

SU 10.16IT/04/90MSF3 3.5AG BK BX SO**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Male header with middle solder flange fastening in 10.16 pitch for 400-V IT systems according to IEC 61800-5-1. UL approval in compliance with UL840 (600 V) when using leading contact. When used together with the BUZ 10.16 IT, they comply with the expanded requirements for 5.5 mm of touch protection with IT systems (400 V relative to earth), according to IEC 61800-5-1.

The middle-flange interlock feature decreases the space required by one pitch width when compared to other standard solutions.

Available on request with screw flange or without flange.

General ordering data

Version	PCB plug-in connector, male header, THT solder connection, 10.16 mm, Number of poles: 4, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	2630170000
Type	SU 10.16IT/04/90MSF3 3.5AG BK BX SO
GTIN (EAN)	4050118633849
Qty.	36 pc(s).
Product data	IEC: 1000 V / 78.3 A UL:
Packaging	Box

Creation date May 11, 2025 9:43:37 PM CEST

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Technical data

Dimensions and weights

Net weight 19.997 g

System specifications

Product family	OMNIMATE Power - series BU/SU 10.16IT		
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 "		
Outgoing elbow	90°		
Number of poles	4		
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		
L1 in mm	40.64 mm		
L1 in inches	1.6 "		
Pin series quantity	1		
Tightening torque for screw flange, min.	0.3 Nm		
Tightening torque for screw flange, max.	0.4 Nm		
Tightening torque	Torque type	Mounting screw, PCB	
	Usage information	Thickness	min. 1.44 mm
			max. 1.76 mm
		Tightening torque	min. 0.25 Nm
			max. 0.3 Nm
		Recommended screw	Part number SU 10.16 BFSC P 35X 14
		Thickness	min. 2.88 mm
			max. 3.52 mm
		Tightening torque	min. 0.2 Nm
			max. 0.25 Nm
		Recommended screw	Part number SU 10.16 BFSC P 35X 14
		Thickness	min. 1.44 mm
			max. 3.52 mm
		Tightening torque	min. 0.8 Nm
			max. 0.9 Nm
		Recommended screw	Part number SU 10.16 BFSC S 35X12

Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of solder connection	≥ 3 µm Ag	Layer structure of plug contact	≥ 3 µm Ag
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	120 °C

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Rated data acc. to IEC

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 impulse voltage for surge voltage class/ pollution degree II/2	6,000 V	Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV
Clearance, min.	8.9 mm	Creepage distance, min.	10.5 mm

Rated data acc. to UL 1059

Clearance distance, min.	8.9 mm	Creepage distance, min.	10.5 mm
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Packing

Packaging	Box	VPE length	352 mm
VPE width	135 mm	VPE height	45 mm

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		

Environmental Product Compliance

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

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	• Additional variants on request • Rated current related to rated cross-section & min. No. of poles. • 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. • 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. • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

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Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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www.weidmueller.com**Technical data****Approvals**

ROHS	Conform
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Downloads

Engineering Data	CAD data – STEP
Product Change Notification	20220630 Change OMNIMATE® Power SU 10.16IT 20220630 Technische Änderung OMNIMATE® Power SU 10.16IT
Catalogues	Catalogues in PDF-format

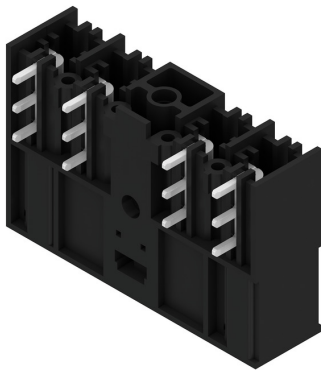
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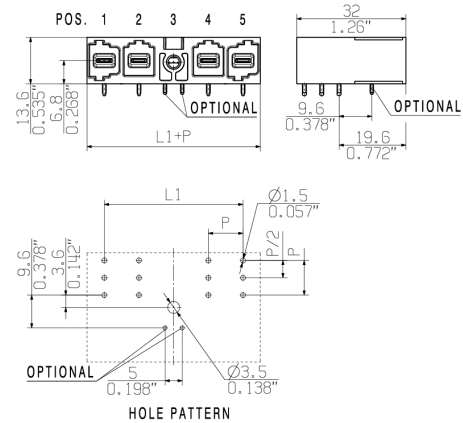
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Drawings

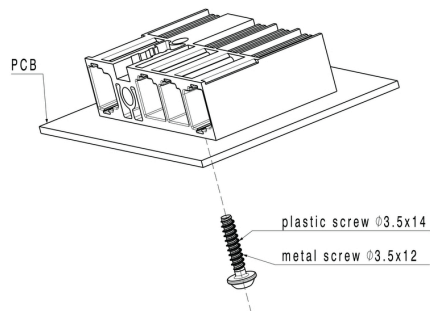
Product image



Dimensional drawing



Example of use



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Accessories

Mounting screw

General ordering data

Type	SU 10.16 BFSC S 35X12	Version	Product data
Order No.	2812290000	PCB plug-in connector, Mounting screw	
GTIN (EAN)	4064675294955		
Qty.	50 pc(s).		
Type	SU 10.16 BFSC P 35X 14	Version	Product data
Order No.	2812340000	PCB plug-in connector, Mounting screw	
GTIN (EAN)	4064675295495		
Qty.	50 pc(s).		

Coding elements



The pluggable connections for power electronics - optimised for modern drive technologies, e.g. motor starters, frequency converters and servo-controllers.

OMNIMATE Power sets the new standard – with increased safety and innovative solutions such as the pluggable shield, integrated signal contacts and one-handed operation.

The three product lines offer you further advantages:

- Application-oriented scalability: from the compact 4 mm² connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm² connector for 76 A (IEC) or 54 A (UL)
- Unlimited usage up to 1,000 V (IEC) or 600 V (UL)
- A variety of application optimised mounting options

Our Service:

Design your individual connectors simply by using the

General ordering data

Type	KO BU/SU10.16HP WT	Version	Product data	Packaging
Order No.	2592600000	PCB plug-in connector, Accessories, Coding element, Natural, Number		Box
GTIN (EAN)	4050118717389	of poles: 1		
Qty.	50 pc(s).			
Type	KO BU/SU10.16HP BK	Version	Product data	Packaging
Order No.	1824410000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248326716	of poles: 1		
Qty.	50 pc(s).			

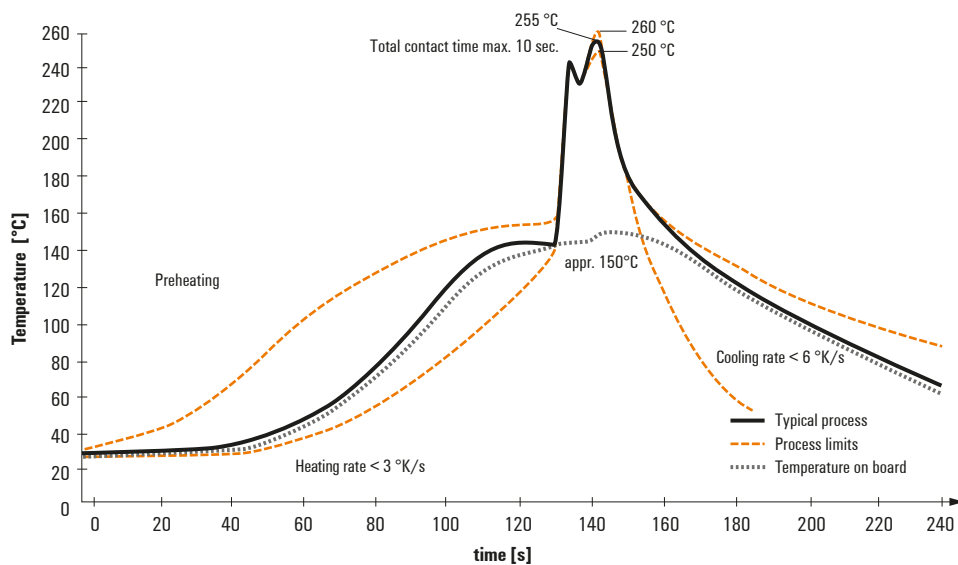
Recommended wave soldering profiles

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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.

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