

**HDC insert
HDC HA 16 MS 33-48****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



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

The wire connection level is designed for screw connections. All screw connection elements are equipped with wire protection (with the exception of size 1).

Screw connection

General ordering data

| | |
|------------|--|
| Type | HDC HA 16 MS 33-48 |
| Order No. | 1650990000 |
| Version | HDC insert, Pin, 250 V, 16 A, Number of poles: 16, Screw connection, Size: 5 |
| GTIN (EAN) | 4008 190299613 |
| Qty. | 1 pc(s). |

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Catalogue status 17.04.2020 / We reserve the right to make technical changes.

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Technical data**Dimensions and weights**

| | | | |
|------------|-------|-----------------|------------|
| Width | 23 mm | Width (inches) | 0.906 inch |
| Height | 29 mm | Height (inches) | 1.142 inch |
| Depth | 73 mm | Depth (inches) | 2.874 inch |
| Net weight | 67 g | | |

Temperatures

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

Environmental Product Compliance

| | |
|------------|--|
| REACH SVHC | Lead 7439-92-1, Potassium perfluorobutane sulfonate 29420-49-3 |
|------------|--|

Dimensions

| | | | |
|----------------|-------|-------------------|-------|
| Height of plug | 29 mm | Total length base | 73 mm |
|----------------|-------|-------------------|-------|

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 | 0.55 Nm |
| Min. torque for main contact | 0.5 Nm | Number of poles | 16 |
| 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) | 250 V | Rated voltage according to UL/CSA | 600 V AC/DC |
| Series | HA | Size | 5 |
| Surface finish | Silver passivated | Type | Pin |
| UL 94 flammability rating | V-0 | Volume resistance | ≤ 2mΩ |

Connection data PE

| | | | |
|---|---------------------|---|---------------------|
| Blade size, crosshead | size PH1 | Blade size, slotted (PE connection) | SD 0.8 x 4.0 |
| Connection type PE | Screw connection | Fixing screw | M 4 |
| Rated cross-section | 2.5 mm ² | Stripping length PE connection | 10 mm |
| Tightening torque, max. PE connection | 1.5 Nm | Tightening torque, min. PE connection | 1.2 Nm |
| Wire connection cross section, finely stranded, max. | 2.5 mm ² | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm ² |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 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 |

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Technical data**Version**

| | | | |
|---|---------------------|---|---------------------|
| Blade size | size PH0 | 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 | 0.55 Nm | Min. torque for main contact | 0.5 Nm |
| Size | 5 | Stripping length, rated connection | 9 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 with wire-end ferrules DIN 46228/4, max. | 2.5 mm ² | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 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 | | |

Classifications

| | | | |
|-------------|-------------|------------|-------------|
| ETIM 6.0 | EC000438 | ETIM 7.0 | EC000438 |
| eClass 9.0 | 27-44-02-05 | eClass 9.1 | 27-44-02-05 |
| eClass 10.0 | 27-44-02-05 | UNSPSC | 30-21-18-01 |

Approvals

Approvals



ROHS

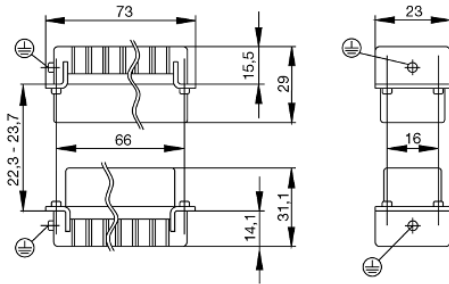
Conform

Downloads

| | |
|-------------------------|---|
| Brochure/Catalogue | CAT 3 HDC 17/18 EN FL FIELDWIRING EN |
| Engineering Data | EPLAN_WSCAD |
| Engineering Data | STEP |
| Technical Documentation | 1650990000 HDC HA 16 MS 33-48 STP Blatt 1.pdf |

Data sheet**HDC insert
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Drawings

Data sheet

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Accessories

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip



General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDS 0.8X4.0X100 | Version |
| Order No. | 9008340000 | Screwdriver, Blade width (B): 4 mm, Blade length: 100 mm, Blade thickness (A): 0.8 mm |
| GTIN (EAN) | 4032248056293 | |
| Qty. | 1 pc(s). | |
| Type | SDS 0.6X3.5X100 | Version |
| Order No. | 9008330000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm |
| GTIN (EAN) | 4032248056286 | |
| Qty. | 1 pc(s). | |

Crosshead screwdriver Phillips

Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip



General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDK PH1 | Version |
| Order No. | 9008480000 | Screwdriver, Blade width (B): 4.5 mm, Blade length: 80 mm |
| GTIN (EAN) | 4032248056477 | |
| Qty. | 1 pc(s). | |
| Type | SDK PH0 | Version |
| Order No. | 9008470000 | Screwdriver, Blade width (B): 3 mm, Blade length: 60 mm |
| GTIN (EAN) | 4032248056460 | |
| Qty. | 1 pc(s). | |

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Accessories

Slotted screwdriver

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip



General ordering data

| | | |
|------------|----------------------------|---|
| Type | SDIS 0.8X4.0X100 | Version |
| Order No. | 9008400000 | Screwdriver, Blade width (B): 4 mm, Blade length: 100 mm, Blade thickness (A): 0.8 mm |
| GTIN (EAN) | 4032248056361 | |
| Qty. | 1 pc(s). | |
| Type | SDIS 0.6X3.5X100 | Version |
| Order No. | 9008390000 | Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm |
| GTIN (EAN) | 4032248056354 | |
| Qty. | 1 pc(s). | |

Crosshead screwdriver Phillips

VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip



General ordering data

| | | |
|------------|----------------------------|----------------------------------|
| Type | SDIK PH0 | Version |
| Order No. | 9008560000 | Screwdriver, Blade length: 60 mm |
| GTIN (EAN) | 4032248056552 | |
| Qty. | 1 pc(s). | |
| Type | SDIK PH1 | Version |
| Order No. | 9008570000 | Screwdriver, Blade length: 80 mm |
| GTIN (EAN) | 4032248056569 | |
| Qty. | 1 pc(s). | |

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.