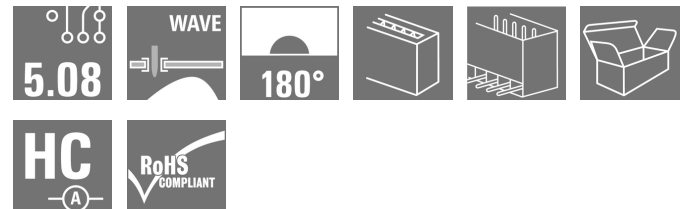


**OMNIMATE Signal - series BL/SL 5.08  
SL 5.08HC/20/180G 3.2SN OR BX**

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



Similar to illustration

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/20/180G 3.2SN OR BX   |
| Order No.    | <a href="#">1147140000</a>  |
| Version      | PCB plug-in connector, male header, closed side, THT solder connection, 5.08 mm, No. of poles: 20, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| GTIN (EAN)   | 4032248108497   |
| Qty.         | 20 pc(s).   |
| Product data | IEC: 400 V / 24 A<br>UL: 300 V / 18.5 A   |
| Packaging    | Box   |

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**Technical data****Dimensions and weights**

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Width                    | 104.8 mm   | Width (inches)  | 4.126 inch |
| Height                   | 15.2 mm    | Height (inches) | 0.598 inch |
| Height of lowest version | 12 mm      | Depth           | 8.5 mm     |
| Depth (inches)           | 0.335 inch | Net weight      | 8.15 g     |

**System specifications**

| Product family                             | OMNIMATE Signal - series BL/SL 5.08 | Type of connection              | Board connection      |
|--|-------------------------------------|---------------------------------|-----------------------|
| Mounting onto the PCB                      | THT solder connection               | Pitch in mm (P)                 | 5.08 mm               |
| Pitch in inches (P)                        | 0.2 inch                            | Outgoing elbow                  | 180°                  |
| No. of poles                               | 20                                  | Number of solder pins per pole  | 1                     |
| Solder pin length (l)                      | 3.2 mm                              | Solder pin length tolerance     | +0.1 / -0.3 mm        |
| Tolerance of solder pin position           | ± 0.20 mm                           | Solder pin dimensions           | d = 1.2 mm, Octagonal |
| Solder pin dimensions = d tolerance        | 0 / -0.03 mm                        | Solder eyelet hole diameter (D) | 1.3 mm                |
| Solder eyelet hole diameter tolerance (D)+ | 0,1 mm                              | L1 in mm                        | 96.52 mm              |
| L1 in inches                               | 3.8 inch                            | Number of rows                  | 1                     |
| Pin series quantity                        | 1                                   | Can be coded                    | Yes                   |
| Plugging cycles                            | 25                                  | Plugging force/pole, max.       | 10 N                  |
| Pulling force/pole, max.                   | 7.5 N                               |                                 |                       |

**Material data**

|                                       |                            |                                       |                            |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material                   | PA GF                      | Colour                                | orange                     |
| Colour chart (similar)                | RAL 2000                   | Insulating material group             | II                         |
| CTI                                   | ≥ 550                      | Insulation strength                   | ≥ 10 <sup>8</sup> Ω        |
| 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.             | 55 °C                      |
| Max. relative humidity during storage | 80 %                       | Operating temperature, min.           | -50 °C                     |
| Operating temperature, max.           | 100 °C                     | Temperature range, installation, min. | -25 °C                     |
| Temperature range, installation, max. | 100 °C                     |                                       |                            |

**Rated data acc. to IEC**

|   |                        |   |       |
|---|------------------------|---|-------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C)                            | 24 A  |
| Rated current, max. no. of poles (Tu=20°C)                                | 19 A                   | Rated current, min. no. of poles (Tu=40°C)                            | 21 A  |
| Rated current, max. no. 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**

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V  | Rated voltage (Use group D / CSA) | 300 V  |
| Rated current (Use group B / CSA) | 18.5 A | Rated current (Use group D / CSA) | 18.5 A |

**Data sheet**

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**Technical data**

**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059) 300 V  
 Rated current (Use group B / UL 1059) 18.5 A  
 Reference to approval values Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / UL 1059) 300 V  
 Rated current (Use group D / UL 1059) 10 A

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 32 mm  |
| VPE width | 130 mm | VPE height | 150 mm |

**Classifications**

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 4.0   | EC002637    | ETIM 5.0   | EC002637    |
| ETIM 6.0   | EC002637    | 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
  - Gold-plated contact surfaces on request
  - Rated current related to rated cross-section & min. No. of poles.
  - 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 Signal - series BL/SL 5.08  
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**Technical data****Downloads**

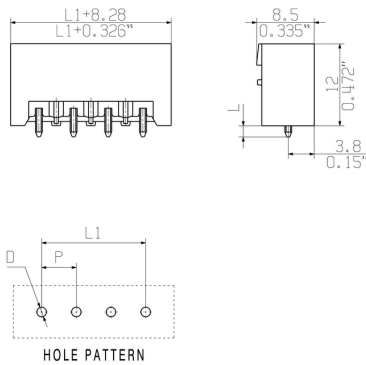
|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">CB Certificate</a><br><a href="#">CB Testreport</a><br><a href="#">Declaration of the Manufacturer</a>   |
| Brochure/Catalogue                          | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">CAT 2 PORTFOLIOGUIDE EN</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FLIndustr.CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL_BASE_STATION_EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a> |

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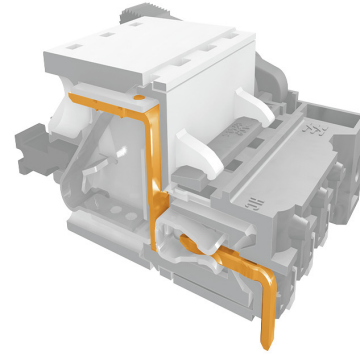
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**Drawings**

**Dimensional drawing**

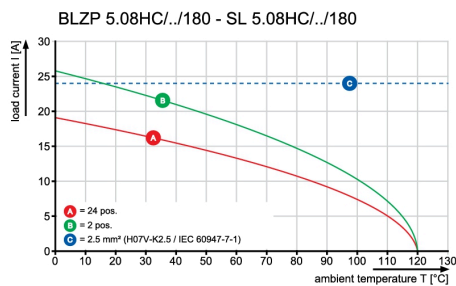


**Product benefits**

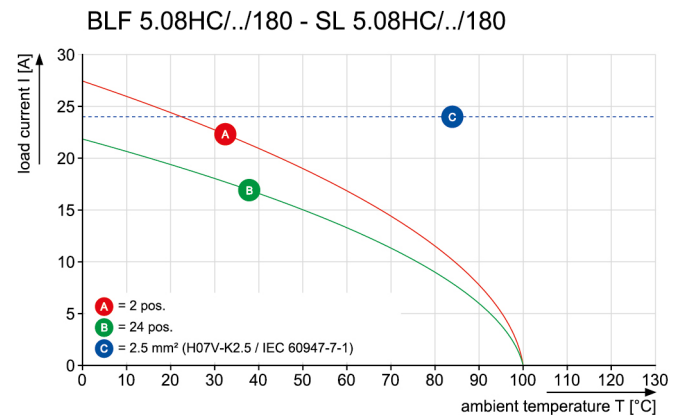


Safe power transmission  
Proven properties

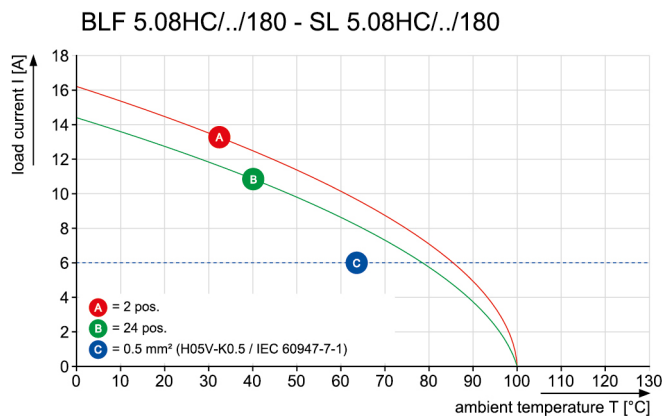
**Graph**



**Graph**



**Graph**



## Recommended wave soldering 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.