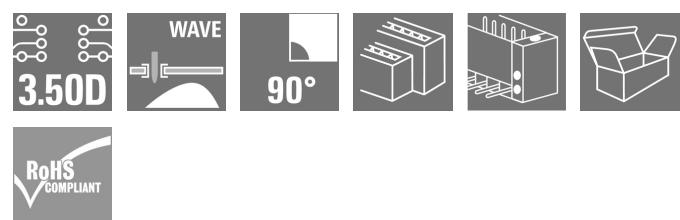


**S2L 3.50/04/90F 3.5SN OR BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergsstraße 26  
 D-32758 Detmold  
 Germany

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



Similar to illustration

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: 4, 90°, Solder pin length (l): 3.5 mm, tinned, orange, Box
Order No.	<a href="#">2941900000</a>
Type	S2L 3.50/04/90F 3.5SN OR BX
GTIN (EAN)	4099986712201
Product data	IEC: 160 V / 10 A UL: 150 V / 10 A
Packaging	Box

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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	14 mm
Width (inches)	0.551 inch	Net weight	1.766 g

**System specifications**

Product family	OMNIMATE Signal - series B2L/S2L 3.50 - 2-row																
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	4																
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																	
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 cycles	25																
Plugging force/pole, max.	5 N																
Pulling force/pole, max.	4 N																
Tightening torque	<table border="1"> <tr> <td>Torque type</td> <td colspan="3">Mounting screw, PCB</td> </tr> <tr> <td>Usage information</td> <td>Tightening torque</td> <td>min.</td> <td>0.1 Nm</td> </tr> <tr> <td></td> <td>max.</td> <td>0.15 Nm</td> <td></td> </tr> <tr> <td></td> <td>Recommended screw</td> <td>Part number</td> <td>PTSC KA 2.2X4.5 WN1412</td> </tr> </table>	Torque type	Mounting screw, PCB			Usage information	Tightening torque	min.	0.1 Nm		max.	0.15 Nm			Recommended screw	Part number	PTSC KA 2.2X4.5 WN1412
Torque type	Mounting screw, PCB																
Usage information	Tightening torque	min.	0.1 Nm														
	max.	0.15 Nm															
	Recommended screw	Part number	PTSC KA 2.2X4.5 WN1412														

**Material data**

Insulating material	PBT GF	Colour	orange
Colour chart (similar)	RAL 2000	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		

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**Technical data****Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	10 A
Rated current, max. number of poles (Tu=20°C)	10 A	Rated current, min. number of poles (Tu=40°C)	9 A
Rated current, max. number of poles (Tu=40°C)	8.5 A	Rated voltage for surge voltage class / pollution degree II/2	160 V
Rated voltage for surge voltage class / pollution degree III/2	125 V	Rated voltage for surge voltage class / pollution degree III/3	80 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	1.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	1.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 77 A

**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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**Rated data acc. to UL 1059**

Rated voltage (Use group B / UL 1059)	150 V	Rated current (Use group B / UL 1059)	10 A
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**Packing**

Packaging	Box	VPE length	352 mm
VPE width	139 mm	VPE height	26 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%

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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**

ROHS	Conform
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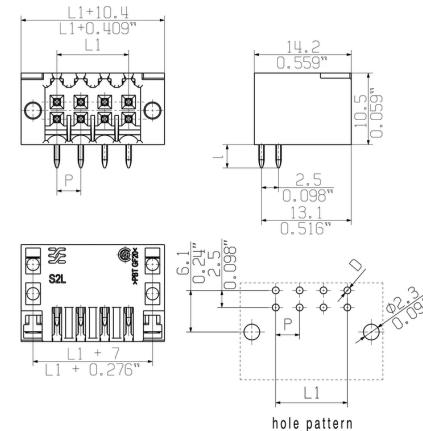
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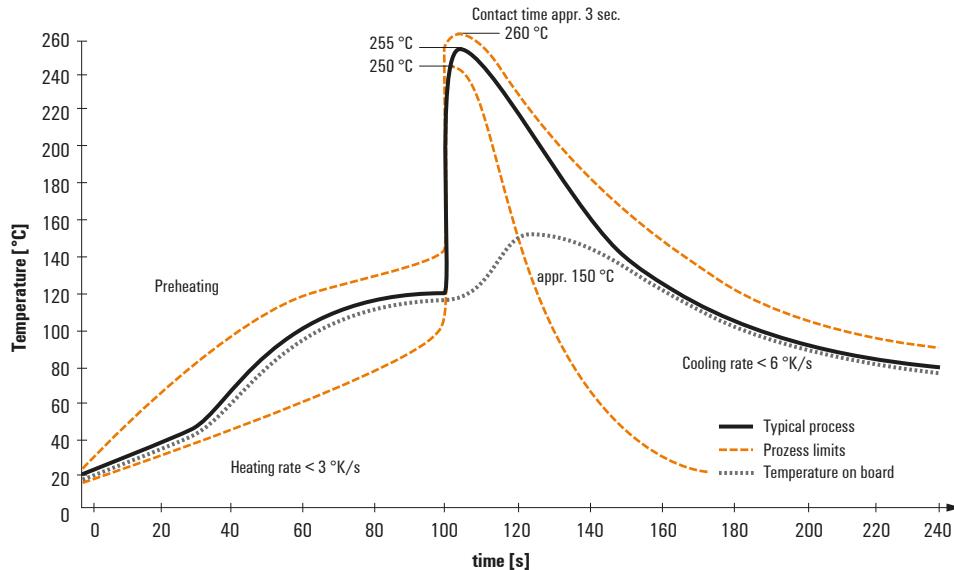
## Drawings

## Dimensional drawing



## 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.