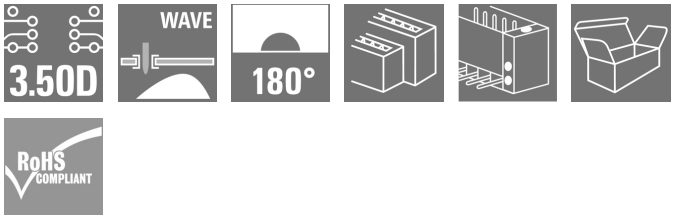
# S2L 3.50/38/180F 3.5SN BK BX

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

www.weidmueller.com

## Product image




Straight, double-row pin header available in closed-sided or flange version (open-sided pin headers on request). The male headers with a pin length of 3.5mm are designed for wave soldering and are packed in a box. They can be screwed on to the PCB. The male headers provide space for labelling and can be coded.

### General ordering data

| | |
|---|---|
| Version | PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 38, 180°, Solder pin length (l): 3.5 mm, tinned, black, Box |
| Order No. | 2559370000 |
| Type | S2L 3.50/38/180F 3.5SN BK BX |
| GTIN (EAN) | 4050118894639 |
| Qty. | 24 pc(s). |
| Product data | IEC: 250 V / 10 A<br>UL: 150 V / 10 A |
| Packaging | Box |

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## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 10.5 mm | Depth (inches) | 0.413 inch |
| Height | 17.7 mm | Height (inches) | 0.697 inch |
| Height of lowest version | 14.2 mm | Width | 73.5 mm |
| Width (inches) | 2.894 inch | Net weight | 10.31 g |

### System specifications

| | |
|---|---|
| Product family | OMNIMATE Signal - series B2L/S2L 3.50 - 2-row |
| Type of connection | Board connection |
| Mounting onto the PCB | THT solder connection |
| Pitch in mm (P) | 3.5 mm |
| Pitch in inches (P) | 0.138 " |
| Outgoing elbow | 180° |
| Number of poles | 38 |
| Number of solder pins per pole | 1 |
| Solder pin length (l) | 3.5 mm |
| Solder pin dimensions | d = 1.0 mm, Octagonal |
| Solder eyelet hole diameter (D) | 1.3 mm |
| Solder eyelet hole diameter tolerance (D) | + 0,1 mm |
| L1 in mm | 63 mm |
| L1 in inches | 2.482 " |
| Pin series quantity | 2 |
| Touch-safe protection acc. to DIN VDE 57 106 | finger-safe unplugged/ back-of-hand-safe plugged |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |
| Can be coded | Yes |
| Plugging force/pole, max. | 5 N |
| Pulling force/pole, max. | 4 N |
| Tightening torque | Torque type: Mounting screw, PCB<br>Usage information: Tightening torque: min. 0.1 Nm; max. 0.15 Nm<br>Recommended screw: Part number: PTSC KA 2.2X4.5 WN1412 |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PBT | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 200 | UL 94 flammability rating | V-0 |
| Contact material | Cu-alloy | Contact surface | tinned |
| Layer structure of solder connection | 2...3 µm Ni / 5...7 µm Sn glossy | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 100 °C | Temperature range, installation, min. | -30 °C |
| Temperature range, installation, max. | 100 °C | | |

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## Technical data

### Rated data acc. to IEC

| | | | |
|---|---|---|---|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 10 A |
| Rated current, max. number of poles (Tu=20°C) | 10 A | Rated current, min. number of poles (Tu=40°C) | 9 A |
| Rated current, max. number of poles (Tu=40°C) | 8.5 A | Rated voltage for surge voltage class / pollution degree II/2 | 250 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 125 V | Rated voltage for surge voltage class / pollution degree III/3 | 80 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 2.5 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV | Short-time withstand current resistance | 3 x 1s with 77 A |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Rated voltage (Use group B / CSA) | 150 V | Rated current (Use group B / CSA) | 5 A |

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Rated voltage (Use group B / UL 1059) | 150 V | Rated current (Use group B / UL 1059) | 10 A |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 338 mm |
| VPE width | 130 mm | VPE height | 27 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% |

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## Technical data

### 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>• Gold-plated contact surfaces on request<br>• Spacing between rows: see hole layout<br>• Rated current related to rated cross-section & min. No. of poles.<br>• Diameter of solder eyelet D = 1.3+0.1 mm<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>• For additional mechanical support for male connectors with screw flange (...F), we recommend an additional cable gland with fastening screws (sheet metal screw ISO 1481-ST 2.2x4.5 C or ISO 7049-ST 2.2x4.5 C – see Accessories). Cable gland only permitted before soldering.<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 |

### Approvals

| | |
|---|---|
| ROHS | Conform |

### Downloads

| | |
|---|---|
| Engineering Data | CAD data – STEP |
| Catalogues | Catalogues in PDF-format |

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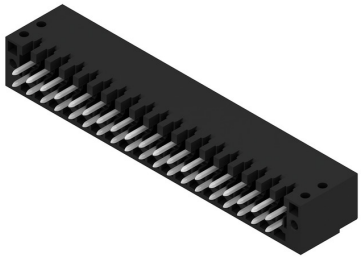
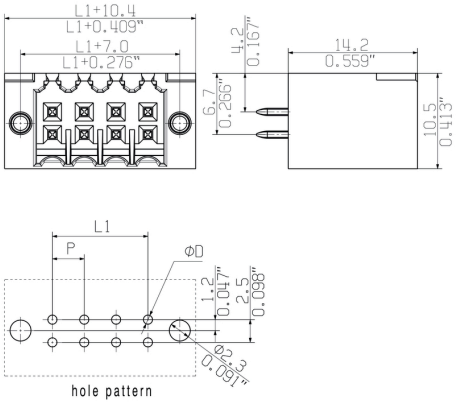
## Drawings

### Product image



### Dimensional drawing



# Wave Solder Profile

## Recommended wave solderding profiles

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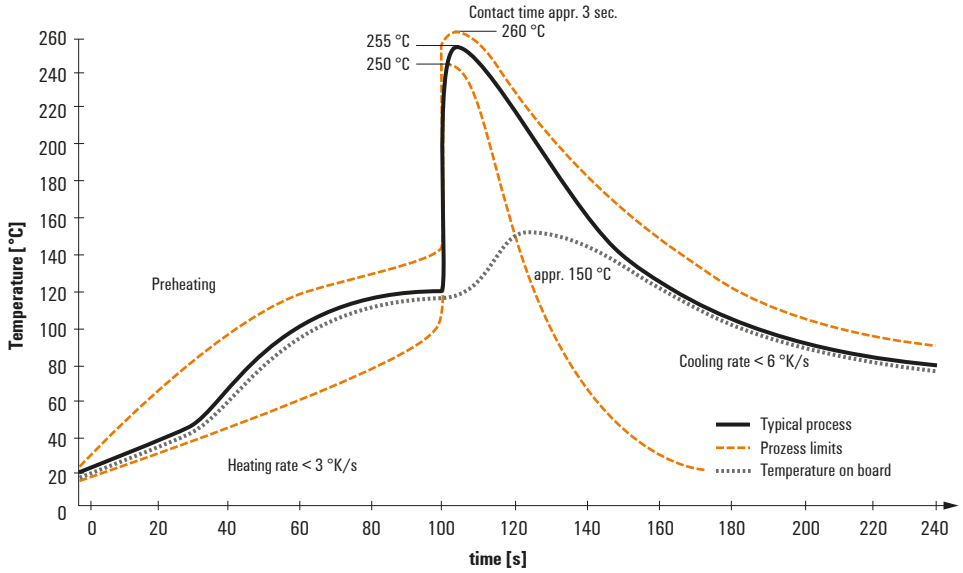
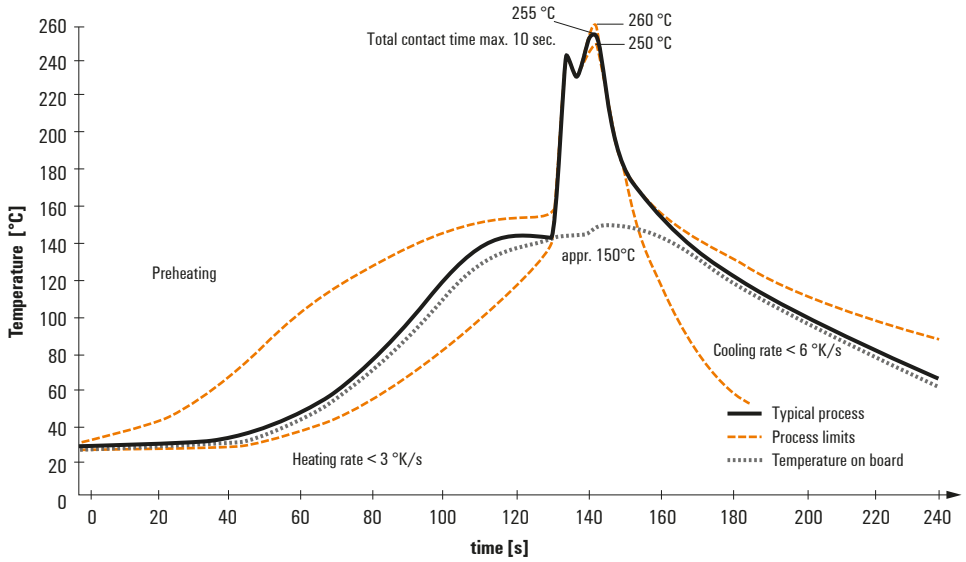
**Single Wave:**




**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.