

**FFH9 S1/20V F1 B RL****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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, 180°, Tape
Order No.	<a href="#">2747360000</a>
Type	FFH9 S1/20V F1 B RL
GTIN (EAN)	4064675001119
Qty.	280 items
Product data	IEC: / 2.8 A UL: 150 V
Packaging	Tape

## FFH9 S1/20V 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	7.8 mm	Depth (inches)	0.3071 inch
Height	9.9 mm	Height (inches)	0.3898 inch
Width	17.78 mm	Width (inches)	0.7 inch
Net weight	5.85 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	180°	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	$\geq 10^{10} \Omega$	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 (T <sub>u</sub> =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		

**Drawings**

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**Product image**

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**Dimensional drawing**

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**Detailed drawing**

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**Derating curve**

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## FFH9 S1/20V F1 B RL

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## Counterpart

## FMH - Male header, Board connection

## OMNIMATE® - Board-to-Board connectors

Flexible engineering of compact devices

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## General ordering data

Type	FMH S1/20H F1 B RL	Version
Order No.	<a href="#">2747180000</a>	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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Germany[www.weidmueller.com](http://www.weidmueller.com)**Counterpart****FMH1 - Male header, Board connection (stack height 1.75 mm)****OMNIMATE® - Board-to-Board connectors**

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**General ordering data**

Type	FMH1 S1/20V F1 B RL	Version
Order No.	<a href="#">2747000000</a>	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	

**Counterpart****FMH3 - Male header, Board connection (stack height 3.25 mm)****OMNIMATE® - Board-to-Board connectors**

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**General ordering data**

Type	FMH3 S1/20V F1 B RL	Version
Order No.	<a href="#">2747090000</a>	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	