

**SU 10.16IT/04/270MSF2 3.5AG BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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, 270°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	<a href="#">2630220000</a>
Type	SU 10.16IT/04/270MSF2 3.5AG BK BX
GTIN (EAN)	4050118633894
Qty.	36 pc(s).
Product data	IEC: 1000 V / 78.3 A UL:
Packaging	Box

Creation date June 1, 2024 5:03:46 AM CEST

Catalogue status 18.05.2024 / We reserve the right to make technical changes.

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## Technical data

### Dimensions and weights

Net weight	19.737 g
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### 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	270°
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	<a href="#">SU 10.16 BFSC P 35X 14</a>
		Thickness	min.	2.88 mm
			max.	3.52 mm
		Tightening torque	min.	0.2 Nm
			max.	0.25 Nm
		Recommended screw	Part number	<a href="#">SU 10.16 BFSC P 35X 14</a>
		Thickness	min.	1.44 mm
			max.	3.52 mm
		Tightening torque	min.	0.8 Nm
			max.	0.9 Nm
		Recommended screw	Part number	<a href="#">SU 10.16 BFSC S 35X12</a>

### 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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**Technical data**
**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	338 mm
VPE width	130 mm	VPE height	44 mm

**Classifications**

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	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

**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	<ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• 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.</li> <li>• 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</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

**Downloads**

Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">20220630 Change OMNIMATE® Power SU 10.16IT</a> <a href="#">20220630 Technische Änderung OMNIMATE® Power SU 10.16IT</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

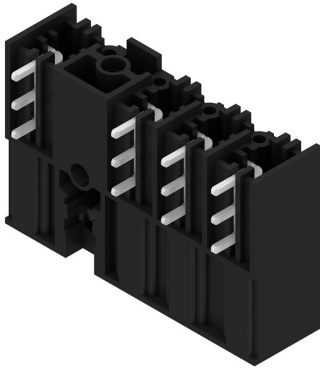
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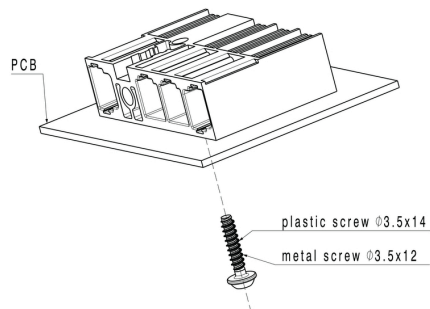
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**Drawings**
**Product image**

**Connection diagram**

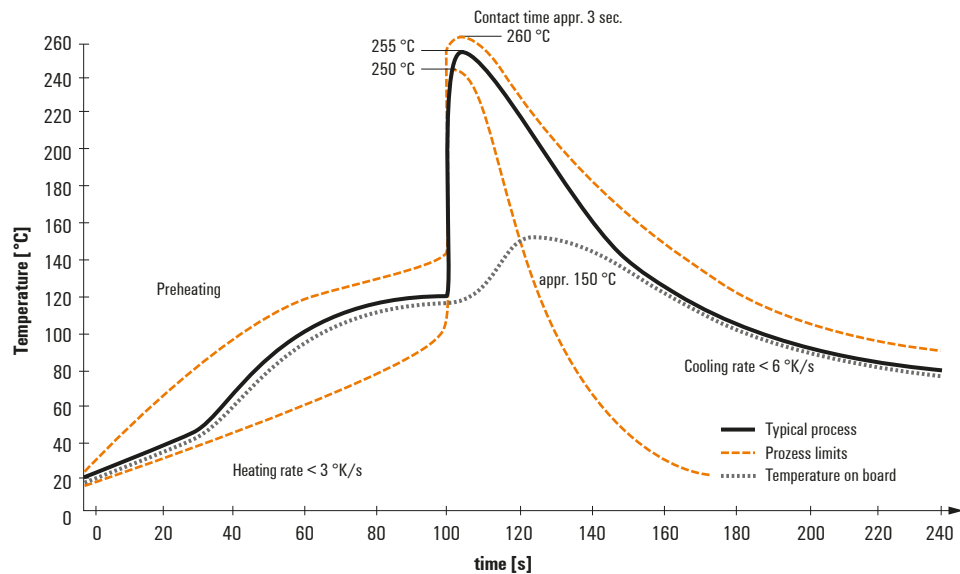
6	M(S)F6	o	o	o	o	o	X	o
6	M(S)F5	o	o	o	o	X	o	o
6	M(S)F4	o	o	o	X	o	o	o
6	M(S)F3	o	o	X	o	o	o	o
6	M(S)F2	o	X	o	o	o	o	o
5	M(S)F5	o	o	o	o	X	o	
5	M(S)F4	o	o	o	X	o	o	
5	M(S)F3	o	o	X	o	o	o	
5	M(S)F2	o	X	o	o	o	o	
4	M(S)F4	o	o	o	X	o		
4	M(S)F3	o	o	X	o	o		
4	M(S)F2	o	X	o	o	o		
3	M(S)F3	o	o	X	o			
3	M(S)F2	o	X	o	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**


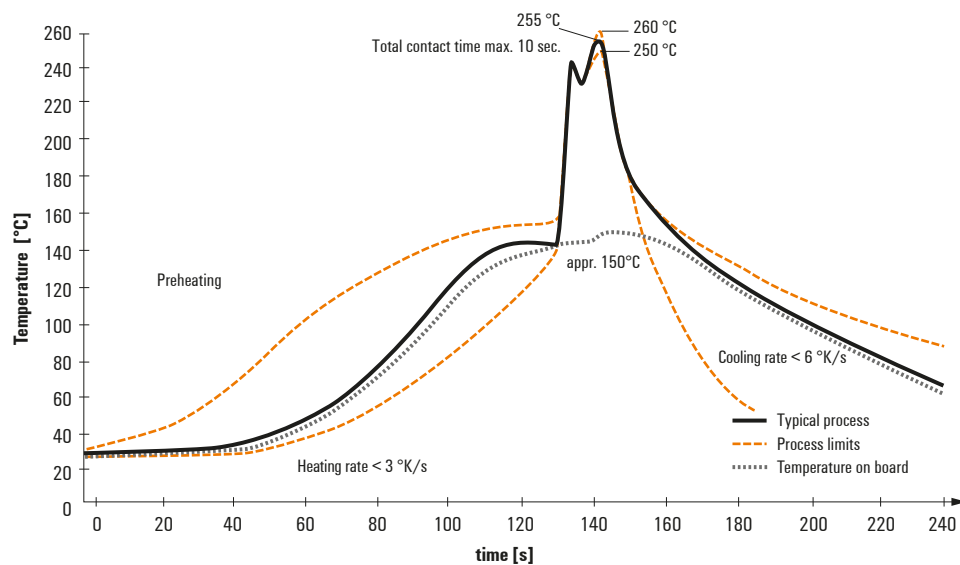
## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

### 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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