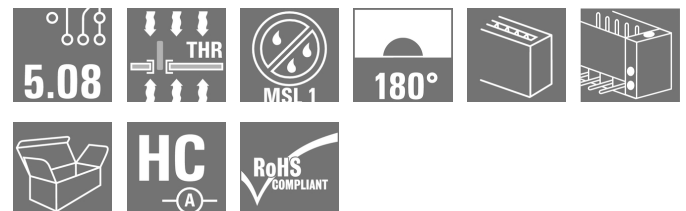
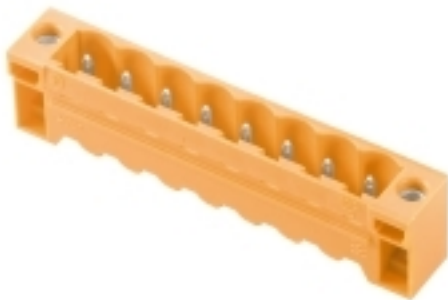


**OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/04/180F 4.5SN LTGY BX**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com



Pin headers in glass-fibre-reinforced plastic with straight wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

| | |
|--------------|--|
| Type | SL 5.08HC/04/180F 4.5SN LTGY BX |
| Order No. | 1981330000 |
| Version | PCB plug-in connector, male header, Flange, THT/THR solder connection, 5.08 mm, Number of poles: 4, 180°, Solder pin length (l): 4.5 mm, tinned, grey, Box |
| GTIN (EAN) | 4032248676613 |
| Qty. | 60 pc(s). |
| Product data | IEC: 400 V / 27.5 A UL: 300 V / 18.5 A |
| Packaging | Box |

Creation date May 3, 2020 2:51:17 AM CEST

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Technical data
Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Width | 30.32 mm | Width (inches) | 1.194 inch |
| Height | 16.5 mm | Height (inches) | 0.65 inch |
| Height of lowest version | 12 mm | Depth | 8.5 mm |
| Depth (inches) | 0.335 inch | Net weight | 0.004 g |

System specifications

| | | | |
|--------------------------------|-------------------------------------|-------------------|--|
| Product family | OMNIMATE Signal - series BL/SL 5.08 | | |
| Type of connection | Board connection | | |
| Mounting onto the PCB | THT/THR solder connection | | |
| Pitch in mm (P) | 5.08 mm | | |
| Pitch in inches (P) | 0.2 inch | | |
| Outgoing elbow | 180° | | |
| Number of poles | 4 | | |
| Number of solder pins per pole | 1 | | |
| Solder pin length (l) | 4.5 mm | | |
| Solder pin length tolerance | 0 / -0.3 mm | | |
| Solder pin dimensions | d = 1.2 mm, Octagonal | | |
| L1 in mm | 15.24 mm | | |
| L1 in inches | 0.6 inch | | |
| Pin series quantity | 1 | | |
| Volume resistance | ≤ 5mΩ | | |
| Can be coded | Yes | | |
| Plugging cycles | 25 | | |
| Plugging force/pole, max. | 9 N | | |
| Pulling force/pole, max. | 7 N | | |
| Tightening torque | Torque type | PCB, Screw flange | |
| | Usage information | Tightening torque | min. 0.1 Nm max. 0.15 Nm |
| | | Recommended screw | Part number PTSC KA 2.2X4.5 WN1412 |

Material data

| | | | |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material | LCP GF | Colour | grey |
| Colour chart (similar) | RAL 7035 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 175 | Insulation strength | ≥ 10 ⁸ Ω |
| Moisture Level (MSL) | 1 | UL 94 flammability rating | V-0 |
| GWFI | 960 °C | Contact material | CuMg |
| Contact surface | tinned | Layer structure of solder connection | 1-3 μm Ni / 2-4 μm Sn matt |
| Layer structure of plug contact | 1-3 μm Ni / 2-4 μm Sn matt | Storage temperature, min. | -25 °C |
| Storage temperature, max. | 50 °C | Max. relative humidity during storage | 70 % |
| 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) | 27.5 A |
| Rated current, max. number of poles (Tu=20°C) | 19 A | Rated current, min. number of poles (Tu=40°C) | 24 A |
| Rated current, max. number of poles (Tu=40°C) | 16.5 A | Rated voltage for surge voltage class / pollution degree II/2 | 400 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 320 V | Rated voltage for surge voltage class / pollution degree III/3 | 250 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 4 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV | | |

Rated data acc. to CSA

| | | | |
|-----------------------------------|---|-----------------------------------|--|
| Institute (CSA) |  | Certificate No. (CSA) | 200039-1176845 |
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group D / CSA) | 18.5 A | Reference to approval values | Specifications are maximum values, details - see approval certificate. |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (UR) |  | Certificate No. (UR) | E60693 |
| Institute (cURus) |  | Certificate No. (cURus) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group D / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 18.5 A | Rated current (Use group D / UL 1059) | 10 A |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 35 mm |
| VPE width | 115 mm | VPE height | 165 mm |

Classifications

| | | | |
|-------------|-------------|------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |
| eClass 10.0 | 27-44-04-02 | | |

Notes

| | |
|----------------|--|
| 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. |
|----------------|--|

Creation date May 3, 2020 2:51:17 AM CEST

Catalogue status 17.04.2020 / We reserve the right to make technical changes.

3

Data sheet**OMNIMATE Signal - series BL/SL 5.08
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www.weidmueller.com**Technical data****Approvals**

Approvals



ROHS

Conform

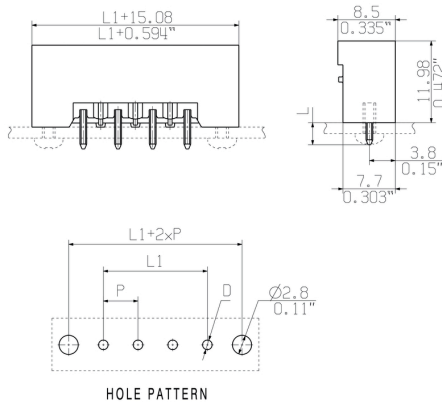
DownloadsApproval/Certificate/Document of
Conformity[CB Certificate](#)
[CB Testreport](#)

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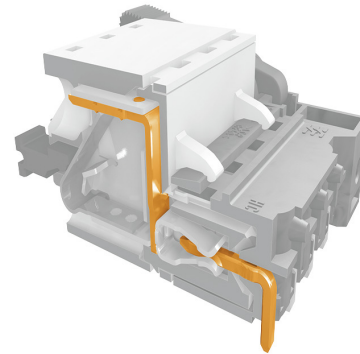
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Drawings

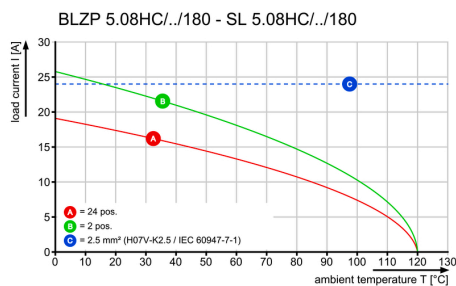
Dimensional drawing



Product benefits



Graph



Graph

Safe power transmission
Proven properties



Graph



Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
 Klängenbergstraße 16
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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.

Recommended reflow soldering profile

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
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Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is ‚activated‘. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.