impulse voltage (DIN EN 61984) | 4 kV | Rated voltage (DIN EN 61984) | 400 V |
| Rated voltage according to UL/CSA | 600 V AC/DC | Series | HA |
| Size | 1 | Surface finish | Silver passivated |
| Type | Pin | UL 94 flammability rating | V-0 |
| Volume resistance | ≤ 2mΩ | | |

Connection data PE

| | | | |
|------------------------------------------------------|---------------------|------------------------------------------------------|---------------------|
| Blade size, slotted (PE connection) | SD 0.6 x 3.5 | Connection type PE | Screw connection |
| Fixing screw | M 3 | Rated cross-section | 2.5 mm ² |
| Stripping length PE connection | 15 mm | Tightening torque, max. PE connection | 0.5 Nm |
| Wire connection cross section, finely stranded, max. | 2.5 mm ² | Wire connection cross-section, finely stranded, min. | 0.5 mm ² |
| Wire cross section, AWG (PE), max. | AWG 14 | Wire cross section, AWG (PE), min. | AWG 20 |
| Wire cross-section, solid, max. | 2.5 mm ² | Wire cross-section, solid, min. | 0.5 mm ² |

Version

| | | | |
|------------------------------------------------------|---------------------|------------------------------------------------------|---------------------|
| Blade size, slotted (screw connection) | SD 0.6 x 3.5 | Clamping screw | M 3 |
| Conductor cross-section, max. | 2.5 mm ² | Conductor cross-section, min. | 0.5 mm ² |
| Material | Copper alloy | Max. torque for main contact | 0.5 Nm |
| Size | 1 | Stripping length, rated connection | 15 mm |
| Surface finish | Silver passivated | Type of connection | Screw connection |
| Volume resistance | ≤ 2mΩ | Wire connection cross section AWG, max. | AWG 14 |
| Wire connection cross section AWG, min. | AWG 20 | Wire connection cross section, finely stranded, max. | 2.5 mm ² |
| Wire connection cross-section, finely stranded, min. | 0.5 mm ² | Wire cross-section, solid, max. | 2.5 mm ² |
| Wire cross-section, solid, min. | 0.5 mm ² | | |

Data sheet

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Technical data

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 3.0 | EC001121 | ETIM 4.0 | EC000438 |
| ETIM 5.0 | EC000438 | ETIM 6.0 | EC000438 |
| UNSPSC | 30-21-18-01 | eClass 5.1 | 27-14-34-19 |
| eClass 6.2 | 27-26-12-04 | eClass 7.1 | 27-44-02-05 |
| eClass 8.1 | 27-44-02-05 | eClass 9.0 | 27-44-02-05 |
| eClass 9.1 | 27-44-02-05 | | |

Approvals

Approvals



ROHS Conform

Downloads

| | |
|--------------------|-------------------------------------------------------------------------|
| Brochure/Catalogue | CAT 3 HDC 17/18 EN FL FIELDWIRING EN |
| Engineering Data | EPLAN, WSCAD, Zuken E3.S |
| Engineering Data | STEP |

Tightening torques and screwing tools

| Screw size | Connector type | Dia. tightening torque in Nm | Recommended blade inserts and AF size for hexagon socket |
|---------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------|
| M 2.5 | Signal contacts | | |
| | S 6/6 | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | S 6/12 | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| M 2.9 x 0.5 | Fastening screws | | |
| | HQ 4/2 | 0.8 (plastic) / 1.1 (metal) | SD 0.6 x 3.5 mm or PH0 |
| | HQ 8 | 0.8 (plastic) / 1.1 (metal) | SD 0.6 x 3.5 mm or PH0 |
| | HQ 17 | 0.8 (plastic) / 1.1 (metal) | SD 0.6 x 3.5 mm or PH0 |
| M 3 | Contact screws | | |
| | HA 3 | 0.5 - 0.55 | SD 0.5 x 3.0 mm |
| | HA 4 | 0.5 - 0.55 | SD 0.5 x 3.0 mm |
| | HA 10 bis HA 48 | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PH0 |
| | HE | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | HVE | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | Signal contacts: | | |
| | S 4/2 | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | S 4/8 | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | PE connection via female contact | | |
| | S 4 | 0.5 - 0.8 | SD 0.6 x 3.5 mm |
| | ConCept modular frame, metal | 0.5 - 0.55 | SD 0.6 x 3.5 mm |
| | PE terminal | | |
| | HQ 5 | 0.5 - 0.55 | SD 0.6 x 3.5 or 0.8 x 4 mm |
| | HQ 7 | 0.5 - 0.55 | SD 0.6 x 3.5 or 0.8 x 4 mm |
| | Fastening screws | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | Guide pin | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | Guide bush | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | Coding pins | 0.5 - 0.55 | SD 0.6 x 3.5 mm or PZ0 |
| | M 4 | Contact screws | |
| HSB | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PZ1 |
| PE connection via male contact | | | |
| S 4 | | 0.5 - 0.8 | SD 0.6 x 3.5 mm |
| ConCept modular frame, metal | | 1.2 - 1.5 | SD 0.6 x 3.5 mm |
| PE terminal | | | |
| HA | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PH1 |
| HE | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PH1 |
| HEE | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PH1 |
| HVE | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PH1 |
| HD | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PZ1 |
| HDD | | 1.2 - 1.5 | SD 0.6 x 3.5 or 0.8 x 4 mm or PZ1 |
| S 6/6 (for signal contacts) | | 1.2 - 1.5 | 0.8 x 4 mm or PZ1 |
| ConCept modular frame, plastic | | 1.2 - 1.5 | 0.8 x 4 mm or PZ1 |
| M 5 | | PE terminal | |
| | HSB | 2 - 2.5 | SD 1 x 5.5 mm or PZ2 |
| | S 4/0 (Screw connection) | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | S 4/0 (Axial screw connection) | 2 - 2.5 | SD 0.8 x 4 mm or PZ 2 |
| | S 4/2 | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | S 4/8 | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | S 6/12 | 2 - 2.5 | SD 0.8 x 4 mm or PZ 2 |
| | S 6/36 | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | S 8/24 | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | S 12/2 | 2 - 2.5 | SD 1.2 x 6.5 mm or PH2 |
| | M 6 | Power contacts | |
| S 4/0 (Screw connection) | | 1.2 (1.5 mm ²) / 2 (2.5 mm ²) / 3 (4-16 mm ²) | SD 0.8 x 4 mm |
| S 4/2 | | 1.2 (1.5 mm ²) / 2 (2.5 mm ²) / 3 (4-16 mm ²) | SD 0.8 x 4 mm |
| S 4/8 | | 1.2 (1.5 mm ²) / 2 (2.5 mm ²) / 3 (4-16 mm ²) | SD 0.8 x 4 mm |
| M 7 x 0.75 | Power contacts | | |
| | S 4 | 1.1 - 1.7 | SW 2 |
| | S 6/6 (+ PE) | 6 - 8 | SW 4 |
| M 8 x 0.75 | Power contacts | | |
| | S 6/12 | 1.1 - 1.7 | SW 2 |
| | S 8/0 (+ PE) | 6 (10-16 mm ²) - 7 (25 mm ²) | SW 4 |
| M10 x 1 | Power contacts | | |
| | S 4/0 (Axial connection) | 2 - 3 | SW 3 |

Increasing the tightening torque does not improve the contact resistance. The stated torque settings offer optimal mechanical, thermal and electrical conditions. Exceeding the recommended values may even damage the conductor and terminal.