

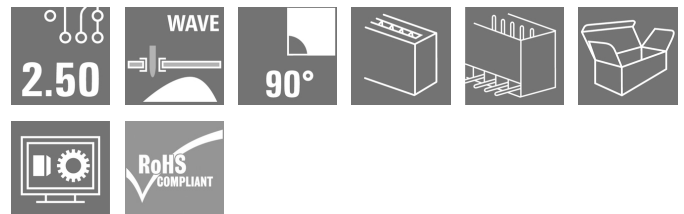
**SL 2.50/05/90G 3.2SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

Male header for wave soldering in 2.50 mm pitch.

- Plugging direction is parallel (90°) to the PCB
- Housing variant: Closed (G)
- Packaged in a cardboard box (BX)

**General ordering data**

|              |                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, male header, THT solder connection, Pitch in mm (P): 2.50 mm, Number of poles: 5, 90°, Box |
| Order No.    | <a href="#">2439780000</a>                                                                                        |
| Type         | SL 2.50/05/90G 3.2SN BK BX                                                                                        |
| GTIN (EAN)   | 4050118454956                                                                                                     |
| Qty.         | 200 pc(s).                                                                                                        |
| Product data | IEC: 320 V / 6 A<br>UL: 150 V / 5 A                                                                               |
| Packaging    | Box                                                                                                               |

Creation date May 7, 2025 5:11:15 AM CEST

Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 10.1 mm    | Depth (inches)  | 0.398 inch |
| Height                   | 11.3 mm    | Height (inches) | 0.445 inch |
| Height of lowest version | 8.1 mm     | Width           | 14.4 mm    |
| Width (inches)           | 0.567 inch | Net weight      | 1.465 g    |

## System specifications

|                                              |                                                     |                                            |                              |
|----------------------------------------------|-----------------------------------------------------|--------------------------------------------|------------------------------|
| Product family                               | OMNIMATE Signal - series BL/SL 2.50                 | Type of connection                         | Board connection             |
| Mounting onto the PCB                        | THT solder connection                               | Pitch in mm (P)                            | 2.5 mm                       |
| Pitch in inches (P)                          | 0.098 "                                             | 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 / -0.1 mm               |
| Solder pin dimensions                        | 0.8 x 0.8 mm                                        | Solder pin dimensions = d tolerance        | +0,02 / -0,02 mm             |
| Solder eyelet hole diameter (D)              | 1.3 mm                                              | Solder eyelet hole diameter tolerance (D)+ | 0,1 mm                       |
| L1 in mm                                     | 10 mm                                               | L1 in inches                               | 3.936 "                      |
| Number of rows                               | 1                                                   | Pin series quantity                        | 1                            |
| Touch-safe protection acc. to DIN VDE 57 106 | finger-safe unplugged/<br>back-of-hand-safe plugged | Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |

## Material data

|                                      |                                   |                                  |          |
|--------------------------------------|-----------------------------------|----------------------------------|----------|
| Insulating material                  | PA 66                             | Colour                           | black    |
| Colour chart (similar)               | RAL 9011                          | Comparative Tracking Index (CTI) | ≥ 600    |
| UL 94 flammability rating            | V-0                               | Contact material                 | Cu-alloy |
| Contact surface                      | tinned                            | Tinning type                     | matt     |
| Layer structure of solder connection | 1...3 µm Ni / 4...6 µm Sn<br>matt | Storage temperature, min.        | -40 °C   |
| Storage temperature, max.            | 70 °C                             | Operating temperature, min.      | -40 °C   |
| Operating temperature, max.          | 105 °C                            |                                  |          |

## Rated data acc. to IEC

|                                                                           |           |                                                                       |        |
|---------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------|--------|
| tested acc. to standard                                                   | IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 6 A    |
| Rated current, min. number of poles (Tu=40°C)                             | 6 A       | Rated voltage for surge voltage class / pollution degree II/2         | 320 V  |
| Rated voltage for surge voltage class / pollution degree III/2            | 320 V     | Rated voltage for surge voltage class / pollution degree III/3        | 80 V   |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 2.5 kV    | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV    |                                                                       |        |

## Rated data acc. to CSA

|                                   |       |                                   |     |
|-----------------------------------|-------|-----------------------------------|-----|
| Rated voltage (Use group B / CSA) | 150 V | Rated current (Use group B / CSA) | 5 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) 150 V

Rated current (Use group B / UL 1059) 5 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 261 mm |
| VPE width | 167 mm | VPE height | 56 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%       |

## 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>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> |

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Approvals**

Approvals



|                         |                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                     |
| UL File Number Search   | UL Website                                                                                                                                                                  |
| Certificate No. (cURus) | E60693                                                                                                                                                                      |

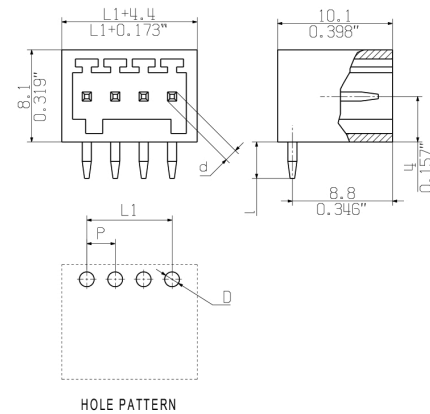
**Downloads**

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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> |

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**Drawings****Dimensional drawing**

### SL 2.50/05/90G 3.2SN BK BX

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## Drawings

### Product benefits



Operating safety  
Through PUSH IN connection system

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WEIDMUELLER INTERFACE GmbH & Co. KG



MAX. NRN./NOS.

86511/0  
02.03.16 AMANN\_A 00

MODIFICATION

Weidmüller

DRAWING NO. 4 63328  
SHEET 00 OF 00 SHEETS

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ISSUE NO.



DATE NAME  
DRAWN 22.02.2016 AMANN\_A

RESPONSIBLE AMANN\_A

CHECKED 02.03.2016 HELIS\_MA

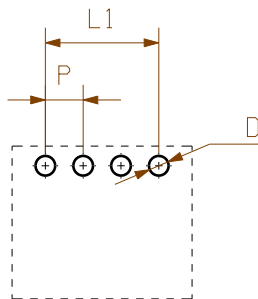
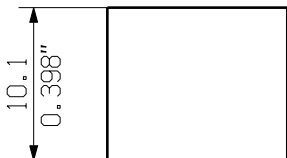
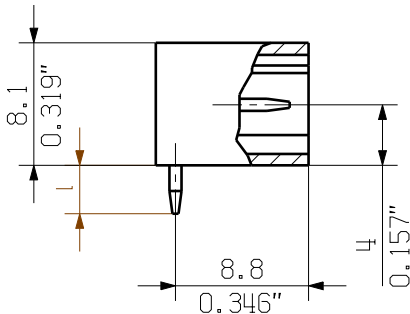
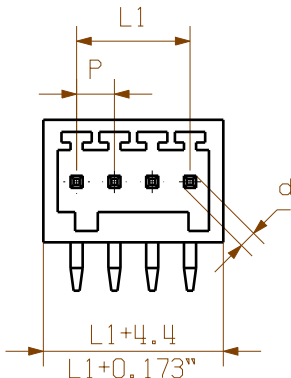
APPROVED LANG\_T

SL 2.50/2-12/90..  
STIFTLEISTE  
MALE HEADER

PRODUCT FILE: SL/BLF 2.50 7414

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



HOLE PATTERN



1:1

SHOWN: SL 2.50/04/90 3.2SN

n = POLZAHL/NO OF POLS

L1 = (n-1) x P

P = 2.50mm RASTER  
0,098" PITCH

D = Ø1.3 +0.1  
0.051"

d = 1.0, OKTAGONAL  
0.039"

l = 3.2  
0.126"

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-mH

CAT.NO.:

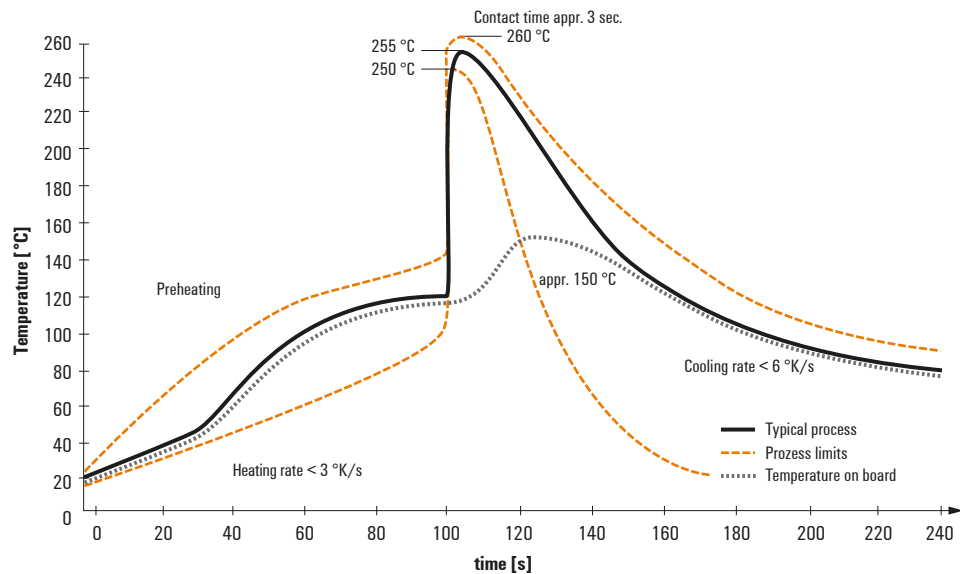
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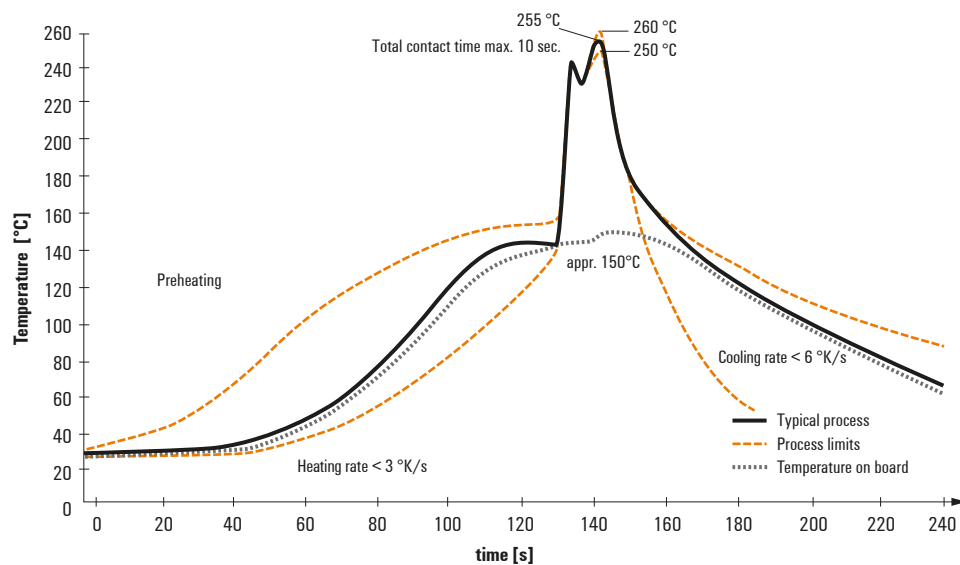
## Recommended wave soldering profiles

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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.

We reserve the right to make technical changes.