

FFH S1/20H F1 B RL

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



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.

- Flexible device design - Industrial suitable density combined with high flexible connection combinations (Mezzanine, Mother-to-Daughter, Extender-card, Cable-to-Board)
- Automation-Ready - Developed for automatic assembly with high precise pin coplanarity and SMT-fixation
- Reliable contact - Up to 500 mating cycles due to industrial suitable gold-surface (PdNi-Au)
- Process-Ready - High performance LCP material for reflow soldering
- Scalability - Different heights with high contact overlapping ensure various solutions from 12 – 80 poles.
- Robust miniaturisation - simple and safe connection even possible under unfavorable mating conditions – e.g. inclination or offset.

General ordering data

Version	PCB plug-in connector, female header, SMD solder connection, Pitch in mm (P): 1.27 mm, Number of poles: 20, 90°, Tape
Order No.	2747450000
Type	FFH S1/20H F1 B RL
GTIN (EAN)	4064675000457
Qty.	560 items
Product data	IEC: / 2.8 A UL: 150 V
Packaging	Tape

FFH S1/20H F1 B RL

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Technical data

Approvals

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate No. (cURus) E92202

Dimensions and weights

Depth	10.9 mm	Depth (inches)	0.4291 inch
Height	3.7 mm	Height (inches)	0.1457 inch
Width	17.78 mm	Width (inches)	0.7 inch
Net weight	3.41 g		

Environmental Product Compliance

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

System specifications

Transmission rate	3.125 Gbit/s	Product family	OMNIMATE Signal - Board-to-Board
Type of connection	Board connection	Mounting onto the PCB	SMD solder connection
Pitch in mm (P)	1.27 mm	Pitch in inches (P)	0.050 "
Outgoing elbow	90°	Number of poles	20
Number of solder pins per pole	1	Coplanarity:	0.1 mm
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 resistance	≥ 10 ¹⁰ Ω	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact base material	Copper alloy
Contact material	Cu-alloy	Contact surface	Gold over nickel
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		

Rated data acc. to IEC

Rated current, min. number of poles (Tu=20°C)	2.8 A	Creepage distance, min.	0.4 mm
Clearance, min.	0.4 mm		

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
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Technical data**Packing**

Packaging	Tape	VPE length	305.00 mm
VPE width	202.00 mm	VPE height	25.00 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.

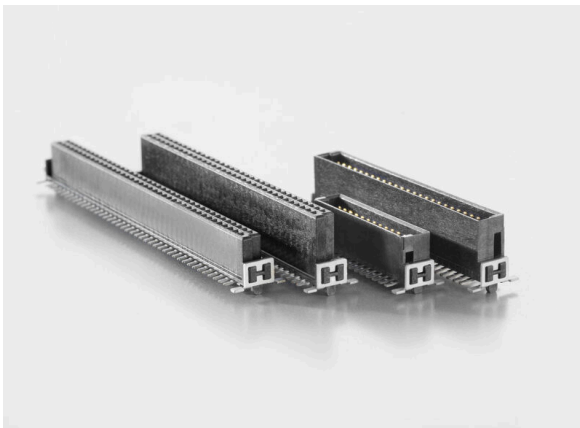
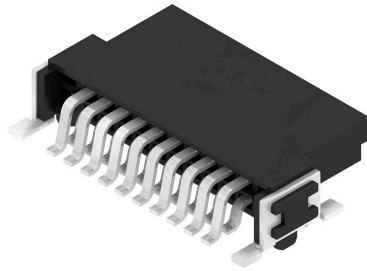
Notes

Classifications

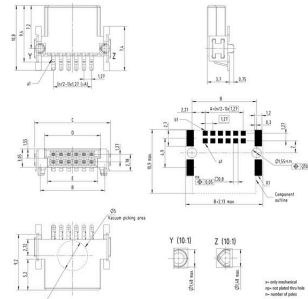
ETIM 8.0	EC002637	ETIM 9.0	EC002637
ETIM 10.0	EC002637	ECLASS 14.0	27-46-02-01
ECLASS 15.0	27-46-02-01		

Drawings

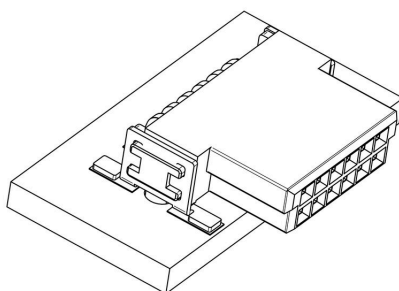
Product image



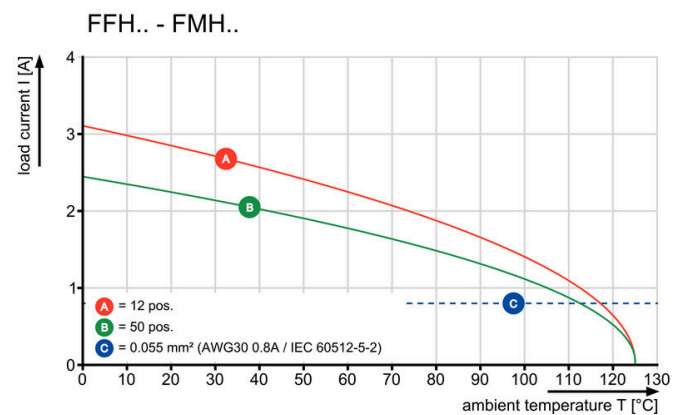
Type	Order no.	No. of poles	A	B	C	D	E
FFH S1/20H F1 B RL	2747430000	12	6.35	10.27	12.7	5.37	8.37
FFH S1/20H F1 B RL	2747430001	16	8.89	13.31	15.24	11.81	10.81
FFH S1/20H F1 B RL	2747430002	20	11.43	15.85	17.78	14.45	13.45
FFH S1/20H F1 B RL	2747430003	25	13.97	18.39	21.29	16.99	17.29
FFH S1/20H F1 B RL	2747430004	32	18.08	23.47	26.4	22.57	21.57
FFH S1/20H F1 B RL	2747430005	40	24.43	30.91	34.63	31.15	29.15
FFH S1/20H F1 B RL	2747430006	50	31.43	38.9	43.63	39.15	37.15
FFH S1/20H F1 B RL	2747430007	60	41.27	48.27	54.27	48.93	47.93
FFH S1/20H F1 B RL	2747430008	80	53.5	63.91	72.58	65.58	64.58

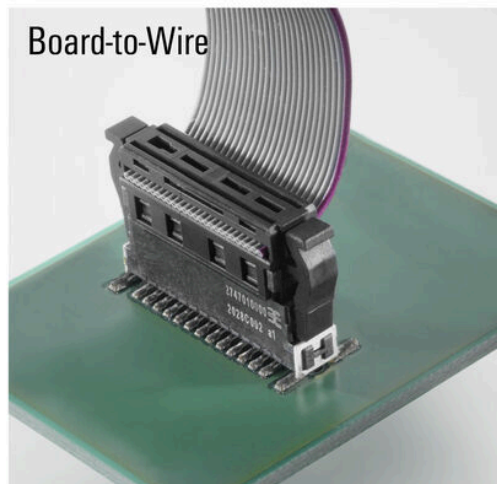
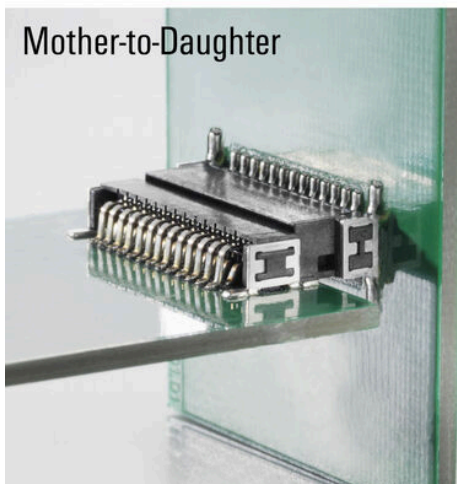
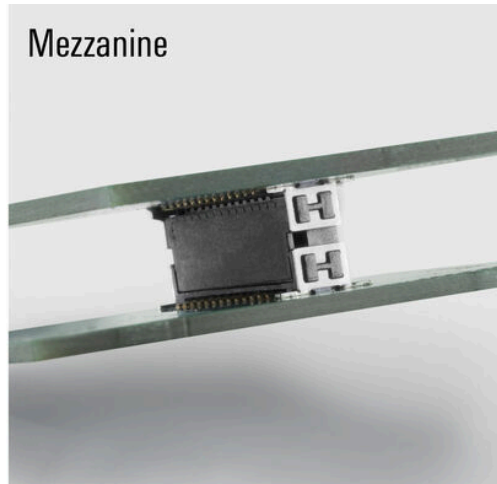
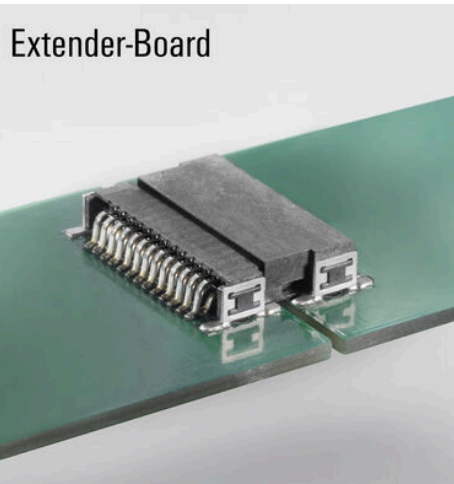


Detailed drawing



Derating curve





FFH S1/20H F1 B RL

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Counterpart

FMH - Male header, Board connection



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General ordering data

Type	FMH S1/20H F1 B RL	Version
Order No.	2747180000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001300	mm (P): 1.27 mm, Number of poles: 20, 90°, Tape
Qty.	560 ST	

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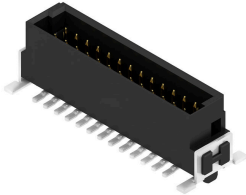
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Counterpart

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

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General ordering data

Type	FMH1 S1/20V F1 B RL	Version
Order No.	2747000000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001249	mm (P): 1.27 mm, Number of poles: 20, 180°, Tape
Qty.	280 ST	

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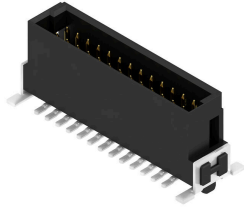
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Counterpart

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

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General ordering data

Type	FMH3 S1/20V F1 B RL	Version
Order No.	2747090000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001171	mm (P): 1.27 mm, Number of poles: 20, 180°, Tape
Qty.	280 ST	