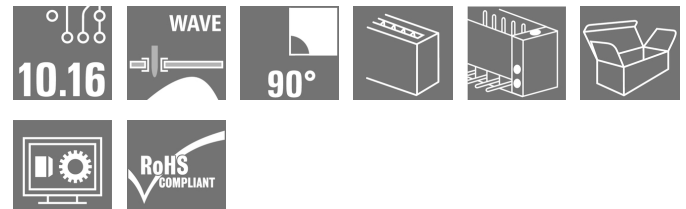


OMNIMATE Power - series BU/SU 10.16HP SU 10.16HP/09/90SF 3.5AG BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

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/09/90SF 3.5AG BK BX |
| Order No. | 1851110000 |
| Version | PCB plug-in connector, male header, Screw/clip-on flange, THT solder connection, 10.16 mm, No. of poles: 9, 90°, Solder pin length (l): 3.5 mm, silver-plated, Black, Box |
| GTIN (EAN) | 4032248382071 |
| Qty. | 12 pc(s). |
| Product data | IEC: 1000 V / 78.3 A UL: 300 V / 60 A |
| Packaging | Box |

**OMNIMATE Power - series BU/SU 10.16HP
SU 10.16HP/09/90SF 3.5AG BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data**Dimensions and weights**

| | |
|------------|---------|
| Net weight | 43.95 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° |
| No. of poles | 9 | Number of solder pins per pole | 3 |
| Solder pin length (l) | 3.5 mm | Solder pin length tolerance | +0.1 / -0.3 mm |
| Tolerance of solder pin position | ± 0.1 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 | 81.28 mm |
| L1 in inches | 3.2 inch | Number of rows | 1 |
| Pin series quantity | 1 | 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 | 25 |

Material data

| | | | |
|---------------------------------------|---------------|---------------------------------------|---------------------|
| Insulating material | PBT GF | Colour | Black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIIa |
| CTI | ≥ 200 | Insulation resistance | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | Contact material | Copper alloy |
| Contact surface | silver-plated | Layer structure of solder connection | 3- μm Ag |
| Layer structure of plug contact | 3- μm Ag | Storage temperature, min. | -25 °C |
| Storage temperature, max. | 55 °C | Max. relative humidity during storage | 80 % |
| 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. no. of poles (Tu=20°C) | 78.3 A |
| Rated current, max. no. of poles (Tu=20°C) | 67.9 A | Rated current, min. no. of poles (Tu=40°C) | 70.6 A |
| Rated current, max. no. 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 |

Data sheet

**OMNIMATE Power - series BU/SU 10.16HP
SU 10.16HP/09/90SF 3.5AG BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | | | |
|---------------------------------------|--|---------------------------------------|---------|
| 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 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packaging

| | | | |
|-----------|-------|------------|--------|
| Packaging | Box | VPE length | 80 mm |
| VPE width | 90 mm | VPE height | 300 mm |

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 3.0 | EC001284 | ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 | ETIM 6.0 | EC002637 |
| UNSPSC | 30-21-18-10 | eClass 5.1 | 27-26-07-04 |
| eClass 6.2 | 27-26-07-04 | eClass 7.1 | 27-44-04-02 |
| eClass 8.1 | 27-44-04-02 | eClass 9.0 | 27-44-04-02 |
| eClass 9.1 | 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.

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.

Approvals

Approvals



ROHS Conform

Data sheet**OMNIMATE Power - series BU/SU 10.16HP
SU 10.16HP/09/90SF 3.5AG BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data**Downloads**

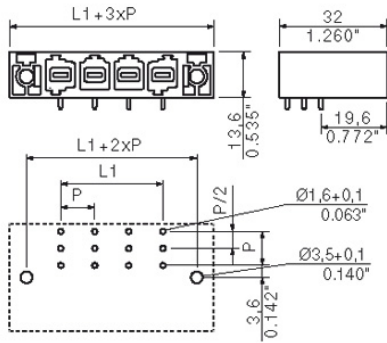
| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | EPLAN, WSCAD |
| Engineering Data | SU.zip STEP |
| Motion controllers white paper | Download Whitepaper |
| White Paper UL 600 V | Download Whitepaper |

**OMNIMATE Power - series BU/SU 10.16HP
SU 10.16HP/09/90SF 3.5AG BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Drawings

Dimensional drawing



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

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.