

FFH S1/40H 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: 40, 90°, Tape
Order No.	2747480000
Type	FFH S1/40H F1 B RL
GTIN (EAN)	4064675000471
Qty.	560 items
Product data	IEC: / 2.8 A UL: 150 V
Packaging	Tape

FFH S1/40H 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	30.48 mm	Width (inches)	1.2 inch
Net weight	4.34 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	40
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	$\geq 10^{10} \Omega$	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	$\geq 2 \mu\text{m Ni} / \geq 0.4 \mu\text{m PdNi} / \geq 0.05 \mu\text{m Au}$	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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Packing

Packaging	Tape	VPE length	350.00 mm
VPE width	340.00 mm	VPE height	135.00 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.
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Notes

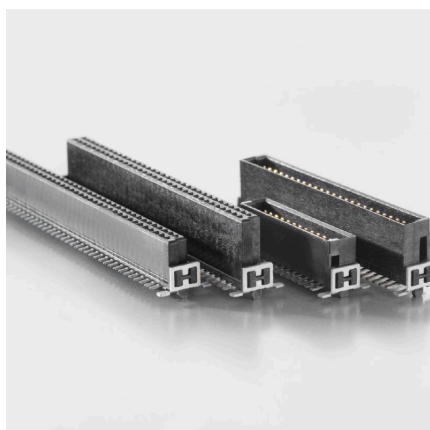
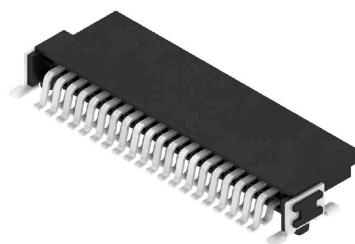
Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	EC002637
ETIM 10.0	EC002637	ECLASS 9.0	27-44-04-02
ECLASS 9.1	27-44-04-02	ECLASS 10.0	27-44-04-02
ECLASS 11.0	27-46-02-01	ECLASS 12.0	27-46-02-01
ECLASS 13.0	27-46-02-01	ECLASS 14.0	27-46-02-01
ECLASS 15.0	27-46-02-01		

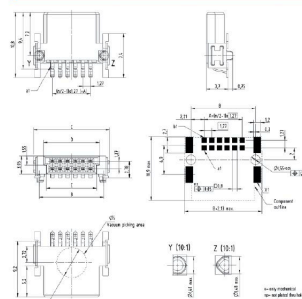
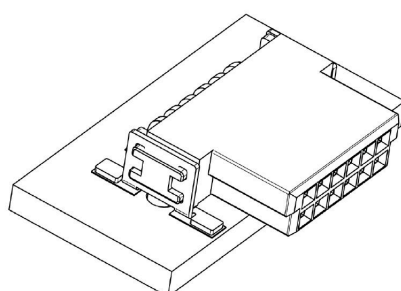
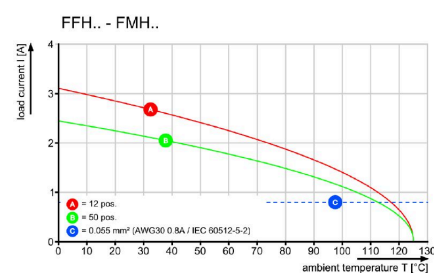
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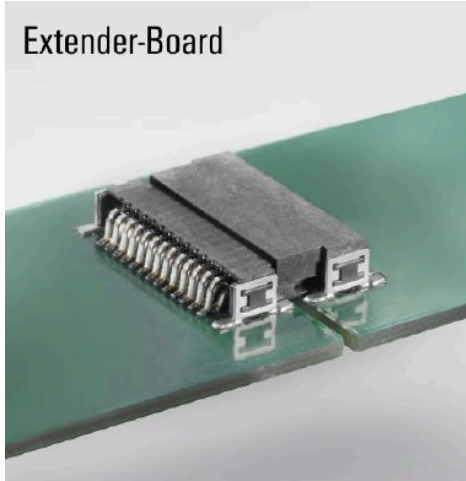
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Drawings
Product image


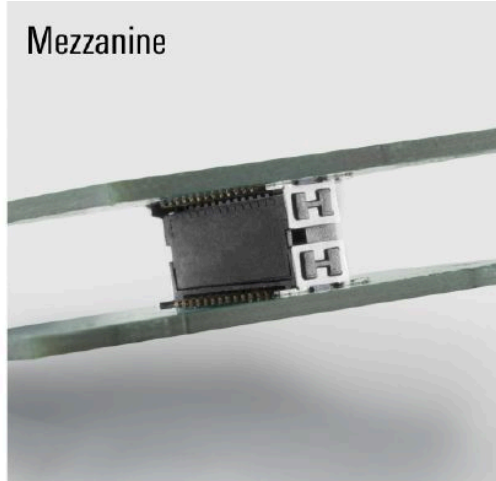
Type	Order no.	No. of poles	A	B	C	D	E
FFH-S1/24H F1 B RL	2742403000	12	6.30	13.77	12.7	8.92	8.92
FFH-S1/36H F1 B RL	2743603000	18	8.86	13.71	15.24	11.51	11.51
FFH-S1/36H F1 B RL	2743603000	18	11.43	15.55	17.00	14.45	14.45
FFH-S1/36H F1 B RL	2743603000	18	15.47	13.98	21.49	13.29	13.29
FFH-S1/24H F1 B RL	2742403000	12	19.05	23.47	21.4	22.57	23.47
FFH-S1/36H F1 B RL	2743603000	18	24.43	23.93	28.46	21.19	21.19
FFH-S1/36H F1 B RL	2743603000	18	28.48	24.3	28.53	21.1	21.1
FFH-S1/36H F1 B RL	2743603000	18	41.25	41.25	40.26	44.23	41.23
FFH-S1/36H F1 B RL	2743603000	18	48.53	53.25	55.09	52.25	52.25


Detailed drawing

Derating curve


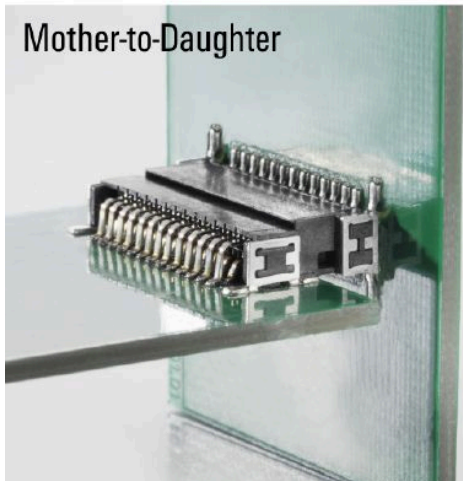
Extender-Board



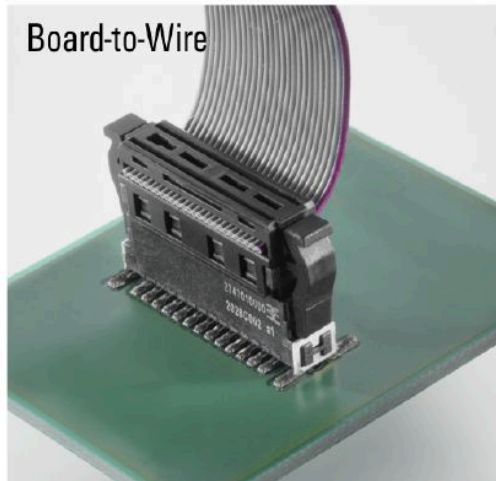
Mezzanine

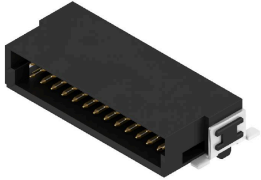


Mother-to-Daughter



Board-to-Wire



FFH S1/40H F1 B RL**Weidmüller Interface GmbH & Co. KG**Klingenbergstraße 26
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Germanywww.weidmueller.com**Counterpart****FMH - Male header, Board connection****OMNIMATE® - Board-to-Board connectors**

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General ordering data

Type	FMH S1/40H F1 B RL	Version
Order No.	2747210000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001034	mm (P): 1.27 mm, Number of poles: 40, 90°, Tape
Qty.	560 ST	

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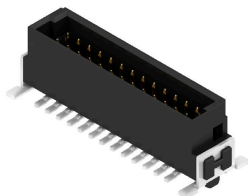
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Counterpart

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



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General ordering data

Type	FMH1 S1/40V F1 B RL	Version
Order No.	2747030000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001485	mm (P): 1.27 mm, Number of poles: 40, 180°, Tape
Qty.	280 ST	

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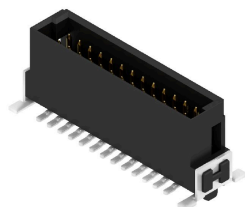
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Counterpart

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



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General ordering data

Type	FMH3 S1/40V F1 B RL	Version
Order No.	2747120000	PCB plug-in connector, male header, SMD solder connection, Pitch in
GTIN (EAN)	4064675001164	mm (P): 1.27 mm, Number of poles: 40, 180°, Tape
Qty.	280 ST	