

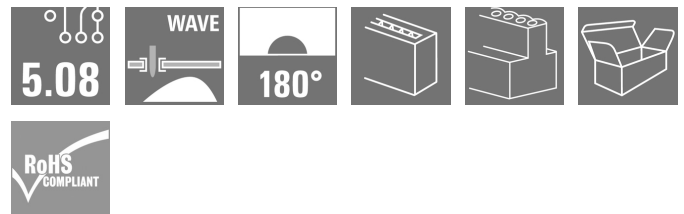
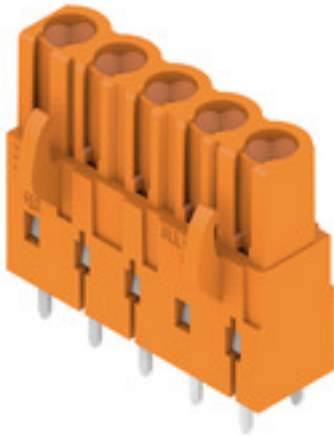
**BLL 5.08/05/180 4.5 SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

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

**General ordering data**

|              |                                                                                                                                                                |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female header, closed side, THT solder connection, 5.08 mm, Number of poles: 5, 180°, Solder pin length (l): 4.5 mm, tinned, black, Box |
| Order No.    | <a href="#">1646280000</a>                                                                                                                                     |
| Type         | BLL 5.08/05/180 4.5 SN BK BX                                                                                                                                   |
| GTIN (EAN)   | 4008190285623                                                                                                                                                  |
| Qty.         | 72 pc(s).                                                                                                                                                      |
| Product data | IEC: 400 V / 23 A<br>UL: 300 V / 15 A                                                                                                                          |
| Packaging    | Box                                                                                                                                                            |

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

|            |       |
|------------|-------|
| Net weight | 5.4 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 "                               | Outgoing elbow                               | 180°                         |
| Number of poles                            | 5                                   | Number of solder pins per pole               | 2                            |
| Solder pin length (l)                      | 4.5 mm                              | Solder pin length tolerance                  | +0.1 / -0.3 mm               |
| Solder pin dimensions                      | 0.4 x 1.00 mm                       | Solder eyelet hole diameter (D)              | 1.3 mm                       |
| Solder eyelet hole diameter tolerance (D)  | + 0,1 mm                            | L1 in mm                                     | 20.32 mm                     |
| L1 in inches                               | 0.8 "                               | Number of rows                               | 1                            |
| Pin series quantity                        | 1                                   | Touch-safe protection acc. to DIN VDE 57 106 | Safe from back-of-hand touch |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged                        | Protection degree                            | IP20                         |
| Volume resistance                          | ≤5 mΩ                               | Can be coded                                 | Yes                          |
| Plugging cycles                            | 25                                  | Plugging force/pole, max.                    | 5 N                          |
| Pulling force/pole, max.                   | 5 N                                 |                                              |                              |

**Material data**

|                                       |                            |                                       |                            |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material                   | PBT GF                     | Colour                                | black                      |
| Colour chart (similar)                | RAL 9011                   | Insulating material group             | IIIa                       |
| Comparative Tracking Index (CTI)      | ≥ 200                      | Insulation strength                   | 10 <sup>8</sup> Ω          |
| UL 94 flammability rating             | V-0                        | Contact material                      | Copper alloy               |
| Contact surface                       | tinned                     | Layer structure of solder connection  | 4...6 µm Sn hot-dip tinned |
| Layer structure of plug contact       | 4...6 µm Sn hot-dip tinned | 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)                         | 23 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 16 A                   | Rated current, min. number of poles (Tu=40°C)                         | 20 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 14 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 V                    | 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                               | 3 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) 15 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) 15 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 | 350 mm |
| VPE width | 130 mm | VPE height | 30 mm  |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002637    | ETIM 7.0    | EC002637    |
| ETIM 8.0    | EC002637    | ETIM 9.0    | EC002637    |
| ETIM 10.0   | 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 | ECLASS 12.0 | 27-46-02-01 |
| ECLASS 13.0 | 27-46-02-01 | ECLASS 14.0 | 27-46-02-01 |
| ECLASS 15.0 | 27-46-02-01 |             |             |

**Environmental Product Compliance**

|                        |                             |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC             | No SVHC above 0.1 wt%       |

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****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          | <ul style="list-style-type: none"> <li>• Additional variants 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>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                       |                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID       | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/</a> |
| ROHS                  | Conform                                                                                                                                                                                                                                                                                                                                                 |
| UL File Number Search | UL Website                                                                                                                                                                                                                                                                                                                                              |
| Certificate No. (UR)  | E60693                                                                                                                                                                                                                                                                                                                                                  |

**Downloads**

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Engineering Data | <a href="#">CAD data – STEP</a>                              |
| Catalogues       | <a href="#">Catalogues in PDF-format</a>                     |
| Brochures        | <a href="#">FL DRIVES EN</a><br><a href="#">FL DRIVES DE</a> |

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## Drawings

## Two green printed circuit boards (PCBs) are shown. The top PCB has a large orange connector with multiple pins. The bottom PCB has a similar orange connector. Both boards are populated with various electronic components like resistors, capacitors, and integrated circuits.

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[www.weidmueller.com](http://www.weidmueller.com)**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.  | <a href="#">1545710000</a> | 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.  | <a href="#">1573010000</a> | PCB plug-in connector, Accessories, Coding element, orange, Number |              | Box       |
| GTIN (EAN) | 4008190048396              | of poles: 1                                                        |              |           |
| Qty.       | 100 pc(s).                 |                                                                    |              |           |

## 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.