

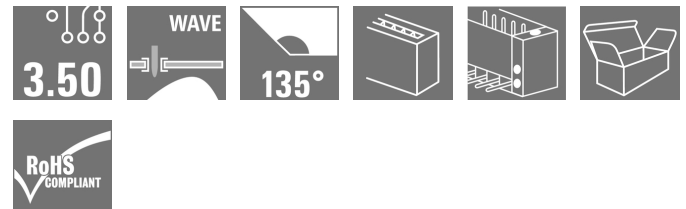
SL 3.50/20/135F 3.2SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Version	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 20, 135°, Solder pin length (l): 3.2 mm, tinned, orange, Box
Order No.	1643510000
Type	SL 3.50/20/135F 3.2SN OR BX
GTIN (EAN)	4008190282271
Qty.	24 pc(s).
Product data	IEC: 320 V / 15 A UL: 300 V / 10 A
Packaging	Box

Creation date March 24, 2021 5:41:52 PM CET

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Technical data

Dimensions and weights

Depth	13.2 mm	Depth (inches)	0.52 inch
Height	16.2 mm	Height (inches)	0.638 inch
Height of lowest version	13 mm	Net weight	7.3 g
Width	77 mm	Width (inches)	3.031 inch

System specifications

Product family	OMNIMATE Signal - series BL/SL 3.50			
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	135°			
Number of poles	20			
Number of solder pins per pole	1			
Solder pin length (l)	3.2 mm			
Solder pin length tolerance	+0.1 / -0.3 mm			
Solder pin dimensions	d = 1.2 mm, Octagonal			
Solder pin dimensions = d tolerance	0 / -0.03 mm			
Solder eyelet hole diameter (D)	1.4 mm			
Solder eyelet hole diameter tolerance (D)	+ 0.1 mm			
L1 in mm	66.5 mm			
L1 in inches	2.618 inch			
Number of rows	1			
Pin series quantity	1			
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			
Volume resistance	≤5 mΩ			
Can be coded	Yes			
Plugging force/pole, max.	10 N			
Pulling force/pole, max.	10 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	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	CuSn	Contact surface	tinned
Layer structure of solder connection	1...3 µm Ni / 2...4 µm Sn matt	Layer structure of plug contact	1...3 µm Ni / 2...4 µm Sn matt
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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Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	15 A
Rated current, max. number of poles (Tu=20°C)	11 A	Rated current, min. number of poles (Tu=40°C)	13 A
Rated current, max. number of poles (Tu=40°C)	9 A	Rated voltage for surge voltage class / pollution degree II/2	320 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	160 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 100 A

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	10 A	Rated current (Use group D / CSA)	10 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)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A	Rated current (Use group D / UL 1059)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	39 mm
VPE width	91 mm	VPE height	128 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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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	• Additional colours on request • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • 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. • 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

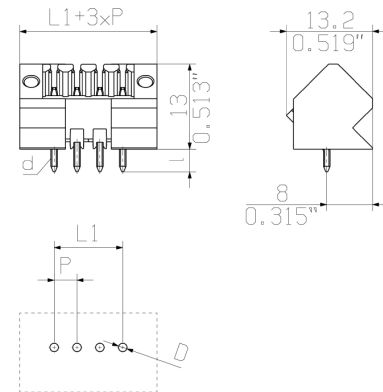
Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
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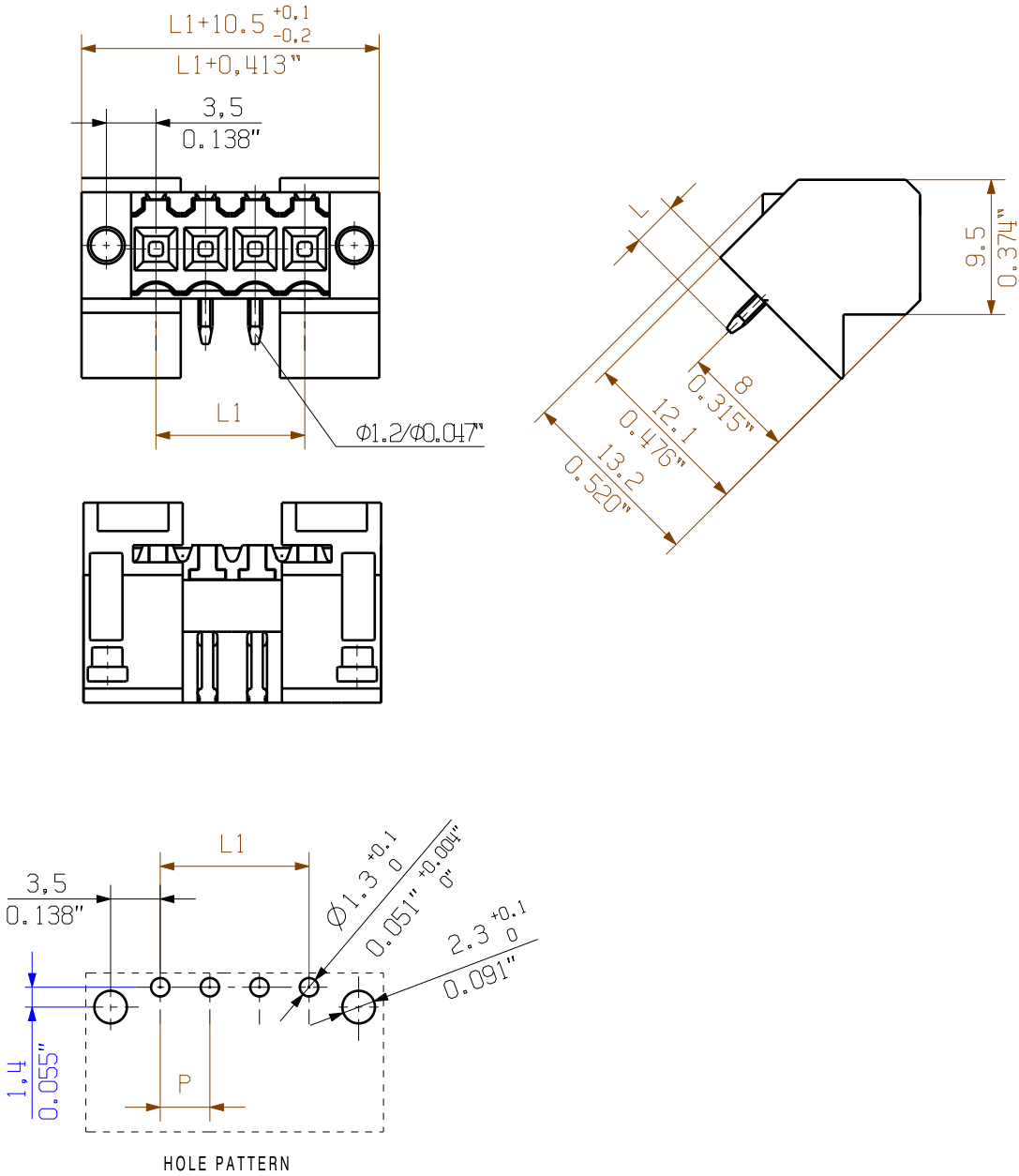
Drawings**Dimensional drawing**

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING



P= RASTER / PITCH
SHOWN SL3.5/04/135F

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.

Weidmüller 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.

STIFTLAENGE L	TOLERANZ
3,2	0,1 -0,3
4,5	0,1 -0,3

24	80,50	3,169
23	77,00	3,031
22	73,50	2,894
21	70,00	2,756
20	66,50	2,618
19	63,00	2,480
18	59,50	2,343
17	56,00	2,205
16	52,50	2,067
15	49,00	1,929
14	45,50	1,791
13	42,00	1,654
12	38,50	1,516
11	35,00	1,378
10	31,50	1,240
9	28,00	1,102
8	24,50	0,965
7	21,00	0,827
6	17,50	0,689
5	14,00	0,551
4	10,50	0,413
3	7,00	0,276
2	3,50	0,138
n	L1 [mm]	L1 [Inch]

	METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05		49545/5 20.01.10 HELIS_MA 02		CAT.NO.: .	
	MODIFICATION				C 21377 05	
	DRAWN 02.11.2009 HELIS_MA		NAME		DRAWING NO. SHEET 02 OF 02 SHEETS	
RESPONSIBLE		LANG_T		ISSUE NO.		
CHECKED 22.01.2010 HECKERT_M		HECKERT_M		SL 3.50/.../135(F)...		
APPROVED		HECKERT_M		STIFTELEISTE PIN HEADER		
SCALE: 2:1 SUPERSEDES: .		PRODUCT FILE: SL 3.50		7296		

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.