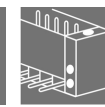
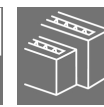
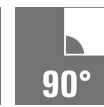


**S2L 3.50/22/90F 3.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

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: 22, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	<a href="#">1728710000</a>
Type	S2L 3.50/22/90F 3.5SN BK BX
GTIN (EAN)	4032248040179
Qty.	36 pc(s).
Product data	IEC: 250 V / 10 A UL: 150 V / 10 A
Packaging	Box

Creation date July 22, 2024 2:54:50 PM CEST

Catalogue status 13.07.2024 / 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	45.5 mm
Width (inches)	1.791 inch	Net weight	6.406 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	22		
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	35 mm		
L1 in inches	1.378 "		
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

352 mm

VPE width

137 mm

VPE height

25 mm

**Classifications**

ETIM 6.0

EC002637

ETIM 7.0

EC002637

ETIM 8.0

EC002637

ETIM 9.0

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

**Environmental Product Compliance**

REACH SVHC

/

RoHS Compliance Status

Compliant without exemption

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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>• 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



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693

**Downloads**

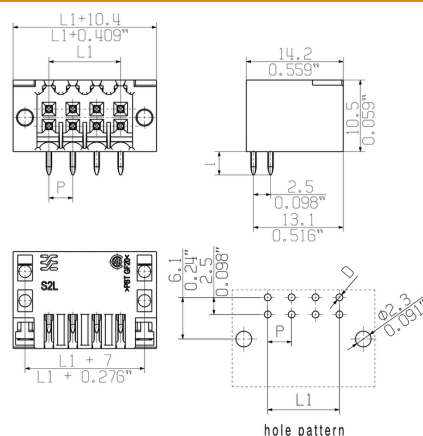
Engineering Data	<a href="#">CAD data – STEP</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">FL DRIVES DE</a>

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

## S2L 3.50/22/90F 3.5SN BK BX

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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	S2L/S2C 3.5 FLA 20/10	Version	Product data	Packaging
Order No.	<a href="#">1699580000</a>	PCB plug-in connector, Accessories, Flood-light display, Transparent,		Box
GTIN (EAN)	4008190891350	Number of poles: 10		
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	B2L/S2L 3.50 KO BK BX	Version	Product data	Packaging
Order No.	<a href="#">1849740000</a>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248378203	of poles: 1		
Qty.	100 pc(s).			

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

Type	B2L/S2L 3.50 KO OR BX	Version	Product data	Packaging
Order No.	<a href="#">1849730000</a>	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4032248378197	of poles: 1		
Qty.	100 pc(s).			

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
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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  $260\text{ °C}$ . In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.