HDC insert
HDC HA 16 FS

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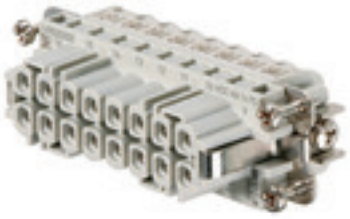

The small and slim HA series can be used wherever space is limited.
The wire connection level is designed for screw connections. All screw connection elements are equipped with wire protection (with the exception of size 1).
Screw connection

General ordering data

Type	HDC HA 16 FS
Order No.	1650780000
Version	HDC insert, Female, 250 V, 16 A, Number of poles: 16, Screw connection, Size: 5
GTIN (EAN)	4008190299408
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	71 g		

Temperatures

Limit temperature	-40 °C ... 125 °C

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

Dimensions

Height of socket	31.1 mm	Total length base	73 mm

General data

Conductor cross-section	2.5 mm²	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	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 mm²	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 mm²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.5 mm²	Wire connection cross-section, finely stranded, min.	0.5 mm²
Wire cross section, AWG (PE), max.	AWG 14	Wire cross section, AWG (PE), min.	AWG 20
Wire cross-section, solid, max.	2.5 mm²	Wire cross-section, solid, min.	0.5 mm²

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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 mm²
Conductor cross-section, min.	0.5 mm²	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 mm²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.5 mm²
Wire connection cross-section, finely stranded, min.	0.5 mm²	Wire cross-section, solid, max.	2.5 mm²
Wire cross-section, solid, min.	0.5 mm²		

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, Zuken E3.S
Engineering Data	STEP
Technical Documentation	1650780000_HDC_HA_16_FS_STP_Blatt__1.pdf

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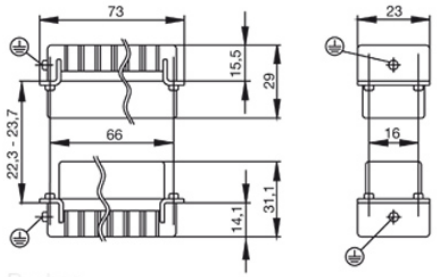
Drawings



Tightening torques and screwing tools

Screw size	Connector type	Dia. tightening torque in Nm	Recommended blade inserts and AF size for hexagon socket
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.