

**HDC HVE 10+2 FS****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



The HVE-series high-voltage inserts are equipped with two latching contacts.

The wire connection level is designed as a screw element. All screw connections are equipped with a wire protection spring.

Number of poles: **12**

Rated current: **23 A**

Rated voltage: **830 V**

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

Screw connection

**General ordering data**

|            |                                                                                 |
|------------|---------------------------------------------------------------------------------|
| Version    | HDC insert, Female, 830 V, 20 A, Number of poles: 12, Screw connection, Size: 8 |
| Order No.  | <a href="#">1651360000</a>                                                      |
| Type       | HDC HVE 10+2 FS                                                                 |
| GTIN (EAN) | 4008190299965                                                                   |
| Qty.       | 1 pc(s).                                                                        |

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## Technical data

## Dimensions and weights

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 111 mm     | Depth (inches)  | 4.37 inch  |
| Height         | 35.2 mm    | Height (inches) | 1.386 inch |
| Net weight     | 104 g      | Width           | 34 mm      |
| Width (inches) | 1.339 inch |                 |            |

## Temperatures

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

## Environmental Product Compliance

|                     |                                                                |                           |
|---------------------|----------------------------------------------------------------|---------------------------|
| REACH SVHC          | Lead 7439-92-1, Potassium perfluorobutane sulfonate 29420-49-3 |                           |
| Chemical resistance | Substance                                                      | Acetone                   |
|                     | Chemical resistance                                            | Resistant                 |
|                     | Substance                                                      | Ammonia, watery           |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Petrol                    |
|                     | Chemical resistance                                            | Resistant                 |
|                     | Substance                                                      | Benzene                   |
|                     | Chemical resistance                                            | Resistant                 |
|                     | Substance                                                      | Diesel oil                |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Acetic acid, concentrated |
|                     | Chemical resistance                                            | Resistant                 |
|                     | Substance                                                      | Potassium hydroxide       |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Methanol                  |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Motor oil                 |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Lye, diluted              |
|                     | Chemical resistance                                            | Resistant                 |
|                     | Substance                                                      | Hydrochlorofluorocarbons  |
|                     | Chemical resistance                                            | Conditionally resistant   |
|                     | Substance                                                      | Outdoor use               |
|                     | Chemical resistance                                            | Conditionally resistant   |

## Dimensions

|                  |         |                   |        |
|------------------|---------|-------------------|--------|
| Height of socket | 35.2 mm | Total length base | 111 mm |
| Width            | 34 mm   |                   |        |

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## 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        | Max. torque for main contact         | 0.55 Nm                                                     |
| Min. torque for main contact | 0.5 Nm              | Number of poles                      | 12                                                          |
| Number of power contacts     | 10                  | Number of signal contacts            | 2                                                           |
| Plugging cycles, silver      | ≥ 500               | Pollution severity                   | 3                                                           |
| Rated current (DIN EN 61984) | 20 A                | Rated impulse voltage (DIN EN 61984) | 8 kV                                                        |
| Rated voltage (DIN EN 61984) | 830 V               | Rated voltage according to UL/CSA    | 600 V AC/DC                                                 |
| Series                       | HVE                 | Size                                 | 8                                                           |
| Surface finish               | Silver passivated   | Type                                 | Female                                                      |
| UL 94 flammability rating    | V-0                 | Volume resistance                    | ≤2 mΩ                                                       |

## Connection data PE

|                                       |                   |                                       |              |
|---------------------------------------|-------------------|---------------------------------------|--------------|
| Blade size, crosshead                 | size PH 1         | Blade size, slotted (PE connection)   | SD 0.8 x 4.0 |
| Connection type PE                    | Screw connection  | Fixing screw                          | M 4          |
| Rated cross-section                   | 4 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 cross section, AWG (PE), max.    | AWG 12            | Wire cross section, AWG (PE), min.    | AWG 20       |

## Version

|                                                                                         |                     |                                                                                         |                     |
|-----------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------|---------------------|
| Blade size                                                                              | size PZ0            | Blade size, slotted (screw connection)                                                  | SD 0.6 x 3.5        |
| Clamping screw                                                                          | M 3                 | Conductor cross-section, max.                                                           | 2.5 mm <sup>2</sup> |
| Conductor cross-section, min.                                                           | 0.5 mm <sup>2</sup> | Material                                                                                | Copper alloy        |
| Max. torque for main contact                                                            | 0.55 Nm             | Min. torque for main contact                                                            | 0.5 Nm              |
| Size                                                                                    | 8                   | Stripping length, rated connection                                                      | 9 mm                |
| Surface finish                                                                          | Silver passivated   | Type of connection                                                                      | Screw connection    |
| Volume resistance                                                                       | ≤2 mΩ               | Wire connection cross section AWG, max.                                                 | AWG 14              |
| Wire connection cross section AWG, min.                                                 | AWG 20              | Wire connection cross section, finely stranded, max.                                    | 4 mm <sup>2</sup>   |
| Wire connection cross section, finely stranded, min.                                    | 0.5 mm <sup>2</sup> | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 4 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 cross-section, solid, max.                                                         | 4 mm <sup>2</sup>   |
| Wire cross-section, solid, min.                                                         | 0.5 mm <sup>2</sup> |                                                                                         |                     |

## 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 | ECLASS 11.0 | 27-44-02-05 |

## Approvals

Approvals



ROHS

Conform

Creation date March 24, 2021 6:32:16 PM CET

Catalogue status 12.03.2021 / We reserve the right to make technical changes.

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## Technical data

### Downloads

Approval/Certificate/Document of  
Conformity

[Manufacturer's declaration](#)

Engineering Data

[STEP](#)

Engineering Data

[EPLAN, WSCAD](#)

Technical Documentation

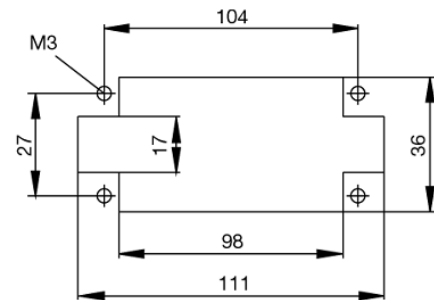
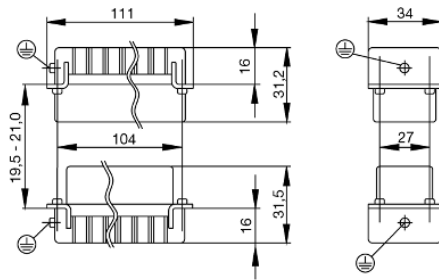
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## Drawings



# 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.