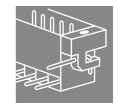


**S2C-SMT 3.50/20/90LF 3.2AU BK RL****Weidmüller Interface GmbH & Co. KG**Klingenbergstraße 26  
D-32758 Detmold  
Germany

www.weidmueller.com

**Product image****High-temperature-resistant male header**

- Finger-safe
- Can be plugged into female plug B2CF 3.50 PUSH IN
- Plug-in direction is perpendicular or parallel to the circuit board (180° / 90°)
- Housing variants: closed (G) and with solder flange (LF)
- Packed either in a box (BX) or on anti-static tape-on-reel (RL)
- Suitable for reflow and wave soldering
- applications
- Pin length of either 1.5 mm or 3.2 mm

**General ordering data**

|              |                                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, male header, Solder flange, THT/THR solder connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 1.5 mm, Au (Gold), black, Tape |
| Order No.    | <a href="#">2654850000</a>                                                                                                                                             |
| Type         | S2C-SMT 3.50/20/90LF 3.2AU BK RL                                                                                                                                       |
| GTIN (EAN)   | 4050118663914                                                                                                                                                          |
| Qty.         | 235 items                                                                                                                                                              |
| Product data | IEC: 200 V / 13.4 A<br>UL: 150 V / 9.5 A                                                                                                                               |
| Packaging    | Tape                                                                                                                                                                   |

## S2C-SMT 3.50/20/90LF 3.2AU BK RL

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## Technical data

## Approvals

Approvals



UL File Number Search [UL Website](#)

Certificate No. (cURus) E60693

## Dimensions and weights

|                          |             |                 |             |
|--------------------------|-------------|-----------------|-------------|
| Depth                    | 14.2 mm     | Depth (inches)  | 0.5591 inch |
| Height                   | 12.3 mm     | Height (inches) | 0.4843 inch |
| Height of lowest version | 10.8 mm     | Width           | 42 mm       |
| Width (inches)           | 1.6535 inch | Net weight      | 4.85 g      |

## Environmental Product Compliance

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

## System specifications

|                                              |                                                     |                                            |                              |
|----------------------------------------------|-----------------------------------------------------|--------------------------------------------|------------------------------|
| Product family                               | OMNIMATE Signal - series B2C/S2C 3.50 - 2-row       | Type of connection                         | Board connection             |
| Mounting onto the PCB                        | THT/THR solder connection                           | Pitch in mm (P)                            | 3.50 mm                      |
| Pitch in inches (P)                          | 0.138 "                                             | Outgoing elbow                             | 90°                          |
| Number of poles                              | 20                                                  | Number of solder pins per pole             | 1                            |
| Solder pin length (l)                        | 1.5 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                       |
| Outside diameter of solder pad               | 2.1 mm                                              | Template aperture diameter                 | 19 mm                        |
| L1 in mm                                     | 31.50 mm                                            | L1 in inches                               | 1.240 "                      |
| Number of rows                               | 1                                                   | Pin series quantity                        | 2                            |
| 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 |
| Can be coded                                 | Yes                                                 | Plugging force/pole, max.                  | 3.5 N                        |
| Pulling force/pole, max.                     | 3.5 N                                               |                                            |                              |

## Material data

|                                       |                                                |                                       |                           |
|---------------------------------------|------------------------------------------------|---------------------------------------|---------------------------|
| Insulating material                   | LCP GF                                         | Colour                                | black                     |
| Colour chart (similar)                | RAL 9011                                       | Insulating material group             | IIIb                      |
| Comparative Tracking Index (CTI)      | ≥ 175                                          | Moisture Level (MSL)                  | 1                         |
| UL 94 flammability rating             | V-0                                            | Contact material                      | Cu-alloy                  |
| Contact surface                       | Au (Gold)                                      | Layer structure of solder connection  | 2...5 µm Sn / 1...3 mm Ni |
| Layer structure of plug contact       | 2...5 µm Sn / 1...3 µm Ni /<br>0.8...1.2 µm Au | Storage temperature, min.             | -40 °C                    |
| Storage temperature, max.             | 70 °C                                          | Operating temperature, min.           | -50 °C                    |
| Operating temperature, max.           | -120 °C                                        | Temperature range, installation, min. | -40 °C                    |
| Temperature range, installation, max. | 120 °C                                         |                                       |                           |

## Rated data acc. to IEC

|                                               |                        |                                                               |        |
|-----------------------------------------------|------------------------|---------------------------------------------------------------|--------|
| tested acc. to standard                       | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                 | 13.4 A |
| Rated current, min. number of poles (Tu=40°C) | 12 A                   | Rated voltage for surge voltage class / pollution degree II/2 | 200 V  |

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## Technical data

Rated voltage for surge voltage class / 160 V  
pollution degree III/2Rated impulse voltage for surge voltage 2.5 kV  
class/ pollution degree II/2Rated impulse voltage for surge voltage 2.5 kV  
class/ contamination degree III/3Rated voltage for surge voltage class / 80 V  
pollution degree III/3Rated impulse voltage for surge voltage 2.5 kV  
class/ pollution degree III/2

Short-time withstand current resistance 3 x 1 s with 80 A

## Rated data acc. to CSA

Rated voltage (Use group B / CSA) 150 V

Rated voltage (Use group D / CSA) 150 V

Rated current (Use group C / CSA) 9.5 A

Rated voltage (Use group C / CSA) 50 V

Rated current (Use group B / CSA) 9.5 A

Rated current (Use group D / CSA) 9.5 A

## Rated data acc. to UL 1059

Institute (cURus) CURUS

Rated voltage (Use group B / UL 1059) 150 V

Rated current (Use group B / UL 1059) 9.5 A

Rated current (Use group D / UL 1059) 9.5 A

Certificate No. (cURus) E60693

Rated voltage (Use group C / UL 1059) 50 V

Rated current (Use group C / UL 1059) 9.5 A

Reference to approval values  
Specifications are maximum values, details - see approval certificate.

## Packing

ESD Level packaging static dissipative

VPE length 330.00 mm

VPE height 61.00 mm

Tape width (W) 56 mm

Tape pocket height (A0) 14.50 mm

Tape pocket separation (P1) 20.00 mm

Tape pocket separation (F) 26.20 mm

Surface resistance  $R_s = 109 - 10^{12} \Omega$ 

Length Pick &amp; Place Pad (LPPP) 15.6 mm

Protrusion 2 Pick &amp; Place Pad (P02 (PPP)) 7.8 mm

Packaging Tape

VPE width 330.00 mm

Tape depth (T2) 15.10 mm

Tape pocket depth (K0) 14.60 mm

Tape pocket width (B0) 43.60 mm

Tape hole separation (E) 1.75 mm

Tape reel diameter  $\phi$  (A) 330 mm

Width Pick &amp; Place Pad (WPPP) 10 mm

Protrusion 1 Pick &amp; Place Pad (L01 (PPP)) 7.8 mm

## 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

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

## Classifications

ETIM 8.0 EC002637

ETIM 10.0 EC002637

ECLASS 15.0 27-46-02-01

ETIM 9.0 EC002637

ECLASS 14.0 27-46-02-01

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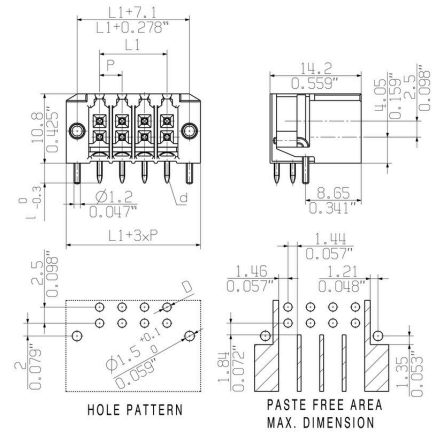
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

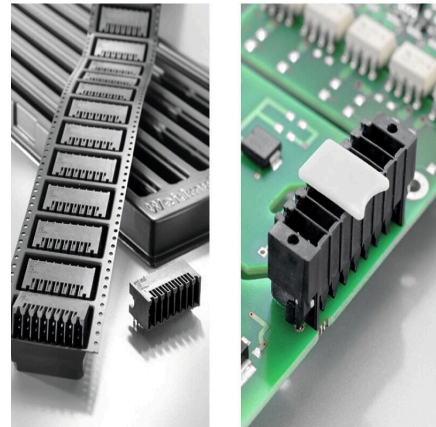
### Product image



### Dimensional drawing



### Product benefits



Optimised for the SMT process  
Safe board-to-board connection

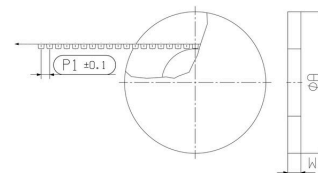
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## Drawings

### Dimensional drawing



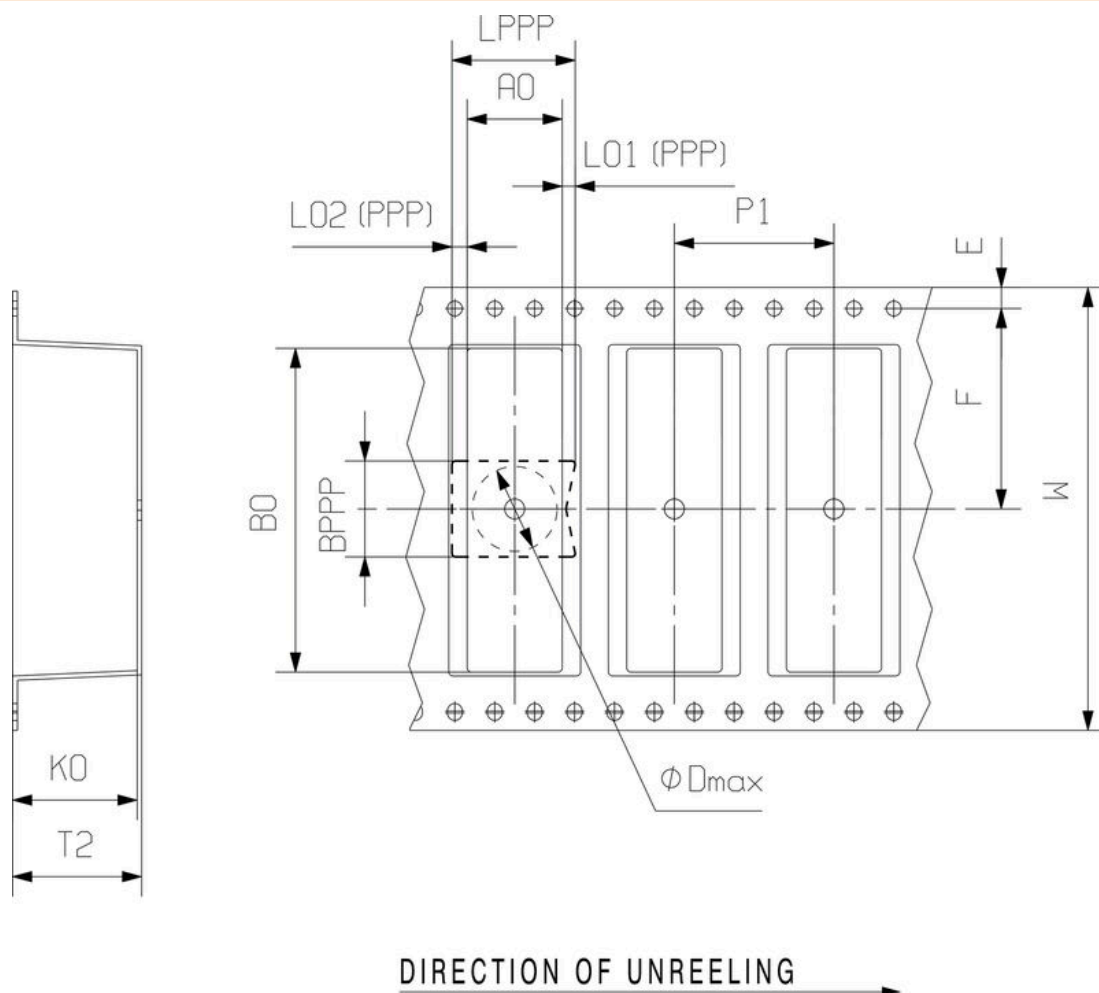
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# Drawings

## Dimensional drawing



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

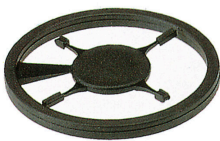
The advantages compared to conventional solutions:

- 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       | S2L/S2C 3.5 FLA 20/10 S... | Version                                                               |
| Order No.  | <a href="#">1814590000</a> | PCB plug-in connector, Accessories, Flood-light display, Transparent, |
| GTIN (EAN) | 4032248302826              | Number of poles: 10                                                   |
| Qty.       | 50 ST                      |                                                                       |

**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       | B2L/S2L 3.50 KO BK BX      | Version                                                            |
| Order No.  | <a href="#">1849740000</a> | PCB plug-in connector, Accessories, Coding element, black, Number  |
| GTIN (EAN) | 4032248378203              | of poles: 1                                                        |
| Qty.       | 100 ST                     |                                                                    |
| Type       | B2L/S2L 3.50 KO OR BX      | Version                                                            |
| Order No.  | <a href="#">1849730000</a> | PCB plug-in connector, Accessories, Coding element, orange, Number |
| GTIN (EAN) | 4032248378197              | of poles: 1                                                        |
| Qty.       | 100 ST                     |                                                                    |

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**General ordering data**

|            |                            |                                                                       |
|------------|----------------------------|-----------------------------------------------------------------------|
| Type       | S2L/S2C 3.5 FLA 20/10      | Version                                                               |
| Order No.  | <a href="#">1699580000</a> | PCB plug-in connector, Accessories, Flood-light display, Transparent, |
| GTIN (EAN) | 4008190891350              | Number of poles: 10                                                   |
| Qty.       | 100 ST                     |                                                                       |