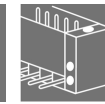
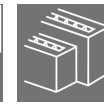
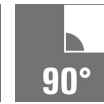
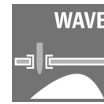


**S2L 3.50/12/90F 3.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

Angled, two-tier pin header available as closed-sided or with flange (open-sided pin headers on request). Pin headers with 3.5mm pins are designed for wave soldering and are packaged in a box. They can be screwed on to the PCB. The pin headers provide space for labelling and can be coded.

**General ordering data**

|              |                                                                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 12, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box |
| Order No.    | <a href="#">1728660000</a>                                                                                                                              |
| Type         | S2L 3.50/12/90F 3.5SN BK BX                                                                                                                             |
| GTIN (EAN)   | 4032248040124                                                                                                                                           |
| Qty.         | 66 pc(s).                                                                                                                                               |
| Product data | IEC: 250 V / 10 A<br>UL: 150 V / 10 A                                                                                                                   |
| Packaging    | Box                                                                                                                                                     |

Creation date June 14, 2025 3:39:25 PM CEST

Catalogue status 07.06.2025 / We reserve the right to make technical changes.

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

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 14.2 mm    | Depth (inches)  | 0.559 inch |
| Height                   | 14 mm      | Height (inches) | 0.551 inch |
| Height of lowest version | 10.5 mm    | Width           | 28 mm      |
| Width (inches)           | 1.102 inch | Net weight      | 4.44 g     |

**System specifications**

|                                              |                                                  |  |                     |                                                    |
|----------------------------------------------|--------------------------------------------------|--|---------------------|----------------------------------------------------|
| Product family                               | OMNIMATE Signal - series B2L/S2L 3.50 - 2-row    |  |                     |                                                    |
| 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 "                                          |  |                     |                                                    |
| Outgoing elbow                               | 90°                                              |  |                     |                                                    |
| Number of poles                              | 12                                               |  |                     |                                                    |
| Number of solder pins per pole               | 1                                                |  |                     |                                                    |
| Solder pin length (l)                        | 3.5 mm                                           |  |                     |                                                    |
| Solder pin dimensions                        | d = 1.0 mm, Octagonal                            |  |                     |                                                    |
| Solder eyelet hole diameter (D)              | 1.3 mm                                           |  |                     |                                                    |
| Solder eyelet hole diameter tolerance (D)+   | 0,1 mm                                           |  |                     |                                                    |
| L1 in mm                                     | 17.5 mm                                          |  |                     |                                                    |
| L1 in inches                                 | 0.689 "                                          |  |                     |                                                    |
| Number of rows                               | 1                                                |  |                     |                                                    |
| Pin series quantity                          | 2                                                |  |                     |                                                    |
| Touch-safe protection acc. to DIN VDE 57 106 | finger-safe unplugged/ back-of-hand-safe plugged |  |                     |                                                    |
| Touch-safe protection acc. to DIN VDE 0470   | IP20 plugged/ IP10 unplugged                     |  |                     |                                                    |
| Can be coded                                 | Yes                                              |  |                     |                                                    |
| Plugging force/pole, max.                    | 5 N                                              |  |                     |                                                    |
| Pulling force/pole, max.                     | 4 N                                              |  |                     |                                                    |
| Tightening torque                            | Torque type                                      |  | Mounting screw, PCB |                                                    |
|                                              | Usage information                                |  | Tightening torque   | min. 0.1 Nm                                        |
|                                              |                                                  |  |                     | max. 0.15 Nm                                       |
|                                              |                                                  |  | Recommended screw   | Part number <a href="#">PTSC KA 2.2X4.5 WN1412</a> |

**Material data**

|                                       |                                  |                                       |        |
|---------------------------------------|----------------------------------|---------------------------------------|--------|
| Insulating material                   | PBT                              | Colour                                | black  |
| Colour chart (similar)                | RAL 9011                         | Insulating material group             | IIIa   |
| Comparative Tracking Index (CTI)      | ≥ 200                            | UL 94 flammability rating             | V-0    |
| Contact material                      | Cu-alloy                         | Contact surface                       | tinned |
| Layer structure of solder connection  | 2...3 µm Ni / 5...7 µm 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                           |                                       |        |

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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)

10 A

Rated current, max. number of poles  
(Tu=40°C)

8.5 A

Rated voltage for surge voltage class /  
pollution degree III/2

125 V

Rated impulse voltage for surge voltage  
class/ pollution degree II/2

2.5 kV

Rated impulse voltage for surge voltage  
class/ contamination degree III/3

2.5 kV

Rated current, min. number of poles  
(Tu=20°C)

10 A

Rated current, min. number of poles  
(Tu=40°C)

9 A

Rated voltage for surge voltage class /  
pollution degree II/2

250 V

Rated voltage for surge voltage class /  
pollution degree III/3

80 V

Rated impulse voltage for surge voltage  
class/ pollution degree III/2

2.5 kV

Short-time withstand current resistance

3 x 1s with 77 A

**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1488444

Rated voltage (Use group B / CSA)

150 V

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated current (Use group B / CSA)

5 A

**Rated data acc. to UL 1059**

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059)

150 V

Rated current (Use group B / UL 1059)

10 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059)

50 V

Rated current (Use group C / UL 1059)

10 A

**Packing**

Packaging

Box

VPE length

351 mm

VPE width

135 mm

VPE height

26 mm

**Classifications**

ETIM 6.0

EC002637

ETIM 8.0

EC002637

ETIM 10.0

EC002637

ECLASS 9.1

27-44-04-02

ECLASS 11.0

27-46-02-01

ECLASS 13.0

27-46-02-01

ECLASS 15.0

27-46-02-01

ETIM 7.0

EC002637

ETIM 9.0

EC002637

ECLASS 9.0

27-44-04-02

ECLASS 10.0

27-44-04-02

ECLASS 12.0

27-46-02-01

ECLASS 14.0

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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**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>• Spacing between rows: see hole layout</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Diameter of solder eyelet D = 1.3+0.1 mm</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>• For additional mechanical support for male connectors with screw flange (...F), we recommend an additional cable gland with fastening screws (sheet metal screw ISO 1481-ST 2.2x4.5 C or ISO 7049-ST 2.2x4.5 C – see Accessories). Cable gland only permitted before soldering.</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                                                                                                                                                                                                                                                                                                                                                  |

## S2L 3.50/12/90F 3.5SN BK BX

**Weidmüller Interface GmbH & Co. KG**  
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Germany

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# Technical data

## Downloads

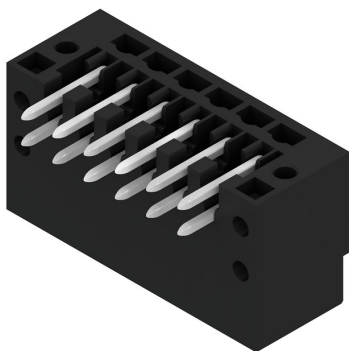
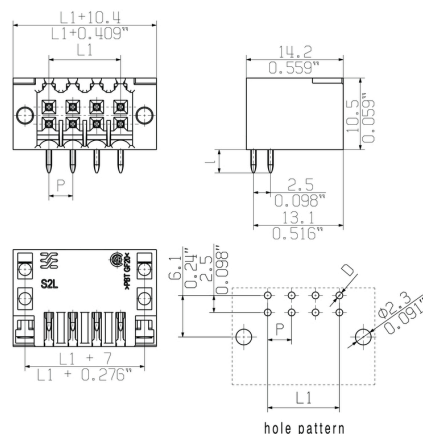
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 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="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FL INDUSTR.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><br><a href="#">PO OMNIMATE EN</a> |

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[www.weidmueller.com](http://www.weidmueller.com)**Drawings****Product image****Dimensional drawing**

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
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Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

### 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.