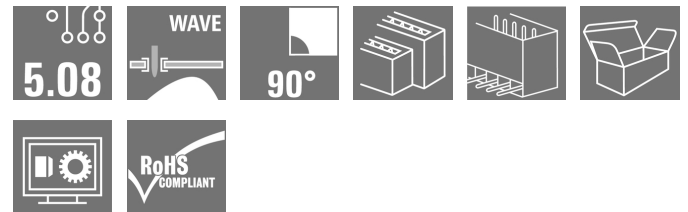


**OMNIMATE Signal - series BL/SL 5.08
SLD 5.08/40/90G 3.2SN OR BX**

Weidmüller Interface GmbH & Co. KG
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www.weidmueller.com



Similar to illustration

2-tier male header with parallel pin arrangement. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

General ordering data

| | |
|--------------|---|
| Type | SLD 5.08/40/90G 3.2SN OR BX |
| Order No. | 1601970000 |
| Version | PCB plug-in connector, male header, closed side, THT solder connection, 5.08 mm, Number of poles: 40, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| GTIN (EAN) | 4008 190127596 |
| Qty. | 10 pc(s). |
| Product data | IEC: 400 V / 11 A UL: 300 V / 10 A |
| Packaging | Box |

Creation date May 3, 2020 10:34:40 PM CEST

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Technical data
Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Width | 103.56 mm | Width (inches) | 4.077 inch |
| Height | 31.25 mm | Height (inches) | 1.23 inch |
| Height of lowest version | 28.05 mm | Depth | 22 mm |
| Depth (inches) | 0.866 inch | Net weight | 38.2 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 | 90° |
| Number of poles | 40 | 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 | 2 |
| Pin series quantity | 2 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from back-of-hand touch |
| Volume resistance | ≤ 5mΩ | Can be coded | Yes |
| Plugging cycles | 25 | | |

Material data

| | | | |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material | PBT | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 200 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | GWFI | 960 °C |
| Contact material | CuSn | 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. | -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. number of poles (Tu=20°C) | 11 A |
| Rated current, max. number of poles (Tu=20°C) | 8.5 A | Rated current, min. number of poles (Tu=40°C) | 9.5 A |
| Rated current, max. number of poles (Tu=40°C) | 7 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 | Short-time withstand current resistance | 1 x 1s with 120 A |


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Technical data**Rated data acc. to CSA**

| | | | |
|-----------------------------------|---|-----------------------------------|----------------|
| Institute (CSA) |  | Certificate No. (CSA) | 200039-1121690 |
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group B / CSA) | 10 A | Rated current (Use group D / CSA) | 10 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 |
| 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) | 10 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 | 50 mm |
| VPE width | 124 mm | VPE height | 181 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 | UNSPSC | 30-21-18-10 |

Notes

| | |
|----------------|--|
| Notes | <ul style="list-style-type: none"> • Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • Spacing between rows: see hole layout • 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. |

Data sheet

**OMNIMATE Signal - series BL/SL 5.08
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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of
Conformity

[Declaration of the Manufacturer](#)

Brochure/Catalogue

- [FL DRIVES EN](#)
- [MB DEVICE MANUF. EN](#)
- [FL DRIVES DE](#)
- [CAT 2 PORTFOLIOGUIDE EN](#)
- [FL BUILDING SAFETY EN](#)
- [FL APPL LED LIGHTING EN](#)
- [FLIndustr.CONTROLS EN](#)
- [FL MACHINE SAFETY EN](#)
- [FL HEATING ELECTR EN](#)
- [FL APPL INVERTER EN](#)
- [FL_BASE_STATION_EN](#)
- [FL ELEVATOR EN](#)
- [FL POWER SUPPLY EN](#)
- [FL 72H SAMPLE SER EN](#)
- [PO OMNIMATE EN](#)

Engineering Data

[WSCAD](#)

Engineering Data

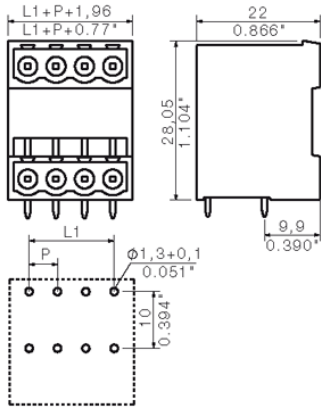
[SLD.zip](#)

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Drawings

Dimensional drawing



**OMNIMATE Signal - series BL/SL 5.08
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Mating connector (fully pluggable)

BLL 5.08/180



Female header for PCB mounting. The solder pin length is optimised for wave flow soldering.

General ordering data

| Type | BLL 5.08/20/180 4.5SN B ... | Version | Product data | Packaging |
|------------|-----------------------------|---|-------------------|-----------|
| Order No. | 1649210000 | PCB plug-in connector, female header, closed side, THT solder | IEC: 400 V / 23 A | Box |
| GTIN (EAN) | 4008190293697 | connection, 5.08 mm, Number of poles: 20, 180°, Solder pin length | UL: 300 V / 15 A | |
| Qty. | 20 pc(s). | (I): 4.5 mm, tinned, black, Box | | |

OMNIMATE Signal - series BL/SL 5.08 SLD 5.08/40/90G 3.2SN OR BX

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Accessories

Coding elements



Only connects what is supposed to be connected: the right connection at the right place.

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

| Type | BLZ/SL KO BK BX | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1545710000 | PCB plug-in connector, Accessories, Coding element, black, Number | | Box |
| GTIN (EAN) | 4008190087142 | of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | BLZ/SL KO OR BX | Version | Product data | Packaging |
| Order No. | 1573010000 | PCB plug-in connector, Accessories, Coding element, orange, Number | | Box |
| GTIN (EAN) | 4008190048396 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

Additional accessories



No task is too small when creating the perfect solution. br />

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload

General ordering data

| Type | SL AT OR | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1598300000 | PCB plug-in connector, Accessories, Spacer, orange, Number of poles: | | Box |
| GTIN (EAN) | 4008190189266 | 1 | | |
| Qty. | 100 pc(s). | | | |

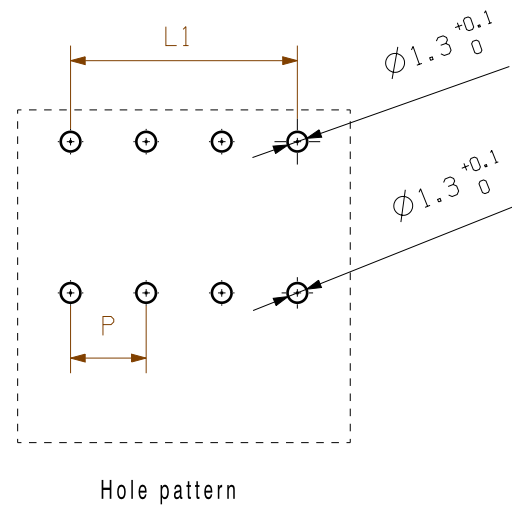
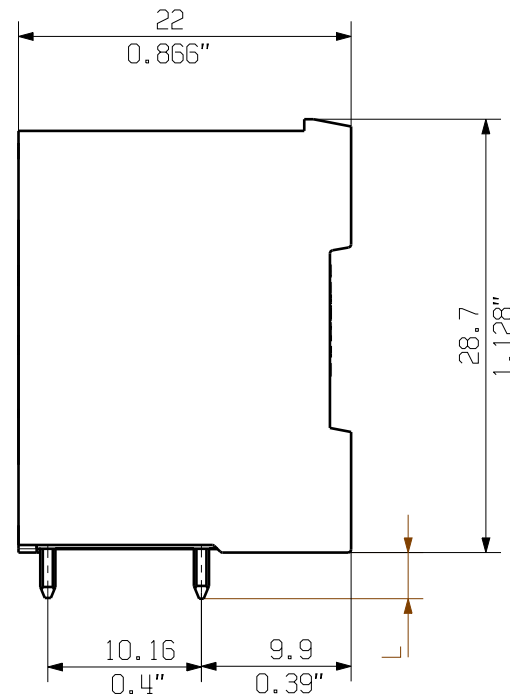
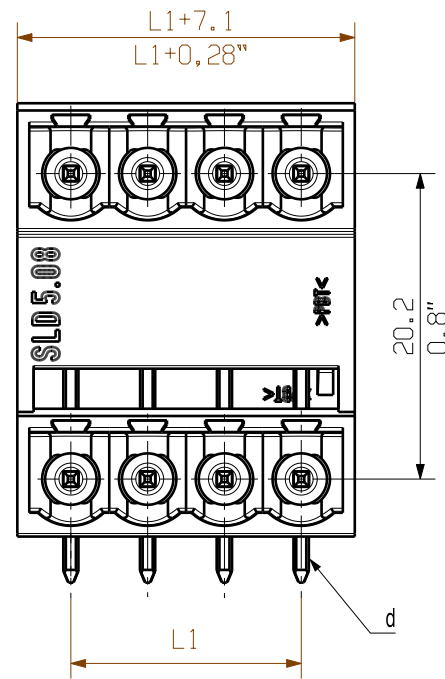
Data sheet

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Accessories

| Type | SL AT SW | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1770240000 | PCB plug-in connector, Accessories, Spacer, black, Number of poles: 1 | | Box |
| GTIN (EAN) | 4032248117710 | | | |
| Qty. | 100 pc(s). | | | |



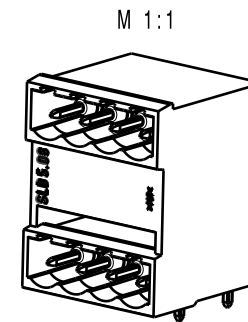
Hole pattern

P = 5.08 Raster Pitch
 D = Ø1,3 +0.1 / Ø0.051" +0.1
 d = 1,2mm oktogonal / 0.047" octogonal

n = no of poles

P = pitch

Shown: SLD 5.08/08/90G



| | |
|----------------------------|------------------|
| 3,2 | 0,1 -0,3 |
| 4,5 | 0,1 -0,3 |
| Solder pin length L | Tolerance |

| | | |
|----------|----------------|------------------|
| 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 DIN IEC 326 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.

| | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|------------|--|--|---|------------|------|--|-------------|--|--|----------|---------|------------|--|----------|----------|--|--|--------|
| General tolerance: DIN ISO 2768-mK | | 102002/5 20.02.18 HELIS_MA 00 | | Cat.no.: . | | | | | | | | | | | | | | | |
| | | Modification | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tr><td>Drawn</td><td>19.08.2003</td><td>Name</td><td>#AttributeError: Benutzer None nicht gefunde</td></tr> <tr><td>Responsible</td><td></td><td></td><td>HERTEL_S</td></tr> <tr><td>Checked</td><td>27.02.2018</td><td></td><td>HELIS_MA</td></tr> <tr><td>Approved</td><td></td><td></td><td>LANG_T</td></tr> </table> | | Drawn | 19.08.2003 | Name | #AttributeError: Benutzer None nicht gefunde | Responsible | | | HERTEL_S | Checked | 27.02.2018 | | HELIS_MA | Approved | | | LANG_T |
| Drawn | 19.08.2003 | Name | #AttributeError: Benutzer None nicht gefunde | | | | | | | | | | | | | | | | |
| Responsible | | | HERTEL_S | | | | | | | | | | | | | | | | |
| Checked | 27.02.2018 | | HELIS_MA | | | | | | | | | | | | | | | | |
| Approved | | | LANG_T | | | | | | | | | | | | | | | | |
| Scale: 2:1 | | Supersedes: . | | SLD 5.08/.../90 STIFTLAISTE MALE HEADER | | | | | | | | | | | | | | | |
| | | Product file: SLD 5.08 | | 7304 | | | | | | | | | | | | | | | |

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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.