OMNIMATE Power - series BU/SU 10.16HP
SU 10.16HP/04/90MF3 3.5AG BK BX

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Product image

Similar to illustration

Single-row, high-current male header, for side-by-side mounting without sacrificing any poles, or with patented flange for fast locking without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, with unique coding diversity and additional fastening in the flange. 3.5 mm pin length is optimised for wave soldering, plug-in direction 90° to solder pins.

General ordering data

Type	SU 10.16HP/04/90MF3 3.5AG BK BX
Order No.	2580420000
Version	PCB plug-in connector, male header, closed side, Middle flange, THT solder connection, 10.16 mm, Number of poles: 4, 90°, Solder pin length (l): 3.5 mm, black, Box
GTIN (EAN)	4050118589375
Qty.	36 pc(s).
Product data	IEC: 1000 V / 78.3 A UL: 300 V / 60 A
Packaging	Box

Creation date May 2, 2020 2:58:54 AM CEST

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Technical data

Dimensions and weights

Net weight	17.752 g

System specifications

Product family	OMNIMATE Power - series BU/SU 10.16HP	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	10.16 mm
Pitch in inches (P)	0.4 inch	Outgoing elbow	90°
Number of poles	4	Number of solder pins per pole	3
Solder pin length (l)	3.5 mm	Solder pin length tolerance	+0.1 / -0.3 mm
Solder pin dimensions	1.2 x 1.1 mm	Solder pin dimensions = d tolerance	+0.1 / -0.1 mm
Solder eyelet hole diameter (D)	1.6 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
L1 in mm	40.64 mm	L1 in inches	1.6 inch
Pin series quantity	2	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch, plugged
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged	Volume resistance	2.00 mΩ
Can be coded	Yes	Plugging cycles	≤ 50

Material data

Insulating material	PBT GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10^8 Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Layer structure of solder connection	3- µm Ag
Layer structure of plug contact	3- µm Ag	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	120 °C

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	78.3 A
Rated current, max. number of poles (Tu=20°C)	67.9 A	Rated current, min. number of poles (Tu=40°C)	70.6 A
Rated current, max. number of poles (Tu=40°C)	61.3 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/3	690 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV	Short-time withstand current resistance	3 x 1s mit 1000 A
Clearance, min.	8.9 mm	Creepage distance, min.	10.5 mm

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	300 V
Rated voltage (Use group D / CSA)	600 V	Rated current (Use group B / CSA)	60 A
Rated current (Use group C / CSA)	60 A	Rated current (Use group D / CSA)	5 A

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Technical data

Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group C / UL 1059)	300 V
Rated voltage (Use group D / UL 1059)	600 V	Rated current (Use group B / UL 1059)	60 A
Rated current (Use group C / UL 1059)	60 A	Rated current (Use group D / UL 1059)	5 A
Clearance distance, min.	8.9 mm	Creepage distance, min.	10.5 mm

Packing

Packaging	Box	VPE length	350 mm
VPE width	135 mm	VPE height	47 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02		

Notes

Notes	• Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule with plastic collar to DIN 46228/4 • Wire end ferrule without plastic collar to DIN 46228/1 • P on drawing = pitch • Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards. • MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3 • For all applications with flange we recommend to fix the pin header with the help of the soldering flange or a self-tapping screw on the board.
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.

Downloads

White paper power electronics connected correctly	Download Whitepaper
White paper UL 600 V	Download Whitepaper

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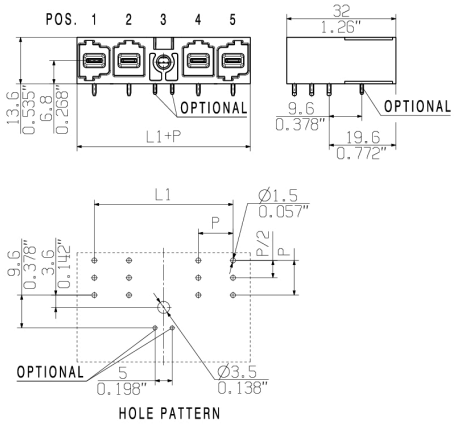
Drawings

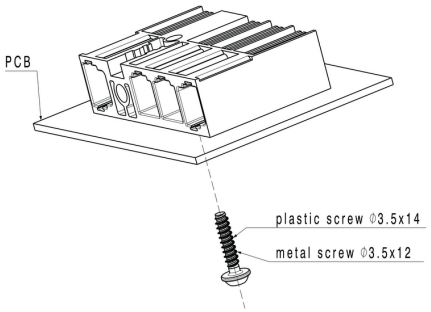
Dimensional drawing



Graph

6	M(S)F6	o	o	o	o	o	X	o
6	M(S)F5	o	o	o	o	X	o	o
6	M(S)F4	o	o	o	X	o	o	o
6	M(S)F3	o	o	X	o	o	o	o
6	M(S)F2	o	X	o	o	o	o	o
5	M(S)F5	o	o	o	o	X	o	
5	M(S)F4	o	o	o	X	o	o	
5	M(S)F3	o	o	X	o	o	o	
5	M(S)F2	o	X	o	o	o	o	
4	M(S)F4	o	o	o	X	o		
4	M(S)F3	o	o	X	o	o		
4	M(S)F2	o	X	o	o	o		
3	M(S)F3	o	o	X	o			
3	M(S)F2	o	X	o	o			
2	M(S)F2	o	X	o				
No of poles	**X = middle flange position**	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Example of use



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Mating connector (conditionally pluggable)

BUF 10.16IT 180MSF AG

Device connectivity | OMNIMATE® Power BUF 10.16 PUSH IN PCB connector, 16mm², with wire-ready function
• PUSH IN technology with settable wire-ready contact point simplifies the connection of stranded wires without wire-end ferrules and wires with particularly rigid insulation
• Direct and tool-free connection of solid wires and wires with crimped wire-end ferrules for fast and safe wiring
• Single-hand operation of the plug-in connector and automatic connection thanks to the middle flange with snap-on mechanism and optionally with additional screw fastening

General ordering data

Type	BUF 10.16IT/04/180MSF3 ...	Version	Product data	Packaging
Order No.	2493270000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 76 A / 2.5 - 16 mm²	Box
GTIN (EAN)	4050118503050	180°, PUSH IN with actuator, Clamping range, max. : 16 mm², Box	UL: 600 V / 34 A / AWG 12 - AWG 6	
Qty.	24 pc(s).			

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Mating connector (fully pluggable)

BUF 10.16IT 180MF AG

Device connectivity | OMNIMATE® Power BUF 10.16 PUSH IN PCB connector, 16mm², with wire-ready function
• PUSH IN technology with settable wire-ready contact point simplifies the connection of stranded wires without wire-end ferrules and wires with particularly rigid insulation
• Direct and tool-free connection of solid wires and wires with crimped wire-end ferrules for fast and safe wiring
• Single-hand operation of the plug-in connector and automatic connection thanks to the middle flange with snap-on mechanism and optionally with additional screw fastening

General ordering data

Type	BUF 10.16IT/04/180MF3 A ...	Version	Product data	Packaging
Order No.	2493210000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 76 A / 2.5 - 16 mm²	Box
GTIN (EAN)	4050118502794	180°, PUSH IN with actuator, Clamping range, max. : 16 mm², Box	UL: 600 V / 34 A / AWG 12 - AWG 6	
Qty.	24 pc(s).			

BUZ 10.16IT/180MF

180° female plug with 10.16 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SU 10.16 IT with leading contact.
Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth.
The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.
Also optionally available without middle flange interlock.

General ordering data

Type	BUZ 10.16IT/04/180MF3 A ...	Version	Product data	Packaging
Order No.	2000430000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 78.3 A / 0.2 - 16 mm²	Box
GTIN (EAN)	4050118382020	180°, Clamping yoke connection, Clamping range, max. : 16 mm², Box	UL: 600 V / 60 A / AWG 22 - AWG 4	
Qty.	18 pc(s).			

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Mating connector (fully pluggable)

BUZ 10.16IT/180MF SH

OMNIMATE Power for IT networks – scalable to 50 kVA
Tailor-made solutions for special requirements
More standard-compliance means fewer compromises: OMNIMATE Power for IT networks has integrated features incorporated as standard across the range. This makes the design-in and approvals process simpler and makes them safer and more reliable in operation. Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process. In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process. Including pre-assembled pluggable shield connection for large area shielding in your application.

General ordering data

Type	BUZ 10.16IT/04/180MF3SH ...	Version	Product data
Order No.	2627460000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 78.3 A / 0.2 - 16 mm²
GTIN (EAN)	4050118631340	180°, Clamping yoke connection, Clamping range, max. : 16 mm²	UL: 600 V / 60 A / AWG 22 - AWG 4
Qty.	20 pc(s).		
Type	BUZ 10.16IT/04/180MF3SH ...	Version	Product data
Order No.	2627410000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 78.3 A / 0.2 - 16 mm²
GTIN (EAN)	4050118631296	180°, Clamping yoke connection, Clamping range, max. : 16 mm²	UL: 600 V / 60 A / AWG 22 - AWG 4
Qty.	20 pc(s).		
Type	BUZ 10.16IT/04/180MF3SH ...	Version	Product data
Order No.	2627360000	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,	IEC: 1000 V / 78.3 A / 0.2 - 16 mm²
GTIN (EAN)	4050118631241	180°, Clamping yoke connection, Clamping range, max. : 16 mm²	UL: 600 V / 60 A / AWG 22 - AWG 4
Qty.	20 pc(s).		

Wave Solder Profile

Recommended wave solderding profiles

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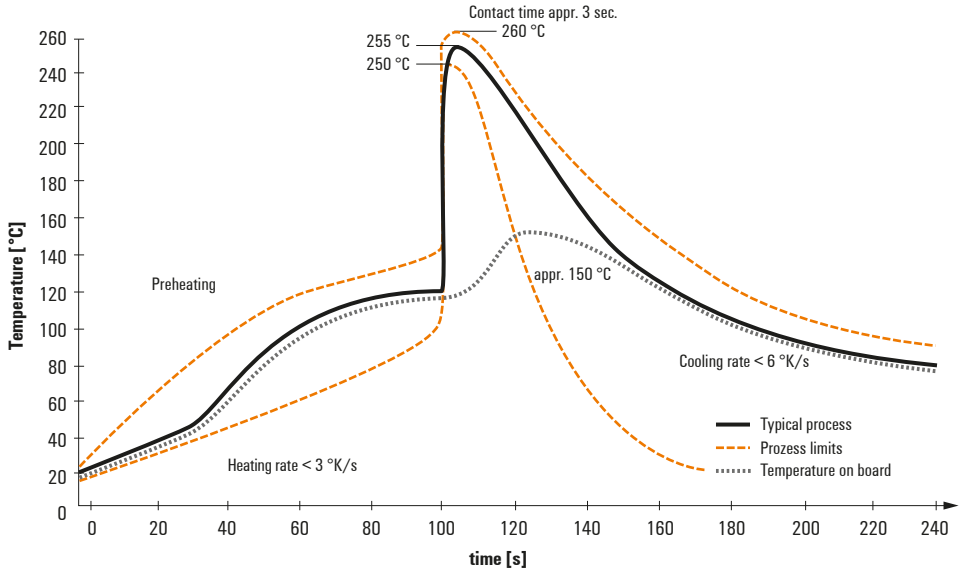
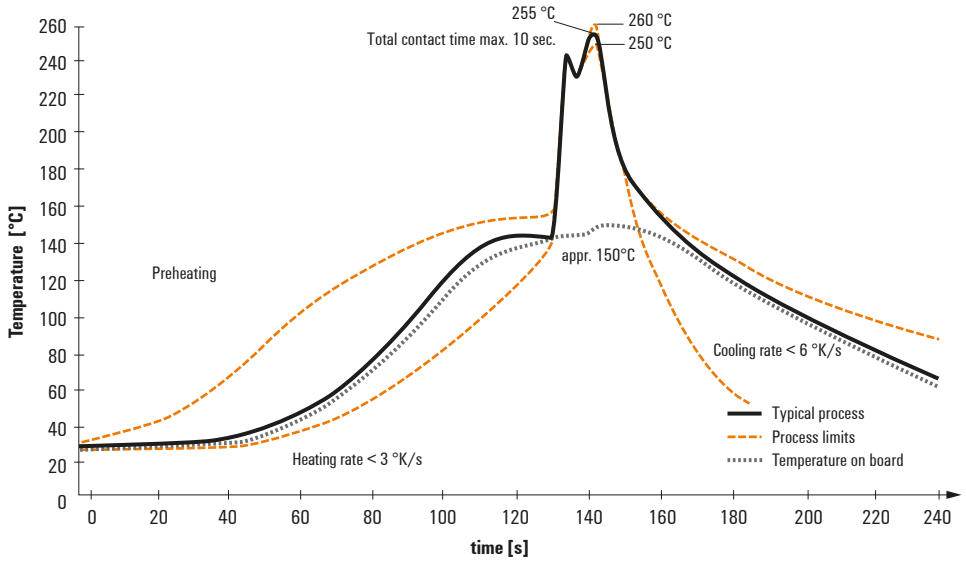
Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:
- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.