

SL 3.50/05/90G 3.2SN OR BX

Weidmüller Interface GmbH & Co. KG

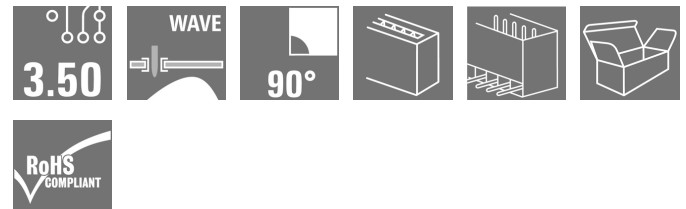
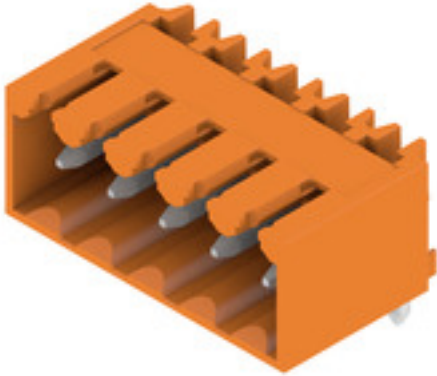
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

| | |
|--------------|--|
| Version | PCB plug-in connector, male header, closed side, THT solder connection, 3.50 mm, Number of poles: 5, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box |
| Order No. | 1605100000 |
| Type | SL 3.50/05/90G 3.2SN OR BX |
| GTIN (EAN) | 4008190102609 |
| Qty. | 50 pc(s). |
| Product data | IEC: / 17 A UL: 300 V / 10 A |
| Packaging | Box |

Creation date January 13, 2022 6:17:40 AM CET

SL 3.50/05/90G 3.2SN OR BX

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Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 11.1 mm | Depth (inches) | 0.437 inch |
| Height | 10.7 mm | Height (inches) | 0.421 inch |
| Height of lowest version | 7.5 mm | Width | 18.9 mm |
| Width (inches) | 0.744 inch | Net weight | 1.398 g |

System specifications

| | | | |
|--|-------------------------------------|--|------------------|
| Product family | OMNIMATE Signal - series BL/SL 3.50 | Type of connection | Board connection |
| Mounting onto the PCB | THT solder connection | Pitch in mm (P) | 3.5 mm |
| Pitch in inches (P) | 0.138 inch | Outgoing elbow | 90° |
| Number of poles | 5 | 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) | 1.4 mm | Solder eyelet hole diameter tolerance (D) | + 0,1 mm |
| L1 in mm | 14 mm | L1 in inches | 0.551 inch |
| 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 | IP 10 |
| Volume resistance | 6.00 mΩ | Can be coded | Yes |
| Plugging force/pole, max. | 10 N | Pulling force/pole, max. | 10 N |


Material data

| | | | |
|---------------------------------------|--|---------------------------------------|----------------------------------|
| Insulating material | PBT | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 200 | UL 94 flammability rating | V-0 |
| Contact base material | CuSn | Contact material | CuSn |
| Contact surface | tinned | Layer structure of solder connection | 2...4 μm Ni / 5...8 μm Sn glossy |
| Layer structure of plug contact | 2...4 undefined Ni / 5...8 undefined Sn glossy | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 100 °C | Temperature range, installation, min. | -30 °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) | 17 A |
| Rated current, max. number of poles (Tu=20°C) | 12 A | Rated current, min. number of poles (Tu=40°C) | 14.5 A |
| Rated current, max. number of poles (Tu=40°C) | 10 A | | |

Rated data acc. to CSA

| | | | |
|-----------------------------------|---|-----------------------------------|----------------|
| Institute (CSA) |  | Certificate No. (CSA) | 154685-1318353 |
| 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. | | |

Creation date January 13, 2022 6:17:41 AM CET

Catalogue status 17.12.2021 / We reserve the right to make technical changes.

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Technical data

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 | 97 mm |
| VPE width | 91 mm | VPE height | 39 mm |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| ETIM 8.0 | 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

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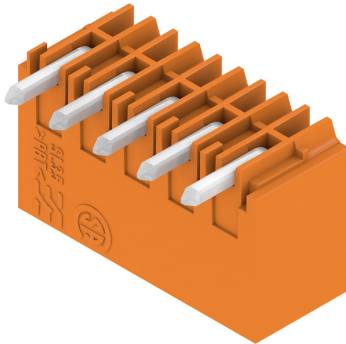
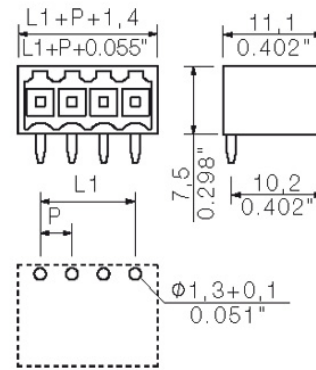
Weidmüller Interface GmbH & Co. KG
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Technical data

Downloads

| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN MB SMT EN FL DRIVES DE MB DEVICE MANUF. 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 PO OMNIMATE EN |

Data sheet**SL 3.50/05/90G 3.2SN OR BX****Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germanywww.weidmueller.com**Drawings****Product image****Dimensional drawing**

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Accessories

LED Light guides

**Effective: the link between LED and front panel.**

Floodlight indicators allow users to monitor the switching states without requiring a special design: optical plastic directs the light from standard LEDs around a bend into the connectors or through the front plate.

The fibre-optic elements are simply clipped behind the relevant 90° bend male connectors (90° outlet direction). Versions with different incoming light beam heights achieve maximum light efficiency for LEDs with different designs or heights.

The advantages compared to conventional solutions:

- No additional LED circuit board required behind the front panel
- No "long-legged" LEDs with separate mounting required
- Bent fibre-optic cable line for maximum light efficiency
- Uncomplicated front plate bore holes due to circular shape of outgoing light beam
- Easy to maintain correct clearance and creepage distance
- Can be partitioned for smaller pole numbers

The result: simplified manufacturing process, reduced costs and simplified design

General ordering data

| Type | SL 3.5 FLA 2.3/1.75/8 | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1597640000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190011321 | Number of poles: 1 | | |
| Qty. | 25 pc(s). | | | |
| Type | SL 3.5 FLA 1.5/1.75/8 | Version | Product data | Packaging |
| Order No. | 1597630000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190148386 | Number of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | SL 3.5 FLA 1.5/8 | Version | Product data | Packaging |
| Order No. | 1597510000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190127541 | Number of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | SL 3.5 FLA 2.3/8 | Version | Product data | Packaging |
| Order No. | 1597520000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190120566 | Number of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | SL 3.5 FLA 4.0/8 | Version | Product data | Packaging |
| Order No. | 1597530000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190075699 | Number of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | SL 3.5 FLA 4.0/1.75/8 | Version | Product data | Packaging |
| Order No. | 1597650000 | PCB plug-in connector, Accessories, Flood-light display, Transparent, | | Box |
| GTIN (EAN) | 4008190027773 | Number of poles: 1 | | |
| Qty. | 50 pc(s). | | | |

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Accessories

Additional accessories



No task is too small when creating the perfect solution.

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 | BL/SL 3.50 VR OR BX | Version | Product data |
|------------|----------------------------|---|--------------|
| Order No. | 1669310000 | PCB plug-in connector, Accessories, Latches, orange, Number of poles: | |
| GTIN (EAN) | 4008190428488 | 1 | |
| Qty. | 100 pc(s). | | |

| Type | BL/SL 3.50 VR BK BX | Version | Product data |
|------------|----------------------------|--|--------------|
| Order No. | 1669300000 | PCB plug-in connector, Accessories, Latches, black, Number of poles: | |
| GTIN (EAN) | 4008190428471 | 1 | |
| Qty. | 100 pc(s). | | |

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 | BL SL 3.5 KO SW | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1610100000 | PCB plug-in connector, Accessories, Coding element, black, Number of poles: 1 | | Box |
| GTIN (EAN) | 4008190187637 | | | |
| Qty. | 100 pc(s). | | | |

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Data sheet**SL 3.50/05/90G 3.2SN OR BX**

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Accessories

| Type | BL SL 3.5 KO OR | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1693430000 | PCB plug-in connector, Accessories, Coding element, orange, Number | | Box |
| GTIN (EAN) | 4008190867447 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

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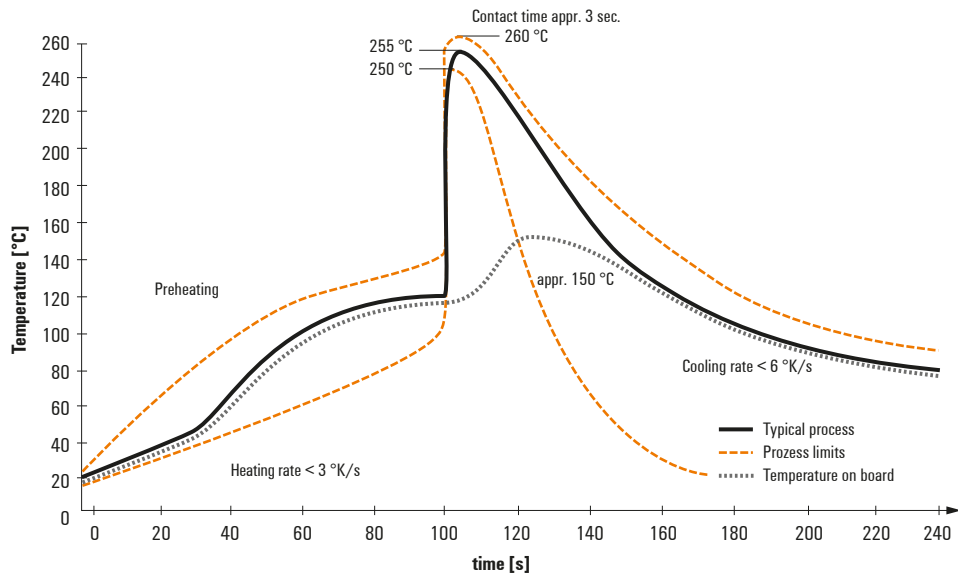
For the mounting of PCBs, it should be noted that the data given in the catalogue relates to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to the respective standard. The current-carrying capacity and pitch to be determined according to DIN IEC 326 p.

Weidmueller connectors are tested to the standard, and are valid for its field of application. Provided that the connectors are used to their purpose, all requirements with respect to the occurring of electrical, mechanical, thermal and corrosive stress will be satisfied.

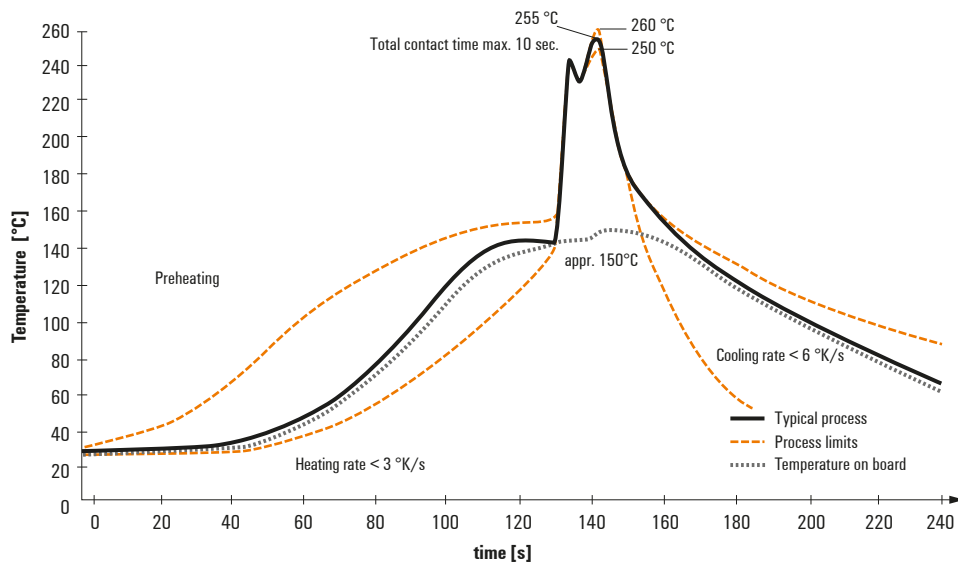
Recommended wave soldering profiles

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 Fax: +49 5231 14-292083
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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.

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