

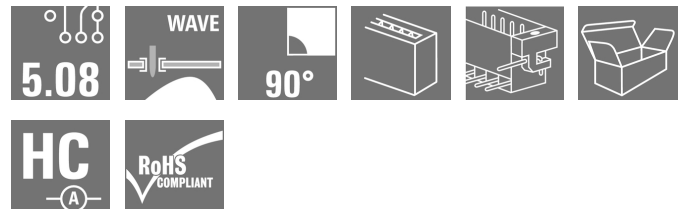
**SL 5.08HC/20/90LF 3.2SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Pin headers made from glass-fibre-reinforced plastic with 90° 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**

|              |                                                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, male header, Solder flange, THT solder connection, 5.08 mm, Number of poles: 20, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| Order No.    | <a href="#">1149980000</a>                                                                                                                                      |
| Type         | SL 5.08HC/20/90LF 3.2SN OR BX                                                                                                                                   |
| GTIN (EAN)   | 4032248936649                                                                                                                                                   |
| Qty.         | 12 pc(s).                                                                                                                                                       |
| Product data | IEC: 400 V / 24 A<br>UL: 300 V / 18.5 A                                                                                                                         |
| Packaging    | Box                                                                                                                                                             |

Creation date March 23, 2021 5:17:52 AM CET

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## Technical data

## Dimensions and weights

|                          |          |                 |            |
|--------------------------|----------|-----------------|------------|
| Depth                    | 12 mm    | Depth (inches)  | 0.472 inch |
| Height                   | 11.7 mm  | Height (inches) | 0.461 inch |
| Height of lowest version | 8.5 mm   | Net weight      | 8.322 g    |
| Width                    | 111.4 mm | Width (inches)  | 4.386 inch |

## 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                 | 20                                  | Number of solder pins per pole            | 1                |
| Solder pin length (l)           | 3.2 mm                              | Solder pin length tolerance               | +0.1 / -0.3 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                |
| Volume resistance               | ≤5 mΩ                               | Can be coded                              | Yes              |
| 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                             |
| Comparative Tracking Index (CTI)      | ≥ 550                          | UL 94 flammability rating             | V-0                            |
| 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                         |

## Rated data acc. to IEC

|                                                                           |                        |                                                                       |       |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 24 A  |
| Rated current, max. number of poles (Tu=20°C)                             | 19 A                   | Rated current, min. number of poles (Tu=40°C)                         | 21 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

|                                   |        |                                   |       |
|-----------------------------------|--------|-----------------------------------|-------|
| 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) | 10 A  |

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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 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 | 38 mm  |
| VPE width | 90 mm | VPE height | 128 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 | ECLASS 11.0 | 27-46-02-01 |

## 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 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

## Approvals

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E60693  |

## Downloads

|                                             |                                                 |
|---------------------------------------------|-------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a> |
| Engineering Data                            | <a href="#">STEP</a>                            |

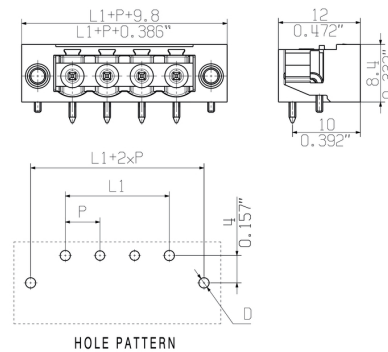
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# Drawings

## Dimensional drawing



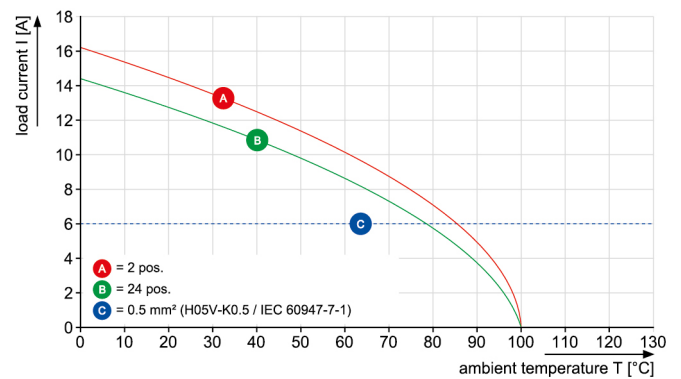
## Graph

BLF 5.08HC/./90 - SL 5.08HC/./90



## Graph

BLF 5.08HC/./90 - SL 5.08HC/./90



## Graph

BLF 5.08HC/./270 - SL 5.08HC/./90



## Graph

BLDF 5.08/180 - SL 5.08HC/./90



## SL 5.08HC/20/90LF 3.2SN OR BX

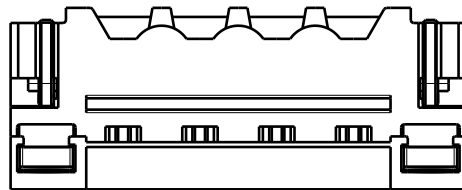
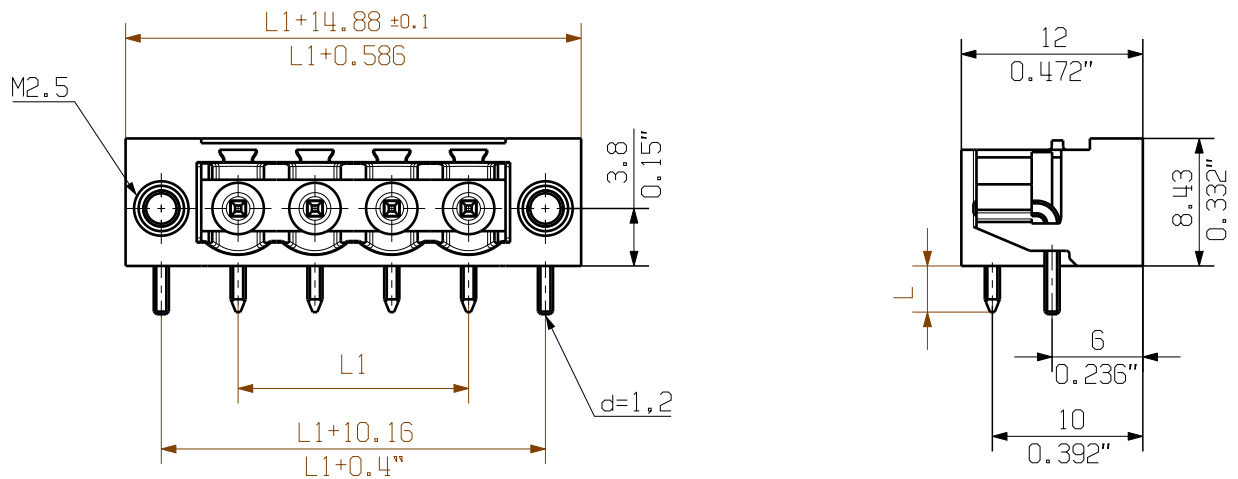
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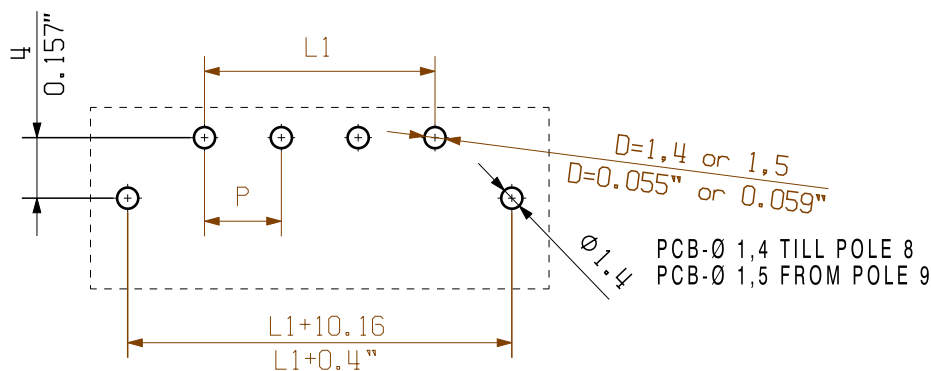
# Drawings

## Graph





1 / 1



## HOLE PATTERN

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.

The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.

The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

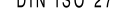
Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.

Provided that the components 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/04/90LF

|                              |                       |   |         |           |
|------------------------------|-----------------------|---|---------|-----------|
| STIFTLÄNGE L<br>PIN LENGTH L | TOLERANZ<br>TOLERANCE | 6 | 25,40   | 1,000     |
|                              |                       | 5 | 20,32   | 0,800     |
| 3,2                          | 0,1                   | 4 | 15,24   | 0,600     |
|                              | -0,3                  | 3 | 10,16   | 0,400     |
| 4,5                          | 0,1                   | 2 | 5,08    | 0,200     |
|                              | -0,3                  | n | L1 [mm] | L1 [inch] |

|                                                                                                    |                               |            |          |                                                                                       |            |    |      |
|----------------------------------------------------------------------------------------------------|-------------------------------|------------|----------|---------------------------------------------------------------------------------------|------------|----|------|
|  DIN ISO 2768-m | 101482/5<br>07.02.18 HELIS_MA |            | 01       |  | Cat.no.: . |    |      |
|                                                                                                    | Modification                  |            |          |                                                                                       | 3 48753    | 04 |      |
|                 |                               | Date       | Name     | <b>SL 5.08HC/.../90...</b><br>STIFTFLEISTE<br>MALE HEADER                             |            |    |      |
|                                                                                                    | Drawn                         | 18.10.2010 | HERTEL_S |                                                                                       |            |    |      |
|                                                                                                    | Responsible                   |            | HERTEL_S |                                                                                       |            |    |      |
| Scale: 2:1                                                                                         | Checked                       | 27.02.2018 | HELIS_MA |                                                                                       |            |    |      |
| Supersedes: .                                                                                      | Approved                      |            | LANG_T   | Product file: SL-HP 5.08                                                              |            |    | 7377 |

## 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.

We reserve the right to make technical changes.