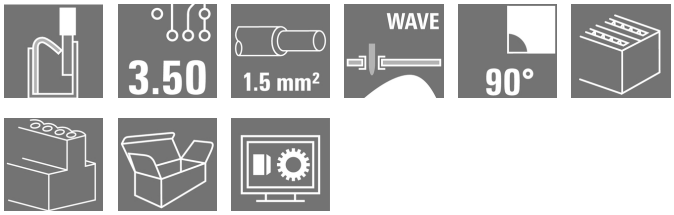
OMNIMATE Signal - series LS
LS2HF 3.50/12/90 3.5SN OR BX

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

Product image

Similar to illustration



Double-level PCB terminal for the wave soldering process, with PUSH IN wire connection system. Conductor insertion and slider operation from the same direction (TOP).

- Solid and flexible conductors with wire-end ferrules can just be inserted - done
- When connecting flexible wires without wire-end ferrules, the actuating element is used to open the clamping point
- Intuitive handling thanks to the clear distinction between wire entry and actuating element
- Packed in a box
- Conductor outlet direction 90°

General ordering data

Type	LS2HF 3.50/12/90 3.5SN OR BX
Order No.	2000980000
Version	Printed circuit board terminals, 3.50 mm, No. of poles: 12, 90°, Solder pin length (l): 3.5 mm, orange, PUSH IN, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4050118382587
Qty.	50 pc(s).
Product data	IEC: 400 V / 17.5 A / 0.2 - 1.5 mm² UL: 150 V / 12.5 A / AWG 26 - AWG 16
Packaging	Box

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Technical data

Dimensions and weights

Width	26 mm	Width (inches)	1.024 inch
Height	27.7 mm	Height (inches)	1.091 inch
Height of lowest version	24.2 mm	Depth	18 mm
Depth (inches)	0.709 inch	Net weight	11.18 g

System parameters

Product family	OMNIMATE Signal - series LS	Wire connection method	PUSH IN
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	3.5 mm	Pitch in inches (P)	0.138 inch
No. of poles	12	Fitted by customer	No
Solder pin length (l)	3.5 mm	Solder pin length tolerance	-0.1 / 0 mm
Solder pin dimensions	1.0 x 0.6 mm	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)	+ 0,1 mm	Number of solder pins per pole	1
Screwdriver blade	0.4 x 2.5	Stripping length	8 mm
L1 in mm	17.5 mm	L1 in inches	0.689 inch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch

Material data

Insulating material	PA 66/6	Colour	orange
Colour of operational elements	black	Material of operational elements	PA 66/6
Colour chart (similar)	RAL 2000	CTI	≥ 600
Insulation strength	≥ 10^8 Ω	UL 94 flammability rating	V-0
Contact material	Copper alloy	Layer structure of solder connection	4-7 µm Sn matt
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	100 °C

Conductors suitable for connection

Clamping range, min.	0.2 mm²
Clamping range, max.	1.5 mm²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.2 mm²
Solid, max. H05(07) V-U	1.5 mm²
Flexible, min. H05(07) V-K	0.2 mm²
Flexible, max. H05(07) V-K	1.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	0.75 mm²
w. wire end ferrule, DIN 46228 pt 1, min	0.2 mm²
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm²

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Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.25 mm²	
	AEH	Stripping length	nominal	10 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.34 mm²	
	AEH	Stripping length	nominal	10 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	AEH	Stripping length	nominal	10 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm²	
	AEH	Stripping length	nominal	10 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	AEH	Stripping length	nominal	7 mm
Max. clamping range	1.5 mm²			

Rated data acc. to IEC

tested acc. to standard	IEC 60947-7-4	Rated current, min. no. of poles (Tu=20°C)	17.5 A
Rated current, max. no. of poles (Tu=20°C)	9 A	Rated current, min. no. of poles (Tu=40°C)	17.5 A
Rated current, max. no. of poles (Tu=40°C)	8 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	200 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		

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	150 V	Rated voltage (Use group D / CSA)	150 V
Rated current (Use group B / CSA)	12.5 A	Rated current (Use group D / CSA)	12.5 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16

Rated data acc. to UL 1059

Institute (cURus)	c US	Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	150 V	Rated voltage (Use group D / UL 1059)	150 V
Rated current (Use group B / UL 1059)	12.5 A	Rated current (Use group D / UL 1059)	12.5 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	0 m
VPE width	0 m	VPE height	0 m

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Technical data

Classifications

ETIM 3.0	EC001284	ETIM 4.0	EC002643
ETIM 5.0	EC002643	ETIM 6.0	EC002643
eClass 6.2	27-26-11-01	eClass 9.0	27-44-04-01
eClass 9.1	27-44-04-01		

Notes

Notes	• Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule without plastic collar to DIN 46228/1 • Wire end ferrule with plastic collar to DIN 46228/4 • 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. • Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.
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.

Approvals

Approvals	c UL us

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN FL ANALO.SIGN.CONV. EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL_INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP

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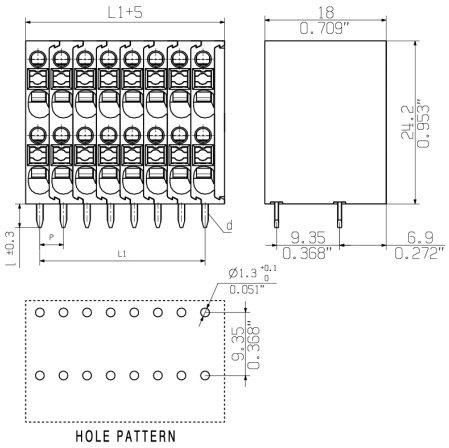
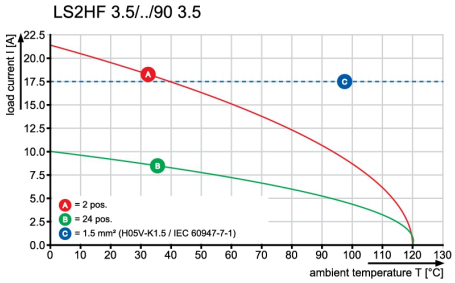
Drawings

Dimensional drawing



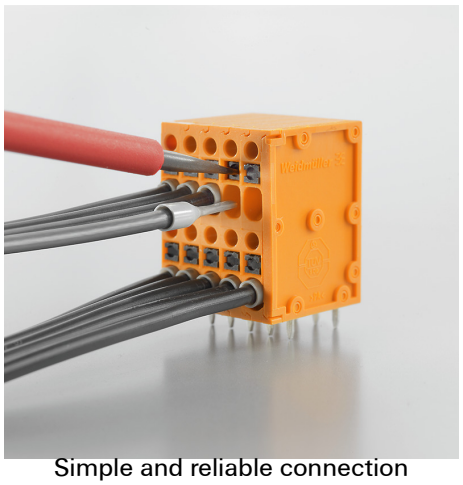
Graph



Product benefits

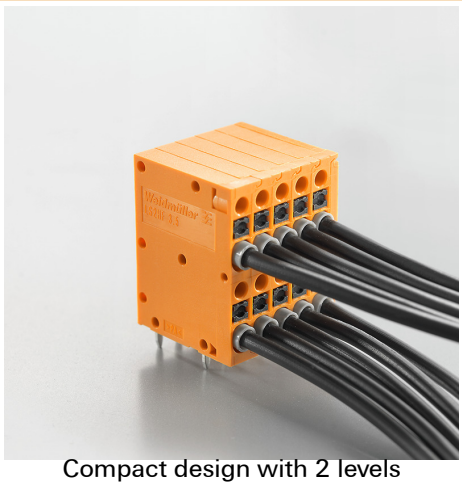
Fast conductor entry through PUSH IN

Product benefits



Simple and reliable connection

Product benefits

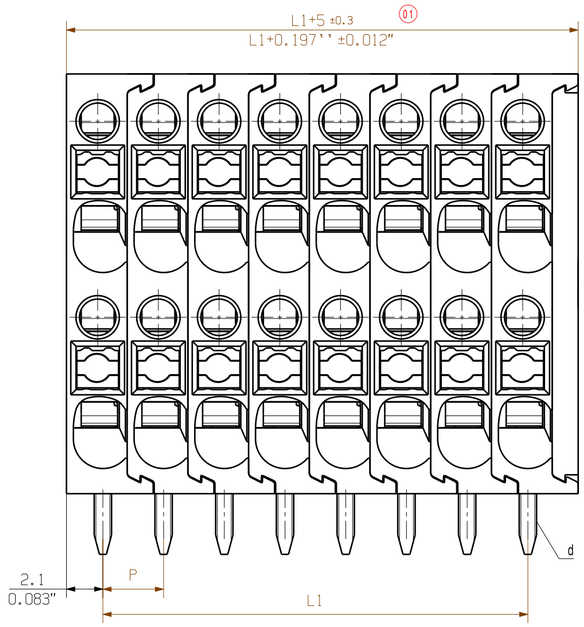


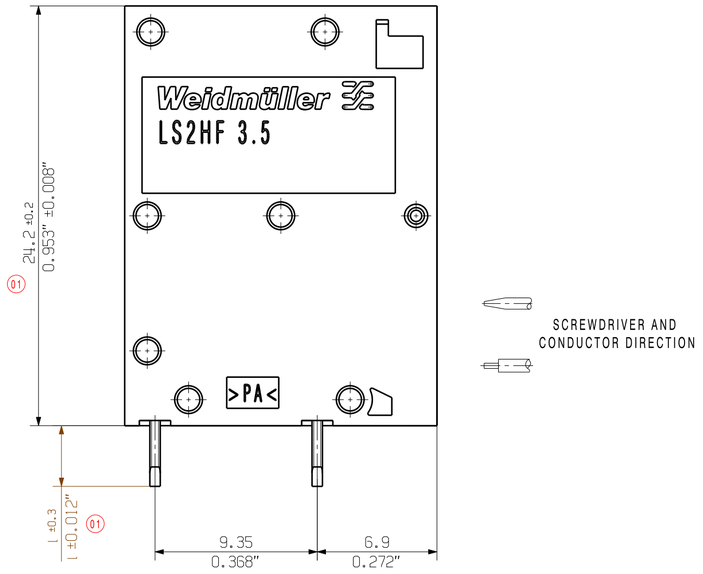
Compact design with 2 levels

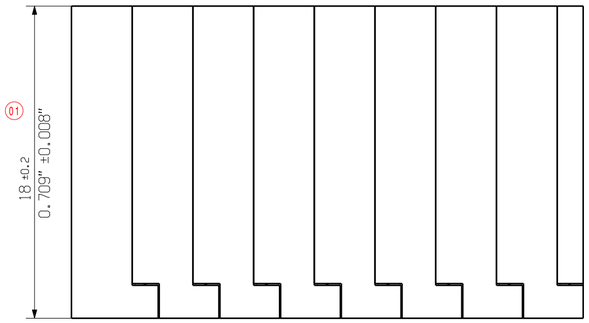
Product benefits

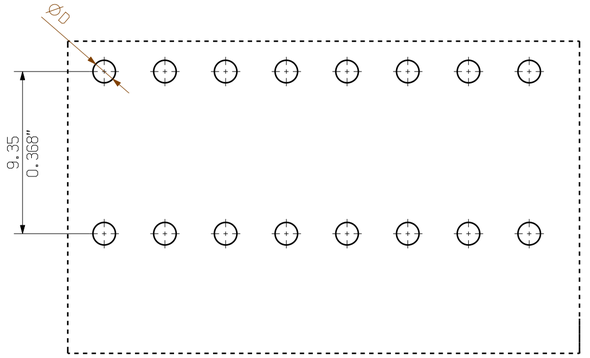
Maintenance through test tap

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

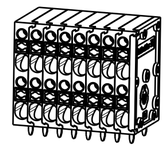








HOLE PATTERN



M 1/1

P = 3.50 RASTER PITCH
D = Ø1.3 +0.1 / 0.051"
d = 0.6x1.0 / 0.024"x0.039"
l = 3.5 / 0.138"

48	80.5	3.169
46	77.0	3.031
44	73.5	2.894
42	70.0	2.756
40	66.5	2.618
38	63.0	2.480
36	59.5	2.343
34	56.0	2.205
32	52.5	2.067
30	49.0	1.929
28	45.5	1.791
26	42.0	1.654
24	38.5	1.516
22	35.0	1.378
20	31.5	1.240
18	28.0	1.102
16	24.5	0.965
14	21.0	0.827
12	17.5	0.689
10	14.0	0.551
8	10.5	0.413
6	7.0	0.276
4	3.5	0.138
2	0.0	0.0
POLES	L1 [mm]	L1 [inch]

ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

GENERAL TOLERANCE:
DIN ISO 2768-m

RoHS COMPLIANT

83899/5
22.09.15 XIANG_K 04
MODIFICATION

	DATE	NAME
DRAWN	09.02.2015	ZHOU_N
RESPONSIBLE		XIANG_K
CHECKED	22.09.2015	ZHOU_N
APPROVED		XU_S

SCALE: 4/1
SUPERSEDES: .

CAT.NO.: 1514540000

Weidmüller

C 59281 01
DRAWING NO. ISSUE NO.
SHEET 02 OF 02 SHEETS

LS2HF 3.5/.../90...
LEITERPLATTENKLEMME
PCB TERMINAL

PRODUCT FILE: LS2HF 7647

Wave Solder Profile

Recommended wave solderding profiles

Weidmüller Interface GmbH & Co. KG
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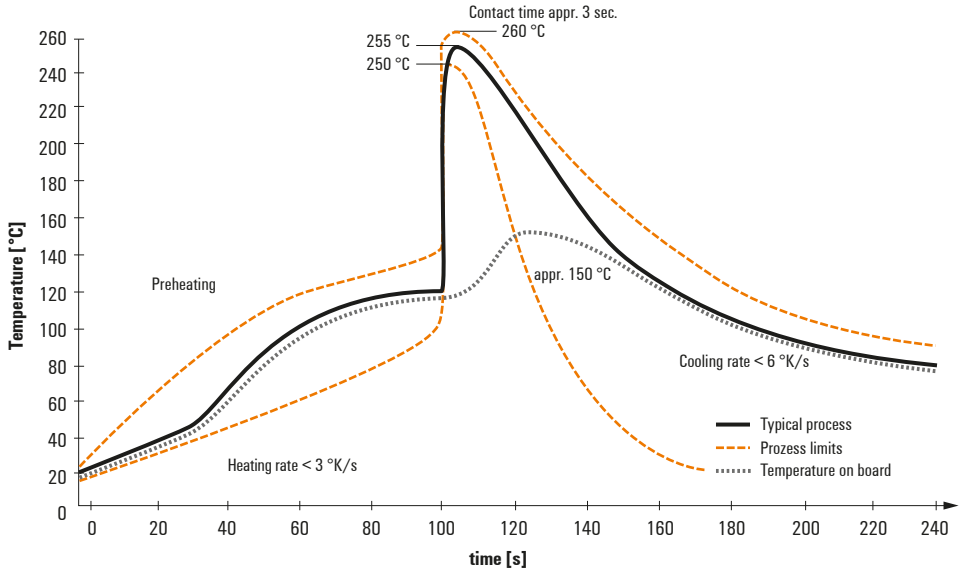
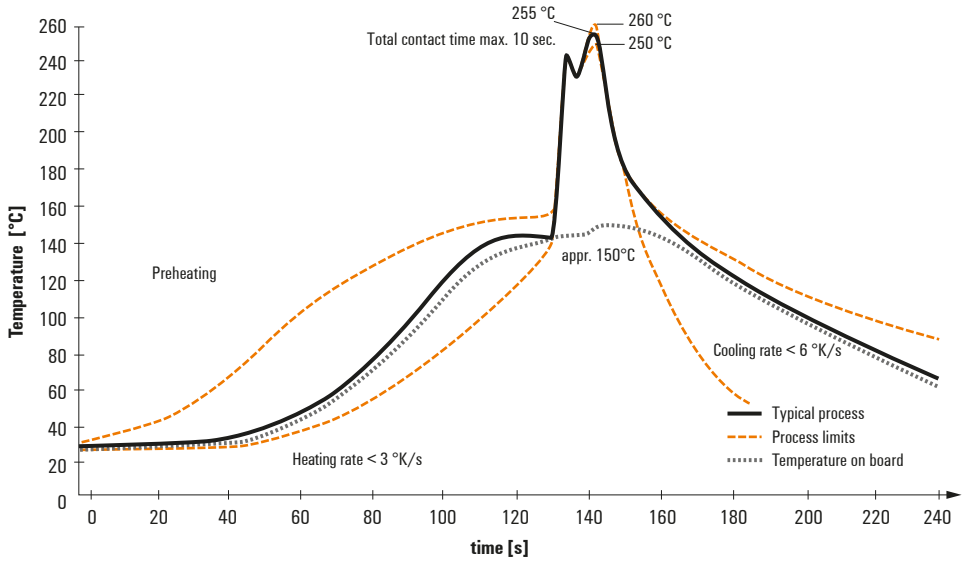
Single Wave:



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°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.