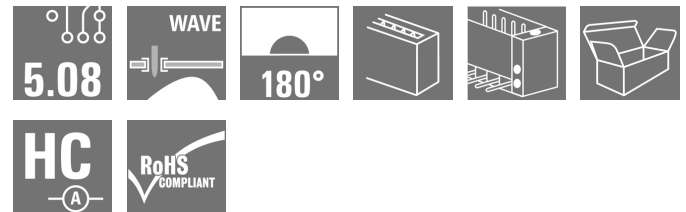
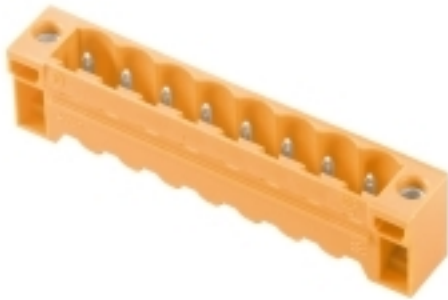


## OMNIMATE Signal - series BL/SL 5.08 SL 5.08HC/04/180F 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
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### Product image



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/04/180F 3.2SN OR BX  |
| Order No.    | <a href="#">1147200000</a>   |
| Version      | PCB plug-in connector, male header, Flange, THT solder connection, 5.08 mm, Number of poles: 4, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| GTIN (EAN)   | 4032248931132  |
| Qty.         | 60 pc(s).  |
| Product data | IEC: 400 V / 24 A<br>UL: 300 V / 18.5 A  |
| Packaging    | Box  |

Creation date 09 September 2020 07:56:11 CEST

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

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Width                    | 30.32 mm   | Width (inches)  | 1.194 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      | 2.33 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°                                |                   |                             |   |
| Number of poles                           | 4                                   |                   |                             |   |
| 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          | ± 0.1 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                                  | 15.24 mm                            |                   |                             |   |
| L1 in inches                              | 0.6 inch                            |                   |                             |   |
| Number of rows                            | 1                                   |                   |                             |   |
| Pin series quantity                       | 1                                   |                   |                             |   |
| Volume resistance                         | ≤ 5mΩ                               |                   |                             |   |
| Can be coded                              | Yes                                 |                   |                             |   |
| Plugging cycles                           | 25                                  |                   |                             |   |
| Plugging force/pole, min.                 | 6.5 N                               |                   |                             |   |
| Plugging force/pole, max.                 | 10 N                                |                   |                             |   |
| Pulling force / pole, min.                | 4.5 N                               |                   |                             |   |
| Pulling force/pole, max.                  | 7.5 N                               |                   |                             |   |
| Tightening torque                         | Torque type                         | PCB, Screw flange |                             |   |
|   | Usage information                   | Tightening torque | min. 0.1 Nm<br>max. 0.15 Nm |   |
|   |                                     | Recommended screw | Part number                 | <a href="#">PTSC KA 2.2X4.5</a><br><a href="#">WN1412</a> |
|   |                                     |                   |                             |   |

**Material data**

|                                       |                                |                                       |                                |
|---------------------------------------|--------------------------------|---------------------------------------|--------------------------------|
| Insulating material                   | PA GF                          | Colour                                | orange                         |
| Colour chart (similar)                | RAL 2000                       | Insulating material group             | II                             |
| Comparative Tracking Index (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.             | -40 °C                         | Storage temperature, max.             | 70 °C                          |
| Operating temperature, min.           | -50 °C                         | Operating temperature, max.           | 100 °C                         |
| Temperature range, installation, min. | -25 °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, max. number of poles (Tu=20°C)                             | 19 A   | Rated current, min. number of poles (Tu=20°C)                         | 24 A  |
| Rated current, max. number of poles (Tu=40°C)                             | 16.5 A | Rated current, min. number of poles (Tu=40°C)                         | 21 A  |
| Rated voltage for surge voltage class / pollution degree III/2            | 320 V  | Rated voltage for surge voltage class / pollution degree II/2         | 400 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 4 kV   | Rated voltage for surge voltage class / pollution degree III/3        | 250 V |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 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 |

### 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 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 | 168 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 |            |             |

## Data sheet

### OMNIMATE Signal - series BL/SL 5.08 SL 5.08HC/04/180F 3.2SN OR BX

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## Technical data

### Notes

|                |  |
|----------------|--|
| Notes          | <ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |
| 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

### Downloads

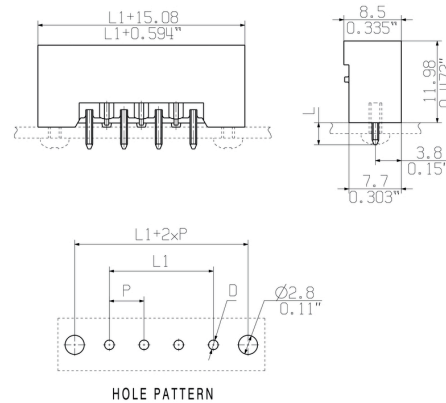
|   |  |
|---|--|
| Approval/Certificate/Document of Conformity | <a href="#">CB Certificate</a><br><a href="#">CB Testreport</a><br><a href="#">Declaration of the Manufacturer</a>   |
| Brochure/Catalogue                          | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><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> |
| Engineering Data                            | <a href="#">STEP</a>   |

**OMNIMATE Signal - series BL/SL 5.08  
SL 5.08HC/04/180F 3.2SN OR BX**

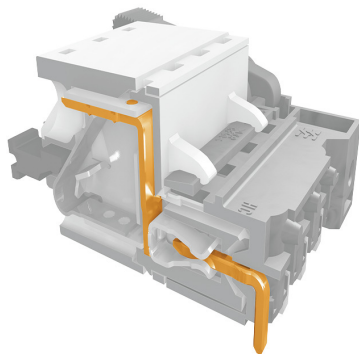
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**Drawings**

**Dimensional drawing**

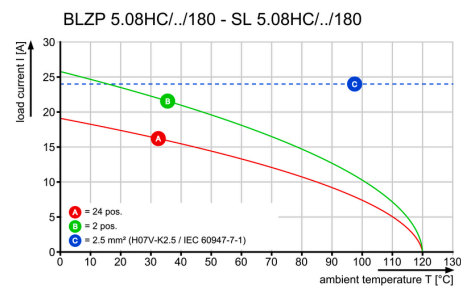


**Product benefits**

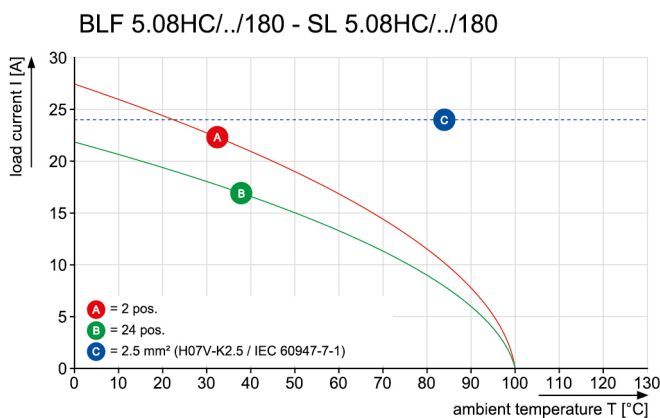


Safe power transmission  
Proven properties

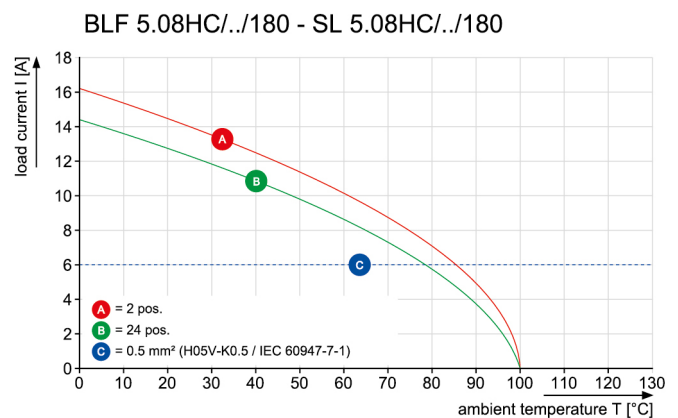
**Graph**

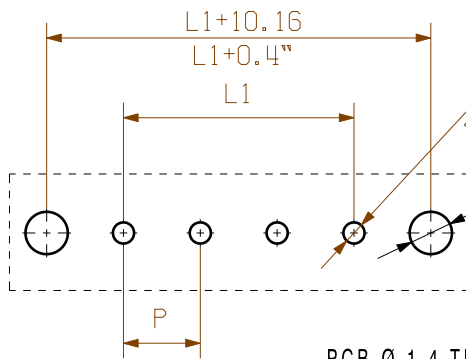
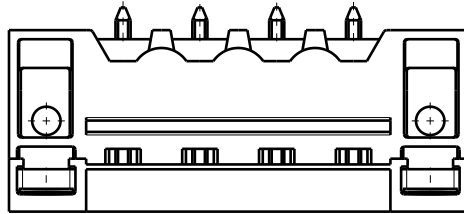
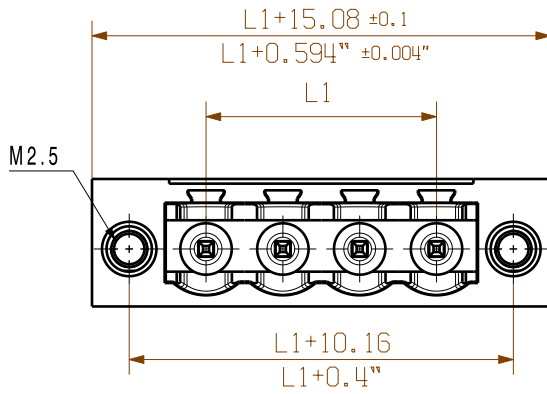


**Graph**



**Graph**





HOLE PATTERN  
PCB-Ø 1,4 TILL POLE 8  
PCB-Ø 1,5 FROM POLE 9



|    |         |           |
|----|---------|-----------|
| 24 | 116,84  | 4,600     |
| 23 | 111,76  | 4,400     |
| 22 | 106,68  | 4,200     |
| 21 | 101,60  | 4,000     |
| 20 | 96,52   | 3,800     |
| 19 | 91,44   | 3,600     |
| 18 | 86,36   | 3,400     |
| 17 | 81,28   | 3,200     |
| 16 | 76,20   | 3,000     |
| 15 | 71,12   | 2,800     |
| 14 | 66,04   | 2,600     |
| 13 | 60,96   | 2,400     |
| 12 | 55,88   | 2,200     |
| 11 | 50,80   | 2,000     |
| 10 | 45,72   | 1,800     |
| 9  | 40,64   | 1,600     |
| 8  | 35,56   | 1,400     |
| 7  | 30,48   | 1,200     |
| 6  | 25,40   | 1,000     |
| 5  | 20,32   | 0,800     |
| 4  | 15,24   | 0,600     |
| 3  | 10,16   | 0,400     |
| 2  | 5,08    | 0,200     |
| n  | L1 [mm] | L1 [Inch] |

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to IEC 60326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

P=PITCH

SHOWN: SL 5.08HC/04/180F

| STIFTLAENGE L<br>PIN LENGTH L | TOLERANZ<br>TOLERANCE |
|-------------------------------|-----------------------|
| 3,2                           | 0,1                   |
|                               | -0,3                  |
| 4,5                           | 0,1                   |
|                               | -0,3                  |

General tolerance:  
DIN ISO 2768-mK



99587/5  
22.11.17 HELIS\_MA 04

Modification

**Weidmüller**

Cat.no.: . . . . .  
**3 50953** **04**

Drawing no. Issue no.  
Sheet 04 of 05 sheets



Date Name

Drawn 18.02.2011 HERTEL\_S

Responsible HERTEL\_S

Checked 30.11.2017 HELIS\_MA

Approved LANG\_T

**SL 5.08HC/./180..**  
STIFTLISTE  
MALE HEADER

Scale: 2:1

Supersedes: .

Product file: SL5.08 HC

7377

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## 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.