

**HDC HA 16 FC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

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www.weidmueller.com



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

The wire connection level is designed for crimp contacts.

The proven crimp connection method has been in standard use for decades.

Crimp contacts are not included in the scope of delivery of inserts.

Crimp connection

**General ordering data**

|            |                                                                    |
|------------|--------------------------------------------------------------------|
| Type       | HDC HA 16 FC                                                       |
| Order No.  | <a href="#">1873880000</a>                                         |
| Version    | , Female, 250 V, 16 A, No. of poles: 16, Crimp connection, Size: 5 |
| GTIN (EAN) | 4032248458394                                                      |
| Qty.       | 1 pc(s).                                                           |

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## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Width      | 23 mm   | Width (inches)  | 0.906 inch |
| Height     | 31.1 mm | Height (inches) | 1.224 inch |
| Depth      | 73 mm   | Depth (inches)  | 2.874 inch |
| Net weight | 36 g    |                 |            |

## Temperatures

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

## Dimensions

|                  |         |                   |       |
|------------------|---------|-------------------|-------|
| Height of socket | 31.1 mm | Total length base | 73 mm |
|------------------|---------|-------------------|-------|

## General data

|                                      |                     |                              |                                                             |
|--------------------------------------|---------------------|------------------------------|-------------------------------------------------------------|
| Conductor cross-section              | 2.5 mm <sup>2</sup> | Insulating material          | PC glass-fibre reinforced (UL-listed and railway-certified) |
| Insulating material group            | IIIa                | Insulation strength          | 10 <sup>10</sup> Ω                                          |
| Material                             | Copper alloy        | No. of poles                 | 16                                                          |
| Plugging cycles, gold                | ≥ 500               | 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, gold                                     |
| Type                                 | Female              | 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 <sup>2</sup> | 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 <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm <sup>2</sup> |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded, min.                                    | 0.5 mm <sup>2</sup> |
| Wire cross section, AWG (PE), max.                                                      | AWG 14              | Wire cross section, AWG (PE), min.                                                      | AWG 20              |
| Wire cross-section, solid, max.                                                         | 2.5 mm <sup>2</sup> | Wire cross-section, solid, min.                                                         | 0.5 mm <sup>2</sup> |

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## Technical data

## Version

|                                                                                         |                     |                                                                                         |                         |
|-----------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------|-------------------------|
| Conductor cross-section, max.                                                           | 4 mm <sup>2</sup>   | Conductor cross-section, min.                                                           | 0.5 mm <sup>2</sup>     |
| Material                                                                                | Copper alloy        | Size                                                                                    | 5                       |
| Stripping length, rated connection                                                      | 8 mm                | Surface finish                                                                          | Silver passivated, gold |
| Type of connection                                                                      | Crimp connection    | Volume resistance                                                                       | ≤ 2mΩ                   |
| Wire connection cross section AWG, max.                                                 | AWG 12              | Wire connection cross section AWG, min.                                                 | AWG 20                  |
| Wire connection cross section, finely stranded, max.                                    | 2.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm <sup>2</sup>     |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded, min.                                    | 0.5 mm <sup>2</sup>     |
| Wire cross-section, solid, max.                                                         | 2.5 mm <sup>2</sup> | Wire cross-section, solid, min.                                                         | 0.5 mm <sup>2</sup>     |

## Classifications

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 3.0   | EC000796    | 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

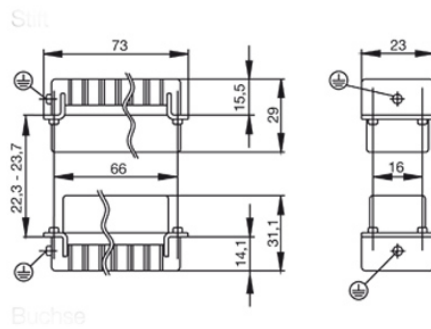
|                         |                                                                         |
|-------------------------|-------------------------------------------------------------------------|
| Brochure/Catalogue      | <a href="#">CAT 3 HDC 17/18 EN</a><br><a href="#">FL FIELDWIRING EN</a> |
| Engineering Data        | <a href="#">EPLAN_WSCAD</a>                                             |
| Engineering Data        | <a href="#">STEP</a>                                                    |
| Technical Documentation | <a href="#">1873880000 HDC_HA_16_FC_STP_Blatt_1.pdf</a>                 |

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## Drawings

### Abmessungen



# Tightening torques and screwing tools

| Screw size         | Connector type                          | Dia. tightening torque in Nm                                                      | Recommended blade inserts and AF size for hexagon socket |
|--------------------|-----------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------|
| <b>M 2.5</b>       | <b>Signal contacts</b>                  |                                                                                   |                                                          |
|                    | 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                                   |
| <b>M 2.9 x 0.5</b> | <b>Fastening screws</b>                 |                                                                                   |                                                          |
|                    | 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                                   |
| <b>M 3</b>         | <b>Contact screws</b>                   |                                                                                   |                                                          |
|                    | 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                                   |
|                    | <b>Signal contacts:</b>                 |                                                                                   |                                                          |
|                    | 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                                   |
|                    | <b>PE connection via female contact</b> |                                                                                   |                                                          |
|                    | 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                                          |
|                    | <b>PE terminal</b>                      |                                                                                   |                                                          |
|                    | 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                               |
|                    | <b>Fastening screws</b>                 | 0.5 - 0.55                                                                        | SD 0.6 x 3.5 mm or PZ0                                   |
|                    | <b>Guide pin</b>                        | 0.5 - 0.55                                                                        | SD 0.6 x 3.5 mm or PZ0                                   |
|                    | <b>Guide bush</b>                       | 0.5 - 0.55                                                                        | SD 0.6 x 3.5 mm or PZ0                                   |
|                    | <b>Coding pins</b>                      | 0.5 - 0.55                                                                        | SD 0.6 x 3.5 mm or PZ0                                   |
| <b>M 4</b>         | <b>Contact screws</b>                   |                                                                                   |                                                          |
|                    | HSB                                     | 1.2 - 1.5                                                                         | SD 0.6 x 3.5 or 0.8 x 4 mm or PZ1                        |
|                    | <b>PE connection via male contact</b>   |                                                                                   |                                                          |
|                    | 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                                          |
|                    | <b>PE terminal</b>                      |                                                                                   |                                                          |
|                    | 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                                        |
| <b>M 5</b>         | <b>PE terminal</b>                      |                                                                                   |                                                          |
|                    | 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                                   |
| <b>M 6</b>         | <b>Power contacts</b>                   |                                                                                   |                                                          |
|                    | S 4/0 (Screw connection)                | 1.2 (1.5 mm <sup>2</sup> ) / 2 (2.5 mm <sup>2</sup> ) / 3 (4-16 mm <sup>2</sup> ) | SD 0.8 x 4 mm                                            |
|                    | S 4/2                                   | 1.2 (1.5 mm <sup>2</sup> ) / 2 (2.5 mm <sup>2</sup> ) / 3 (4-16 mm <sup>2</sup> ) | SD 0.8 x 4 mm                                            |
|                    | S 4/8                                   | 1.2 (1.5 mm <sup>2</sup> ) / 2 (2.5 mm <sup>2</sup> ) / 3 (4-16 mm <sup>2</sup> ) | SD 0.8 x 4 mm                                            |
| <b>M 7 x 0.75</b>  | <b>Power contacts</b>                   |                                                                                   |                                                          |
|                    | S 4                                     | 1.1 - 1.7                                                                         | SW 2                                                     |
|                    | S 6/6 (+ PE)                            | 6 - 8                                                                             | SW 4                                                     |
| <b>M 8 x 0.75</b>  | <b>Power contacts</b>                   |                                                                                   |                                                          |
|                    | S 6/12                                  | 1.1 - 1.7                                                                         | SW 2                                                     |
|                    | S 8/0 (+ PE)                            | 6 (10-16 mm <sup>2</sup> ) - 7 (25 mm <sup>2</sup> )                              | SW 4                                                     |
| <b>M10 x 1</b>     | <b>Power contacts</b>                   |                                                                                   |                                                          |
|                    | 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.