# SU 10.16HP/06/90G 3.5AG BK BX SO

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image


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

| | |
|---|---|
| Version | PCB plug-in connector, male header, closed side, THT solder connection, 10.16 mm, Number of poles: 6, 90°, Solder pin length (l): 3.5 mm, black, Box |
| Order No. | 2563780000 |
| Type | SU 10.16HP/06/90G 3.5AG BK BX SO |
| GTIN (EAN) | 4050118572858 |
| Qty. | 30 pc(s). |
| Product data | IEC: 1000 V / 78.3 A<br>UL: 300 V / 60 A |
| Packaging | Box |

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## Technical data

### Dimensions and weights

| | |
|---|---|
| Net weight | 24.952 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 " | Outgoing elbow | 90° |
| Number of poles | 6 | 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 | 50.8 mm | L1 in inches | 2 " |
| 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 | ≤ 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 | Contact material | Cu-alloy |
| 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 |

### 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 | 352 mm |
| VPE width | 136 mm | VPE height | 48 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<br>• Rated current related to rated cross-section & min. No. of poles.<br>• P on drawing = pitch<br>• 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.<br>• 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<br>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

### Downloads

| | |
|---|---|
| Product Change Notification | 20220630 Change OMNIMATE® Power SU 10.16IT<br>20220630 Technische Änderung OMNIMATE® Power SU 10.16IT |
| Catalogues | Catalogues in PDF-format |

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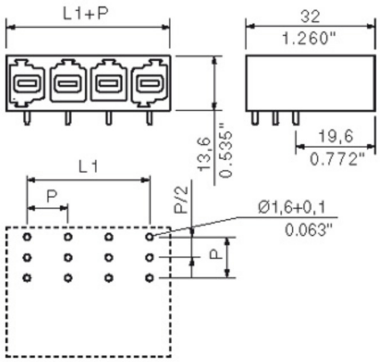
# Drawings

### Dimensional drawing



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## Accessories

### 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 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). | | | |

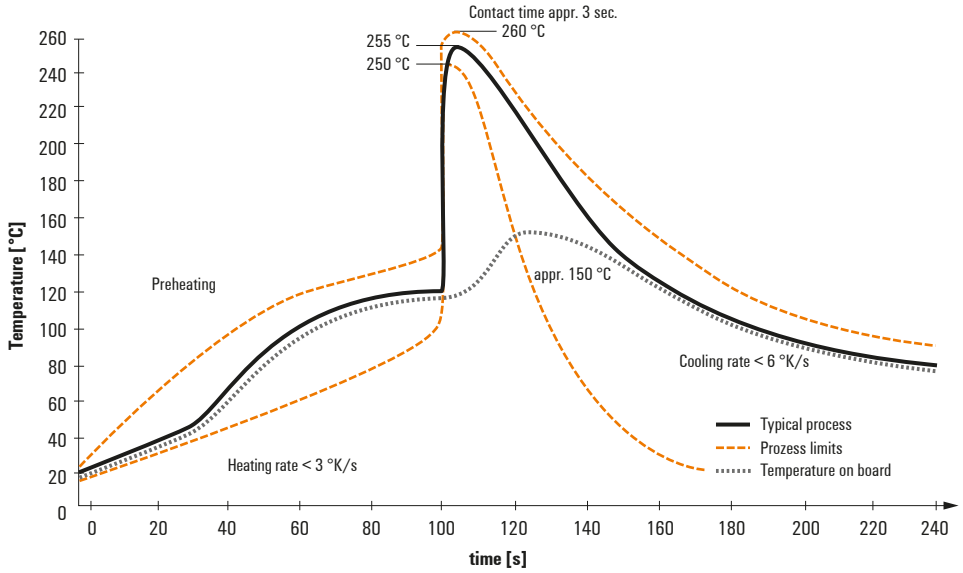
| | | | | |
|---|---|---|---|---|
| Type | KO BU/SU10.16HP WT | Version | Product data | Packaging |
| Order No. | 2592600000 | PCB plug-in connector, Accessories, Coding element, Natural, Number | | Box |
| GTIN (EAN) | 4050118717389 | of poles: 1 | | |
| Qty. | 50 pc(s). | | | |

# Wave Solder Profile

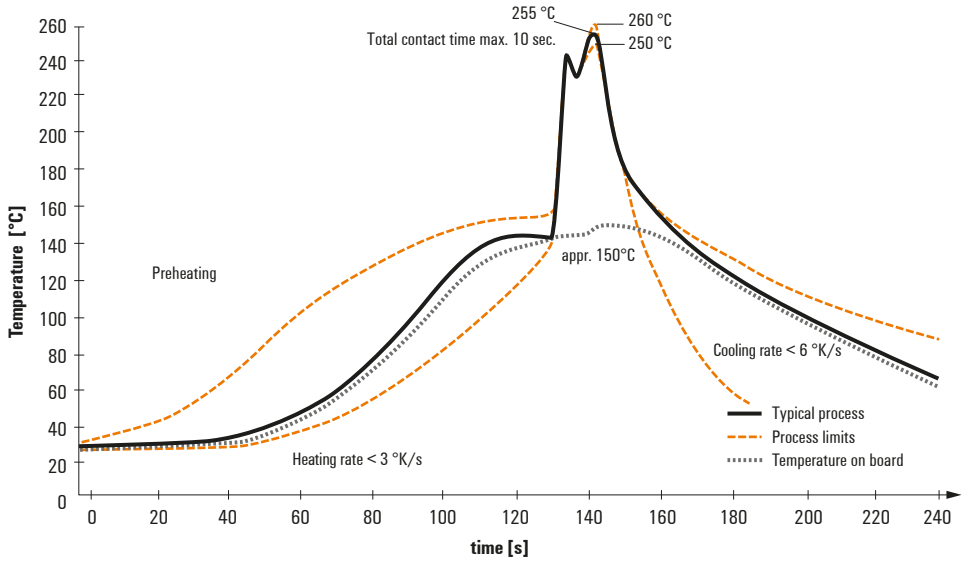
## Recommended wave solderding profiles

**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.

We reserve the right to make technical changes.