Data sheet

FFP D1/68H S1 B TY

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

OMNIMATE® - Board-to-Board connectors
Flexible engineering of compact devices
The use of future-proof contact systems, as well as the optimisation of manufacturing processes, are increasingly important in the development of efficient industrial devices, especially in the field of Industry 4.0. OMNIMATE® board-to-board connectors feature a 1.27 mm pitch and offer maximum flexibility due to different designs.

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General ordering data

Version	PCB plug-in connector, female plug, Pitch in mm (P): 1.27 mm, Number of poles: 68, Tray (manual assembly)
Order No.	2747590000
Type	FFP D1/68H S1 B TY
GTIN (EAN)	4050118896169
Qty.	75 ST
Product data	IEC: / 1.9 A UL: 150 V / 1 A / AWG 30 sol - AWG 30 sol
Packaging	Tray (manual assembly)

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Technical data

Approvals

Approvals	cULus
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E92202

Dimensions and weights

Depth	5.6 mm	Depth (inches)	0.2205 inch
Height	14.05 mm	Height (inches)	0.5531 inch
Width	50.96 mm	Width (inches)	2.0063 inch
Net weight	4.8 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

System Parameters

Product family	OMNIMATE Signal - Board-to-Board	Type of connection	Insulation displacement connection (IDC)
Wire connection method	IDC terminal	Pitch in mm (P)	1.27 mm
Pitch in inches (P)	0.050 "	Conductor outlet direction	90°/270°
Number of poles	68	Number of rows	1
Pin series quantity	2	Protection degree	IP20
Volume resistance	<25 mΩ	Plugging cycles	500
Plugging force/pole, max.	0.6 N	Pulling force/pole, max.	0.6 N

Material data

Insulating material	LCP	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Insulation strength	≥ 10^{10} Ω	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact base material	Copper alloy
Contact material	Cu-alloy	Contact surface	Ni/Au
Layer structure of plug contact	≥ 2 µm Ni / ≥ 0.4 µm PdNi / ≥ 0.05 µm Au	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-55 °C
Operating temperature, max.	125 °C		

Conductors suitable for connection

Wire connection cross section AWG, min.	AWG 30/1, 30/7	Wire connection cross section AWG, max.	AWG 30/1, 30/7
Outer diameter of insulation, min.	0.55 mm	Outer diameter of insulation, max.	0.75 mm

Rated data acc. to IEC

Rated current, min. number of poles (Tu=20°C)	1.9 A	Rated current, max. number of poles (Tu=20°C)	2.3 A
Rated current, min. number of poles (Tu=40°C)	2.5 A	Creepage distance, min.	0.4 mm
Clearance, min.	0.4 mm		

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Technical data

Rated data acc. to UL 1977

Reference to approval values	Specifications are maximum values, details - see approval certificate.	Rated voltage (UL 1977) (obsolete)	150 V
Rated current (UL 1977) (obsolete)	1 A	AWG-conductor, min. (UL 1977)	30 sol
AWG-conductor, max. (UL 1977)	30 sol		

Packing

Packaging	Tray (manual assembly)	VPE length	190.00 mm
VPE width	122.00 mm	VPE height	79.00 mm

Important note

IPC conformity	Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.
Notes	

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 9.0	27-44-03-09
ECLASS 9.1	27-44-03-09	ECLASS 10.0	27-44-03-09
ECLASS 11.0	27-46-02-02	ECLASS 12.0	27-46-02-02
ECLASS 13.0	27-46-02-02	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

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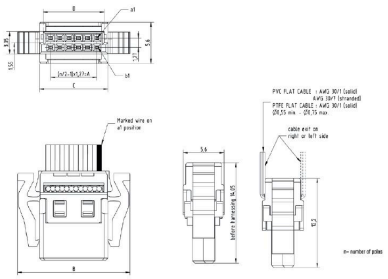
Drawings

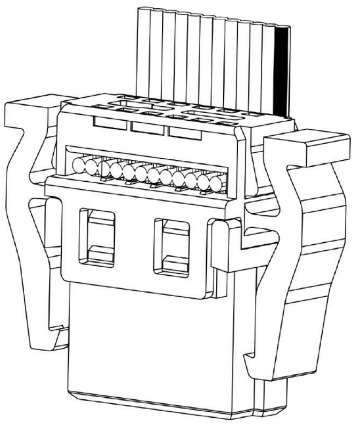
With optional strain relief

Dimensional drawing

Type	Order no.	No. of poles	A	B	C	D	E
FFP D1/12H S1 B TY	2747620000	12	6,35	15,4	9,37	8,37	15
FFP D1/16H S1 B TY	2747630000	16	8,89	17,94	11,81	10,81	15
FFP D1/20H S1 B TY	2747640000	20	11,43	20,48	14,45	13,45	15
FFP D1/26H S1 B TY	2747660000	26	16,24	24,28	18,26	17,26	15
FFP D1/32H S1 B TY	2747680000	32	19,05	28,1	22,07	21,07	15
FFP D1/40H S1 B TY	2747670000	40	24,13	33,18	27,15	26,15	15
FFP D1/50H S1 B TY	2747690000	50	30,48	39,53	33,5	32,5	15
FFP D1/68H S1 B TY	2747590000	68	41,91	50,96	44,93	43,93	16,2
FFP D1/80H S1 B TY	2747600000	80	49,53	58,58	50,88	51,55	16,2



Detailed drawing



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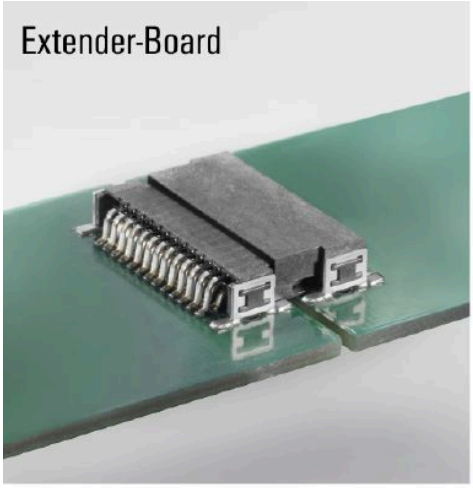

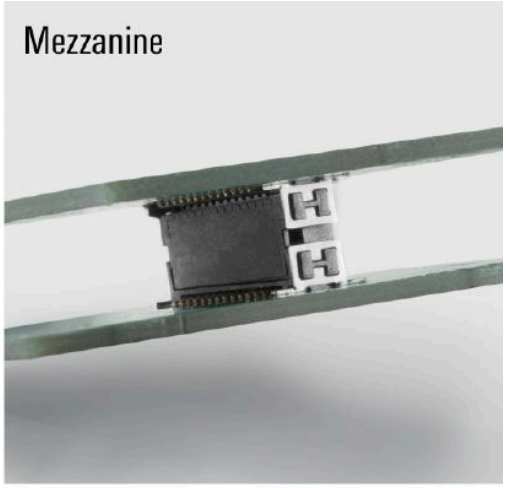

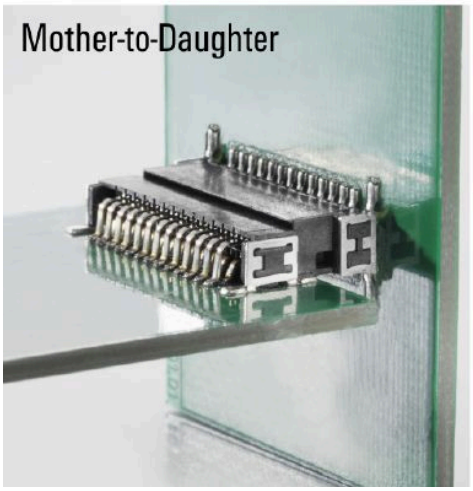

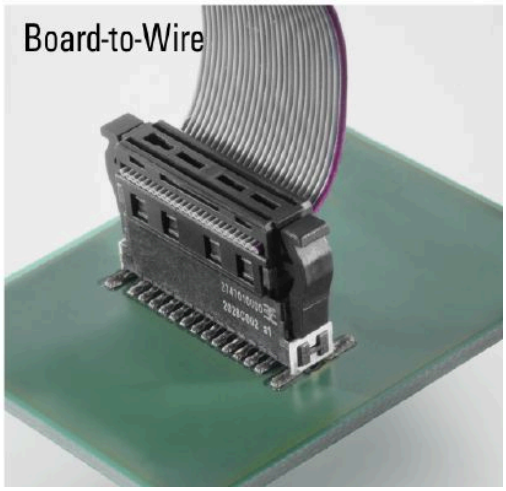

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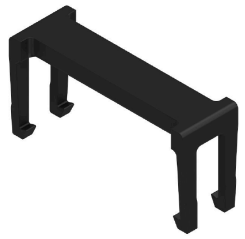
Accessories

FC/FFP - Strain relief (Accessory)



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General ordering data

Type	FC/FFP ZE/68 B BX	Version
Order No.	2853160000	PCB plug-in connector, Accessories, Pitch in mm (P): 1.27 mm,
GTIN (EAN)	4064675476030	Number of poles: 68, Box
Qty.	50 ST	

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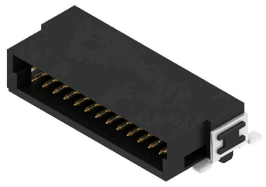
Counterpart

FMH - Male header, Board connection



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General ordering data

Type	FMH S1/68H F1 B RL	Version
Order No.	2747230000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001027	mm (P): 1.27 mm, Number of poles: 68, 90°, Tape
Qty.	560 ST	

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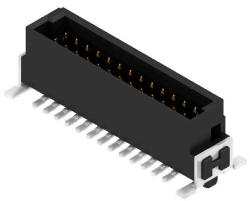
Counterpart

FMH1 - Male header, Board connection (stack height 1.75 mm)



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General ordering data

Type	FMH1 S1/68V F1 B RL	Version
Order No.	2747050000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001188	mm (P): 1.27 mm, Number of poles: 68, 180°, Tape
Qty.	280 ST	

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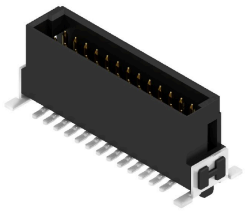
Counterpart

FMH3 - Male header, Board connection (stack height 3.25 mm)



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General ordering data

Type	FMH3 S1/68V F1 B RL	Version
Order No.	2747140000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001201	mm (P): 1.27 mm, Number of poles: 68, 180°, Tape
Qty.	280 ST	