

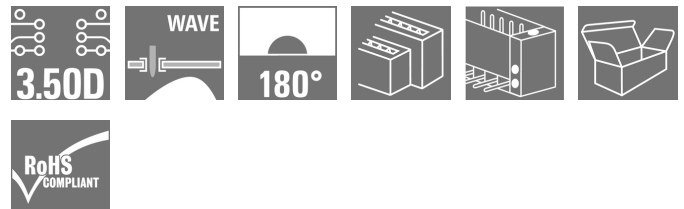
S2L 3.50/12/180F 3.5SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

Straight, double-row pin header available in closed-sided or flange version (open-sided pin headers on request). The male headers with a pin length of 3.5mm are designed for wave soldering and are packed in a box. They can be screwed on to the PCB. The male 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, 180°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	1729620000
Type	S2L 3.50/12/180F 3.5SN BK BX
GTIN (EAN)	4032248041022
Qty.	66 pc(s).
Product data	IEC: 250 V / 10 A UL: 150 V / 10 A
Packaging	Box

Creation date March 25, 2021 1:09:28 AM CET

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Technical data**Dimensions and weights**

Depth	10.5 mm	Depth (inches)	0.413 inch
Height	17.7 mm	Height (inches)	0.697 inch
Height of lowest version	14.2 mm	Net weight	3.27 g
Width	28 mm	Width (inches)	1.102 inch

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 inch			
Outgoing elbow	180°			
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 inch			
Number of rows	1			
Pin series quantity	2			
Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch			
Touch-safe protection acc. to DIN VDE 0470	IP 10			
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	PTSC KA 2.2X4.5 WN1412

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	Copper 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

Rated current (Use group B / CSA)

5 A

Reference to approval values

Specifications are
maximum values, details -
see approval certificate.**Rated data acc. to UL 1059**

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059)

150 V

Rated voltage (Use group C / UL 1059)

50 V

Rated current (Use group B / UL 1059)

10 A

Rated current (Use group C / UL 1059)

10 A

Reference to approval values

Specifications are
maximum values, details -
see approval certificate.**Packing**

Packaging

Box

VPE length

58 mm

VPE width

70 mm

VPE height

110 mm

Classifications

ETIM 6.0

EC002637

ETIM 7.0

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

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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	• Additional colours on request • Gold-plated contact surfaces on request • Spacing between rows: see hole layout • Rated current related to rated cross-section & min. No. of poles. • Diameter of solder eyelet D = 1.3+0.1 mm • P on drawing = pitch • 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. • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



ROHS	Conform
UL File Number Search	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	STEP

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

Drawings

Technical drawing of a 4-pin connector showing top, side, and detail views with dimensions in inches and millimeters.

Top View Dimensions:

- Overall width: $L1 + P + 6.9$ (inches), $L1 + P + 0.271$ " (inches)
- Pin pitch: $L1 + P + 3.5$ (inches), $L1 + P + 0.137$ " (inches)
- Pin diameter: ϕD
- Pin length: 2.5 (inches), 0.098" (inches)
- Pin spacing: $L1$ (inches), P (inches)
- Pin diameter: ϕD
- Pin length: 1.2 (inches), 0.047" (inches)
- Pin diameter: $\phi 2.3$ (inches), $\phi 0.091$ " (inches)

Side View Dimensions:

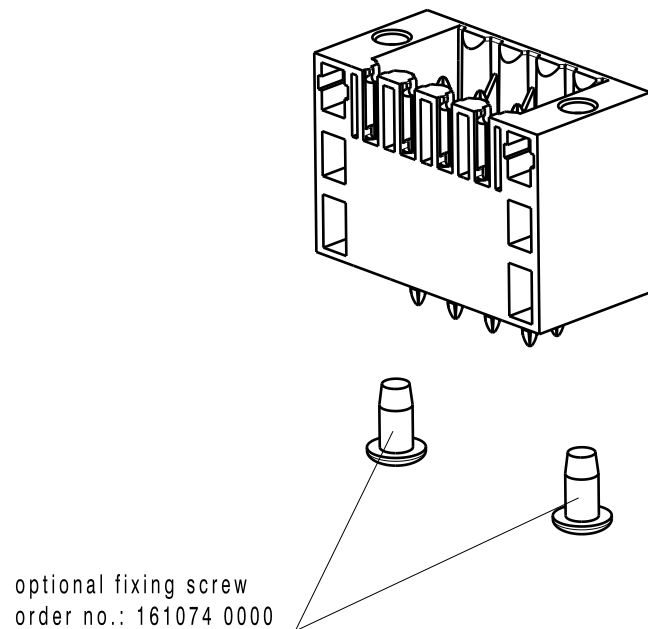
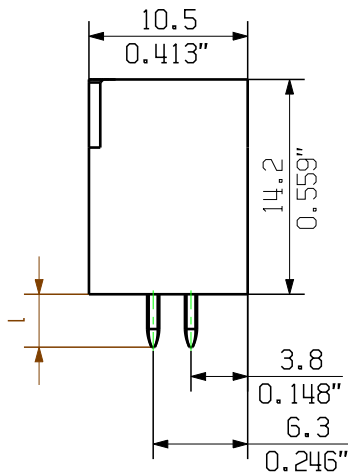
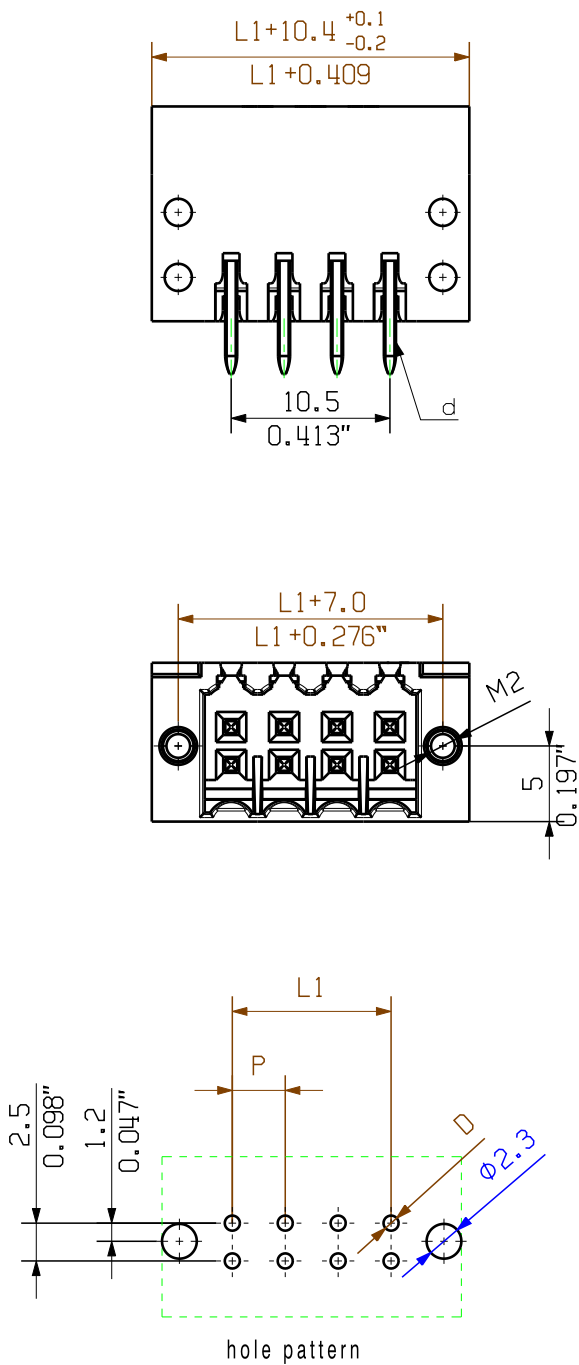
- Overall height: 10.5 (inches), 0.413" (inches)
- Pin length: 14.2 (inches), 0.555" (inches)
- Pin diameter: 3.8 (inches), 0.148" (inches)
- Pin length: 6.3 (inches), 0.246" (inches)

Detail View Dimensions:

- Pin diameter: ϕD
- Pin length: 1.2 (inches), 0.047" (inches)
- Pin diameter: $\phi 2.3$ (inches), $\phi 0.091$ " (inches)

Labels:

- hole pattern



P = 3.50 Raster Pitch
D = $\emptyset 1,3^{+0.1}$
 $\emptyset 0.051^{+0.1}$
d = 1mm oktagonale
0.039" oktagonale

shown S2L 3.50/././180F

pin length l	tolerance
3,5	0,2 -0,2
2,6	0,2 -0,2

n	Polzahl/ no of poles	L1	Toleranz/ tolerance L1
46	77.0		
44	73.5		
42	70.0		
40	66.5		
38	63.0		
36	59.5		
34	56.0		
32	52.5		
30	49.0		
28	45.5		
26	42.0		
24	38.5		
22	35.0		
20	31.5		
18	28.0		
16	24.5		
14	21.0		
12	17.5		
10	14.0		
8	10.5		
6	7.0		
4	3.5		

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 with VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmueller 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-mK

98746/5
29.11.17 HELIS_MA

01

Modification

Drawn

28.11.2008

HELIS_MA

Responsible

AMANN_A

Checked

04.12.2017

HELIS_MA

Approved

LANG_T

Weidmüller

3 25607

18

Drawing no.

Sheet 06 of 06 sheets

Issue no.

Scale: 5/1

Supersedes: .

S2L 3.50/././...

STIFTLEISTE

MALE HEADER

Product file: S2L 3.50

7110

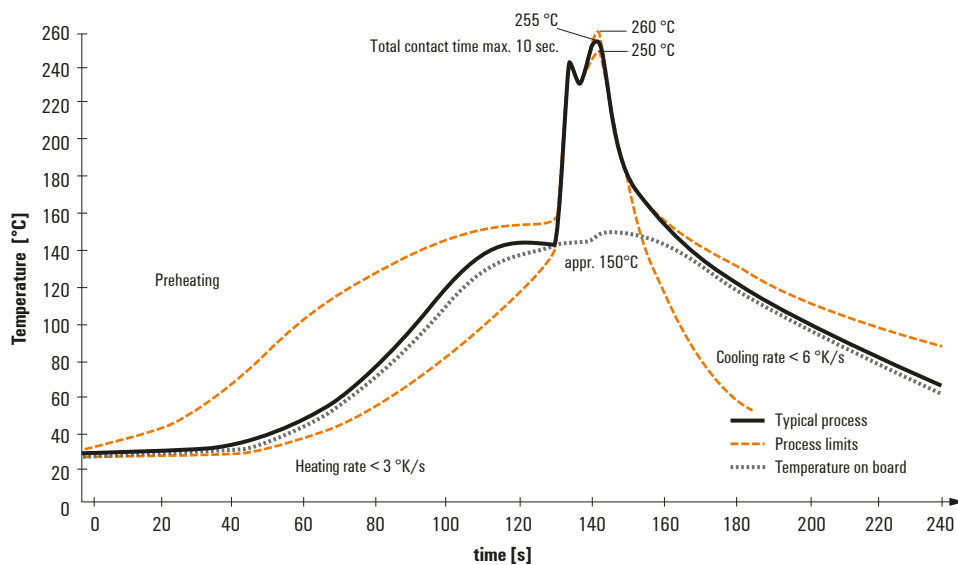
Recommended wave soldering profiles

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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.