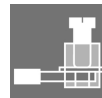
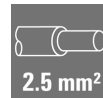


**HDC HA 16 FS 33-48****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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**

|            |   |
|------------|---|
| Version    | HDC insert, Female, 250 V, 16 A, Number of poles: 16, Screw connection, Size: 5 |
| Order No.  | <a href="#">1651020000</a>  |
| Type       | HDC HA 16 FS 33-48  |
| GTIN (EAN) | 4008190299644   |
| Qty.       | 1 pc(s).  |

## HDC HA 16 FS 33-48

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## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 73 mm   | Depth (inches)  | 2.874 inch |
| Height     | 31.1 mm | Height (inches) | 1.224 inch |
| Width      | 23 mm   | Width (inches)  | 0.906 inch |
| Net weight | 71 g    |                 |            |

## Temperatures

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

## Dimensions

|                  |         |                   |       |
|------------------|---------|-------------------|-------|
| Height of socket | 31.1 mm | Total length base | 73 mm |
| Width            | 23 mm   |                   |       |

## General data

|                              |   |                                      |             |
|------------------------------|---|--------------------------------------|-------------|
| BG                           | 5   | Colour                               | beige       |
| Conductor cross-section      | 2.5 mm <sup>2</sup>   | Free from halogens                   | true        |
| Insulating material          | PC glass-fibre reinforced (UL-listed and railway-certified) | Insulating material group            | IIIa        |
| Insulation strength          | 10 <sup>10</sup> Ω  | Low smoke acc. DIN EN 45545-2        | Yes         |
| 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                                 | Female      |
| Type of connection           | Screw connection  | UL 94 flammability rating            | V-0         |
| Volume resistance            | ≤2 mΩ   |                                      |             |

## Connection data PE

|                                       |              |                                       |                     |
|---------------------------------------|--------------|---------------------------------------|---------------------|
| 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 cross section, AWG (PE), max.    | AWG 14              |
| Wire cross section, AWG (PE), min.    | AWG 20       |                                       |                     |

## HDC HA 16 FS 33-48

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## Technical data

## Version

|   |                     |   |                     |
|---|---------------------|---|---------------------|
| BG  | 5                   | Blade size  | size PHO            |
| 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  | 5                   |
| 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.                                    | 2.5 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. | 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 cross-section, solid, max.   | 2.5 mm <sup>2</sup> | Wire cross-section, solid, min.   | 0.5 mm <sup>2</sup> |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC000438    | ETIM 7.0    | EC000438    |
| ETIM 8.0    | EC000438    | ETIM 9.0    | 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 |
| ECLASS 12.0 | 27-44-02-05 | ECLASS 13.0 | 27-44-02-05 |

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

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## Technical data

|                     |                         |
|---------------------|-------------------------|
| Chemical resistance | Conditionally resistant |
| Substance           | Outdoor use             |
| Chemical resistance | Conditionally resistant |

## Environmental Product Compliance

|                     |  |
|---------------------|--|
| REACH SVHC          | Lead 7439-92-1 Potassium perfluorobutane sulfonate 29420-49-3  |
| SCIP                | b67daa31-7dca-434d-8290-da7fb52f83a2   |
| Chemical resistance | de.myview.objectmodel.impl.BlockImpl@1e06b7fd de.myview.objectmodel.impl.BlockImpl@1caf95d3<br>de.myview.objectmodel.impl.BlockImpl@2e20a5f de.myview.objectmodel.impl.BlockImpl@2283f157<br>de.myview.objectmodel.impl.BlockImpl@91103a5 de.myview.objectmodel.impl.BlockImpl@69701e59<br>de.myview.objectmodel.impl.BlockImpl@7bd241da de.myview.objectmodel.impl.BlockImpl@46661ebe<br>de.myview.objectmodel.impl.BlockImpl@476b31fc de.myview.objectmodel.impl.BlockImpl@2e806d9e<br>de.myview.objectmodel.impl.BlockImpl@47352505 de.myview.objectmodel.impl.BlockImpl@31d050b3 |

## Approvals

Approvals



ROHS

Conform

## Downloads

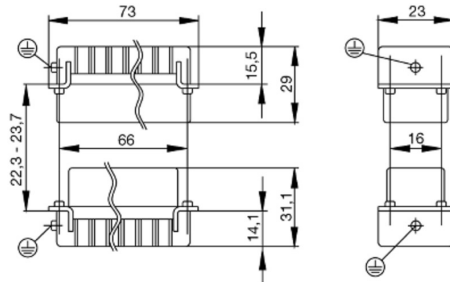
|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">Manufacturer's declaration</a>                             |
| Engineering Data                            | <a href="#">CAD data – STEP</a>  |
| Technical Documentation                     | <a href="#">1651020000 HDC HA 16 FS 33-48 STP Blatt 1.pdf</a>          |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                               |
| Brochures                                   | <a href="#">FL FIELDWIRING EN</a><br><a href="#">FL FIELDWIRING EN</a> |

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# Drawings



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

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Accessories****DSTV**

Various accessories are available for our inserts. This includes coding elements for the inserts.

**General ordering data**

|            |                            |  |
|------------|----------------------------|--|
| Type       | DSTV COBU5                 | Version  |
| Order No.  | <a href="#">1471500000</a> | Heavy-duty connectors, Accessories, Coding element |
| GTIN (EAN) | 4008190178543              |  |
| Qty.       | 100 pc(s).                 |  |
| Type       | DSTV COST4                 | Version  |
| Order No.  | <a href="#">1471300000</a> | Heavy-duty connectors, Accessories, Coding System  |
| GTIN (EAN) | 4008190017354              |  |
| Qty.       | 100 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.  | <a href="#">9008480000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056477              |                          |
| Qty.       | 1 pc(s).                   |                          |
| Type       | SDK PH0                    | Version                  |
| Order No.  | <a href="#">9008470000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056460              |                          |
| Qty.       | 1 pc(s).                   |                          |

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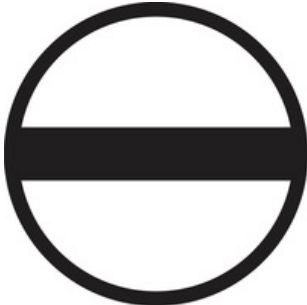
Germany

[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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.  | <a href="#">9008560000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056552              |                          |
| Qty.       | 1 pc(s).                   |                          |
| Type       | SDIK PH1                   | Version                  |
| Order No.  | <a href="#">9008570000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056569              |                          |
| Qty.       | 1 pc(s).                   |                          |

**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 0.6X3.5X100            | Version                  |
| Order No.  | <a href="#">9008330000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056286              |                          |
| Qty.       | 1 pc(s).                   |                          |
| Type       | SDS 0.8X4.0X100            | Version                  |
| Order No.  | <a href="#">9008340000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056293              |                          |
| Qty.       | 1 pc(s).                   |                          |

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[www.weidmueller.com](http://www.weidmueller.com)**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 0.6X3.5X100           | Version                  |
| Order No.  | <a href="#">9008390000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056354              |                          |
| Qty.       | 1 pc(s).                   |                          |
| Type       | SDIS 0.8X4.0X100           | Version                  |
| Order No.  | <a href="#">9008400000</a> | Screwdriver, Screwdriver |
| GTIN (EAN) | 4032248056361              |                          |
| 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 |
|--------------------|---|---|--|
| <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.