

**HDC insert  
HDC HA 16 FS 33-48**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
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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. All screw connection elements are equipped with wire protection (with the exception of size 1).

Screw connection

**General ordering data**

Type	HDC HA 16 FS 33-48
Order No.	<a href="#">1651020000</a>
Version	HDC insert, Female, 250 V, 16 A, Number of poles: 16, Screw connection, Size: 5
GTIN (EAN)	4008190299644
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	31.1 mm	Height (inches)	1.224 inch
Depth	73 mm	Depth (inches)	2.874 inch
Net weight	73 g		

**Temperatures**

Limit temperature	-40 °C ... 125 °C
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**Environmental Product Compliance**

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

Height of socket	31.1 mm	Total length base	73 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	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
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**

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 <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	≤ 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 <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 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



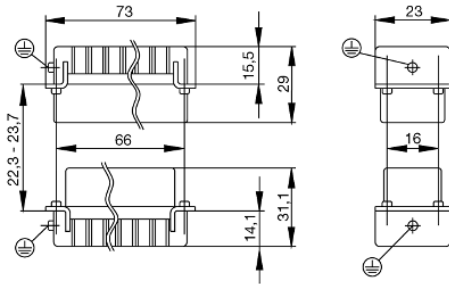
ROHS Conform

**Downloads**

Brochure/Catalogue	<a href="#">CAT 3 HDC 17/18 EN</a> <a href="#">FL FIELDWIRING EN</a>
Engineering Data	<a href="#">EPLAN_WSCAD</a>
Engineering Data	<a href="#">STEP</a>
Technical Documentation	<a href="#">1651020000 HDC HA 16 FS 33-48 STP Blatt 1.pdf</a>

**Data sheet****HDC insert  
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**Drawings**

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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.	<a href="#">9008340000</a>	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.	<a href="#">9008330000</a>	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.	<a href="#">9008480000</a>	Screwdriver, Blade width (B): 4.5 mm, Blade length: 80 mm
GTIN (EAN)	4032248056477	
Qty.	1 pc(s).	
Type	SDK PH0	Version
Order No.	<a href="#">9008470000</a>	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.	<a href="#">9008400000</a>	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.	<a href="#">9008390000</a>	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.	<a href="#">9008560000</a>	Screwdriver, Blade length: 60 mm
GTIN (EAN)	4032248056552	
Qty.	1 pc(s).	
Type	SDIK PH1	Version
Order No.	<a href="#">9008570000</a>	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	
<b>M 2.5</b>	<b>Signal contacts</b>			
	S 6/6	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	S 6/12	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
<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 PZO	
	HVE	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	<b>Signal contacts:</b>			
	S 4/2	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	S 4/8	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	<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 PZO	
	<b>Guide pin</b>	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	<b>Guide bush</b>	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	<b>Coding pins</b>	0.5 - 0.55	SD 0.6 x 3.5 mm or PZO	
	<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.