

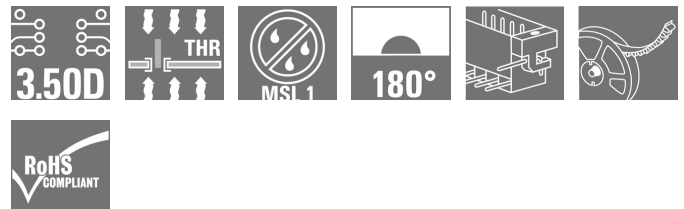
S2L-SMT 3.50/36/180LF 1.5SN BK RL**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

High-temperature-resistant, double-row pin header for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. Solder pin 3.2 mm long, suitable for reflow and wave soldering. The male connectors provide space for labelling and can be coded.

General ordering data

Version	PCB plug-in connector, male header, Solder flange, THT/THR solder connection, 3.50 mm, Number of poles: 36, 180°, Solder pin length (l): 3.5 mm, tinned, black, Tape
Order No.	1106190000
Type	S2L-SMT 3.50/36/180LF 1.5SN BK RL
GTIN (EAN)	4032248881741
Qty.	150 pc(s).
Product data	IEC: 160 V / 10 A UL: 150 V / 10 A
Packaging	Tape

Creation date March 23, 2021 12:17:59 AM CET

S2L-SMT 3.50/36/180LF 1.5SN BK RL**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Dimensions and weights**

Depth	10.8 mm	Depth (inches)	0.425 inch
Height	14.3 mm	Height (inches)	0.563 inch
Height of lowest version	14.2 mm	Net weight	13.85 g
Width	70 mm	Width (inches)	2.756 inch

System specifications

Product family	OMNIMATE Signal - series B2L/S2L 3.50 - 2-row	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	180°
Number of poles	36	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	
Outside diameter of solder pad	2.1 mm	Template aperture diameter	1.9 mm
L1 in mm	59.5 mm	L1 in inches	2.343 inch
Number of rows	2	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.	3 N
Pulling force/pole, max.	6 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	Copper alloy
Contact surface	tinned	Layer structure of solder connection	2...3 µm Ni / 5...7 µm Sn
Layer structure of plug contact	2...5 µm Sn / 1...3 µm Ni	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		

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	50 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 1 s with 77 A

S2L-SMT 3.50/36/180LF 1.5SN BK RL

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1176845

Rated voltage (Use group B / CSA)	50 V
Rated voltage (Use group D / CSA)	150 V
Rated current (Use group C / CSA)	9.5 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	5 A
Rated current (Use group D / CSA)	9.5 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	Tape	VPE length	90 mm
VPE width	330 mm	VPE height	330 mm
Tape depth (T2)	19.8 mm	Tape width (W)	88 mm
Tape pocket depth (K0)	19.3 mm	Tape pocket height (A0)	11.1 mm
Tape pocket width (B0)	70.4 mm	Tape pocket separation (P1)	20 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	42.2 mm
Tape reel diameter Ø (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$
Width Pick & Place Pad (W_{PPP})	10 mm	Length Pick & Place Pad (L_{PPP})	15.6 mm
Diameter of the withdrawal surface ($\varnothing D_{max}$)	9 mm	Protrusion 1 Pick & Place Pad ($L_{01 (PPP)}$)	7.8 mm
Protrusion 2 Pick & Place Pad ($P_{02 (PPP)}$)	7.8 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

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

S2L-SMT 3.50/36/180LF 1.5SN BK RL**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Technical data****Approvals**

Approvals



ROHS	Conform
UL File Number Search	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	STEP
Product Change Notification	Change of housing geometry S2L-SMT - EN Change of housing geometry S2L-SMT - DE

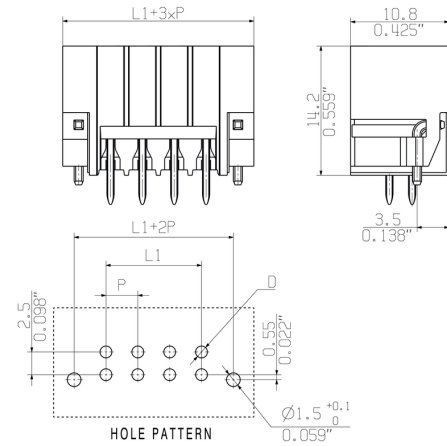
S2L-SMT 3.50/36/180LF 1.5SN BK RL

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

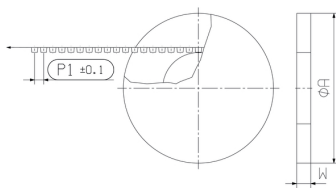
www.weidmueller.com

Drawings

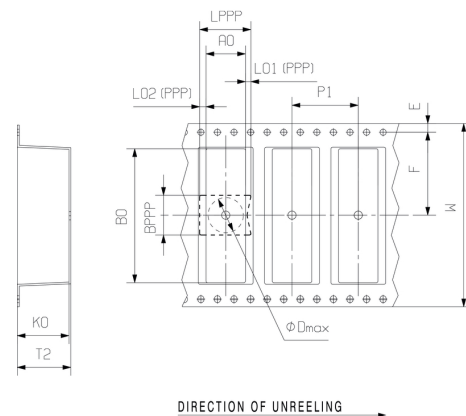
Dimensional drawing



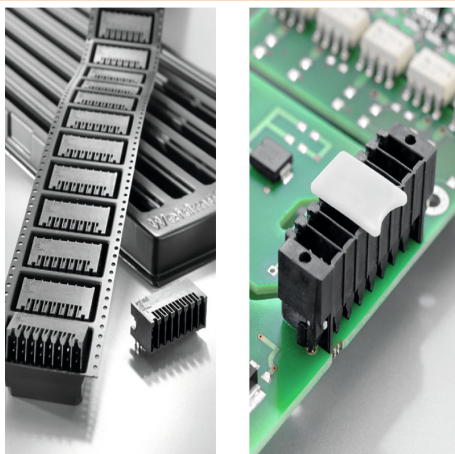
Dimensional drawing



Dimensional drawing



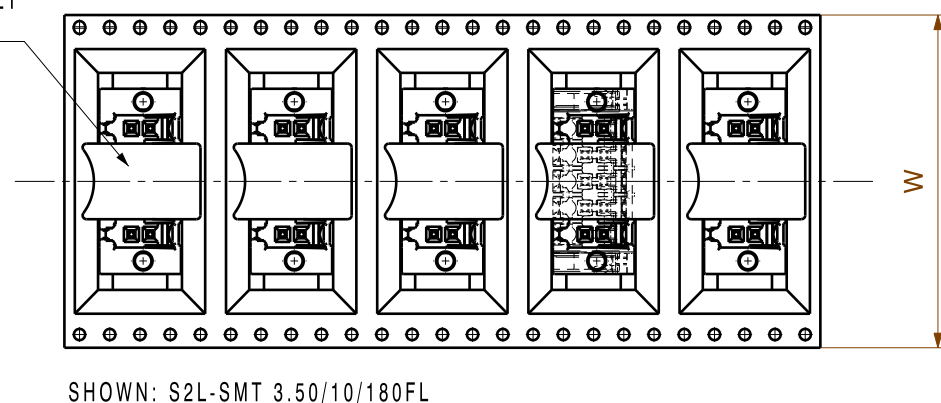
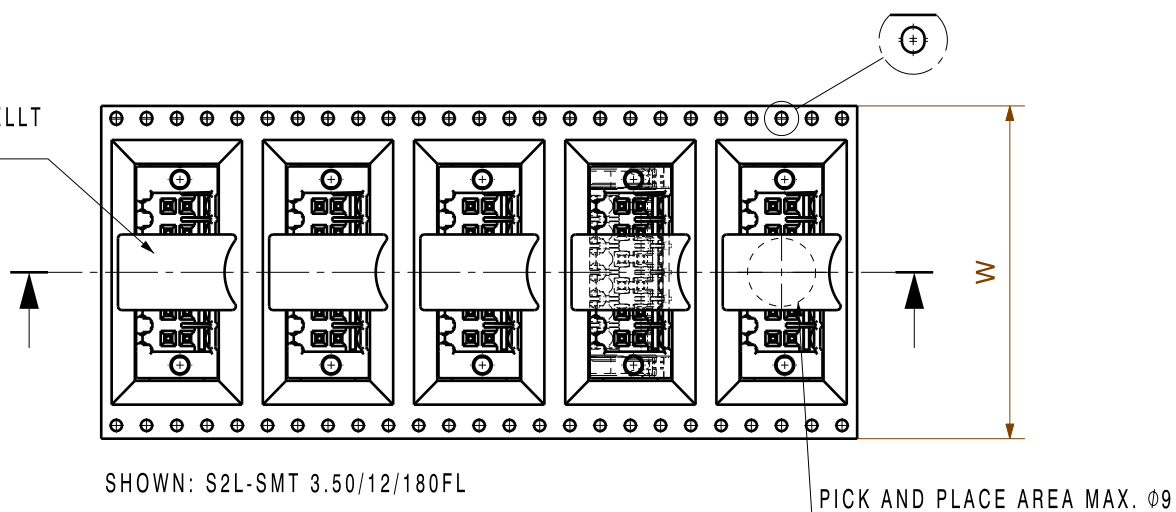
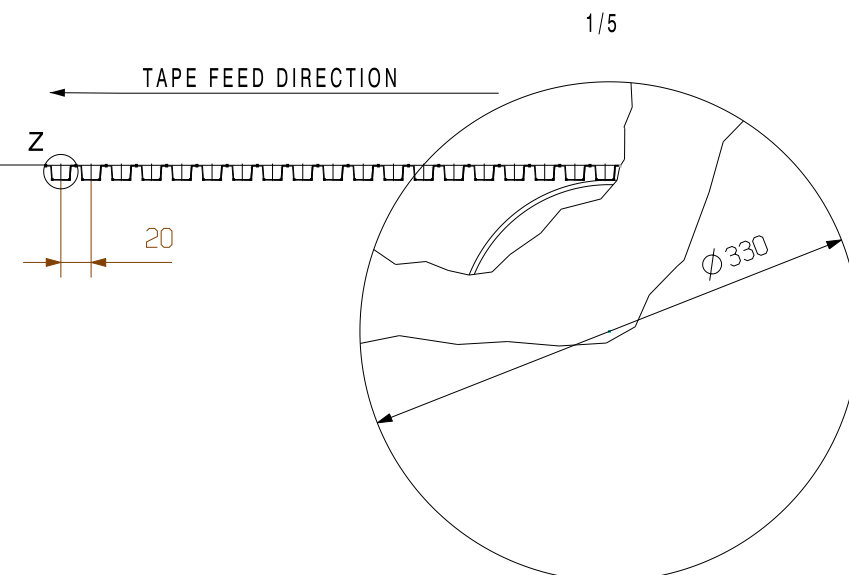
Product benefits



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

DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING

(C) WEIDMUELLER INTERFACE GmbH & Co. KG



NO OF POLES MATCHING IN TAPE														
OPEN ENDED					CLOSED ENDED					SOLDER FLANGE ENDED				
w					w					w				
32mm	44mm	56mm	72mm	88mm	32mm	44mm	56mm	72mm	88mm	32mm	44mm	56mm	72mm	88mm
4					4					4				
6					6					6				
8					8						8			
10						10					10			
	12					12					12			
	14					14					14			
	16					16						16		
	18						18					18		
		20					20					20		
		22					22						22	
		24					24						24	
			26					26					26	
			28					28					28	
			30					30						30
			32					32						32
				34					34					34
				36					36					36
				38					38					
				40										

 CAT.NO.: C 33278 12		83816/5 03.09.15 AMANN_A 00		
		MODIFICATION		
		DRAWING NO. SHEET 01 ISSUE NO. OF 02 SHEETS		
		DATE	NAME	TAPE S2L-SMT 3.50/./180 TAPE STIFTFLEISTE TAPE PIN HEADER
DRAWN	23.08.2007	LANG_T		
RESPONSIBLE		AMANN_A		
CHECKED	03.09.2015	HELIS_MA		
APPROVED		LANG_T		
SCALE: 1/1		PRODUCT FILE: S2L-SMT 3.50		7272
SUPERSEDES: .				

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

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.

Recommended reflow soldering profile

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.