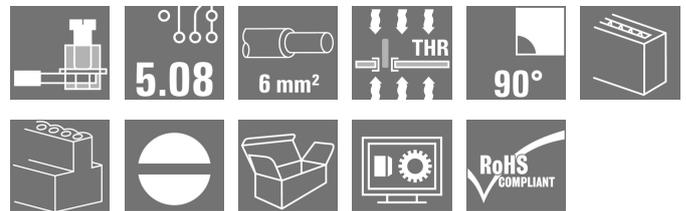


LP-THR 5.08/03/90 3.2SN BK BX

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

www.weidmueller.com

Product image



This PCB terminal provides connections for 32 A and 6 mm² conductor cross-section with proven clamping yoke connection at 5.00 and 5.08 mm pitch, conductor outlet direction in 90°, 135° and 180° design, with extensive auxiliary functions.

General ordering data

Version	Printed circuit board terminals, 5.08 mm, Number of poles: 3, 90°, Solder pin length (l): 3.2 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 6 mm ² , Box
Order No.	1789160000
Type	LP-THR 5.08/03/90 3.2SN BK BX
GTIN (EAN)	4032248208364
Qty.	100 pc(s).
Product data	IEC: 500 V / 32 A / 0.5 - 6 mm ² UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box
Creation date	March 25, 2021 8:24:10 AM CET
Available until	2018-12-31

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Technical data

Dimensions and weights

Depth	11 mm	Depth (inches)	0.433 inch
Height	20.2 mm	Height (inches)	0.795 inch
Height of lowest version	17 mm	Net weight	4.414 g
Width	15.84 mm	Width (inches)	0.624 inch

System parameters

Product family	OMNIMATE Signal - series LP	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT/THR solder connection	Conductor outlet direction	90°
Pitch in mm (P)	5.08 mm	Pitch in inches (P)	0.2 inch
Number of poles	3	Pin series quantity	1
Fitted by customer	Yes	Solder pin length (l)	3.2 mm
Solder pin dimensions	0.75 x 0.9 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	0.6 x 3.5	Screwdriver blade standard	DIN 5264
Tightening torque, min.	0.5 Nm	Tightening torque, max.	0.6 Nm
Clamping screw	M 3	Stripping length	6 mm
L1 in mm	10.16 mm	L1 in inches	0.4 inch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Volume resistance	1.20 mΩ		

Material data

Insulating material	PA	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-2	Contact material	Copper alloy
Contact surface	tinned	Coating	1-3 μm Ni, 4-6 μm SN
Tinning type	matt	Layer structure of solder connection	2...4 μm Ni / 4...6 μm Sn
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	100 °C

Conductors suitable for connection

Clamping range, min.	0.13 mm ²	Clamping range, max.	6 mm ²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.5 mm ²	Solid, max. H05(07) V-U	6 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²	Flexible, max. H05(07) V-K	4 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm ²	w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm ²	w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm ²
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.4 mm; 3.0 mm	Reference text	Length of ferrules is to be chosen depending on the product and the rated voltage. The outside diameter of the plastic collar should not be larger than the pitch (P)

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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)	32 A
Rated current, max. number of poles (Tu=20°C)	30.5 A	Rated current, min. number of poles (Tu=40°C)	32 A
Rated current, max. number of poles (Tu=40°C)	25 A	Rated voltage for surge voltage class / pollution degree II/2	500 V
Rated voltage for surge voltage class / pollution degree III/2	250 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	20 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12

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)	20 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	60 mm
VPE width	100 mm	VPE height	115 mm

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ECLASS 9.0	27-44-04-01	ECLASS 9.1	27-44-04-01
ECLASS 10.0	27-44-04-01	ECLASS 11.0	27-46-01-01

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	<ul style="list-style-type: none"> Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Data sheet**LP-THR 5.08/03/90 3.2SN BK BX****Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germanywww.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	WSCAD

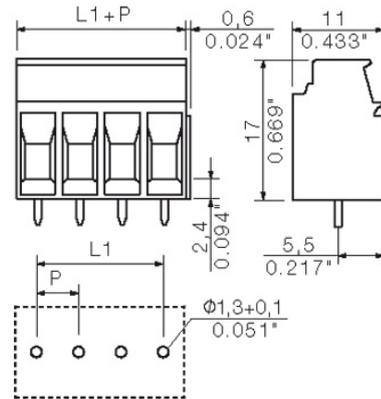
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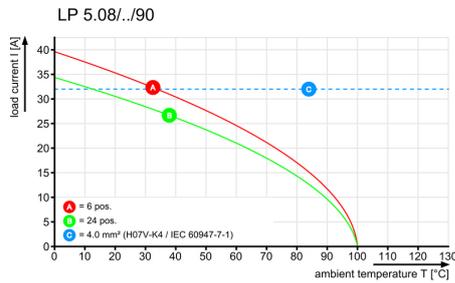
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Drawings

Dimensional drawing



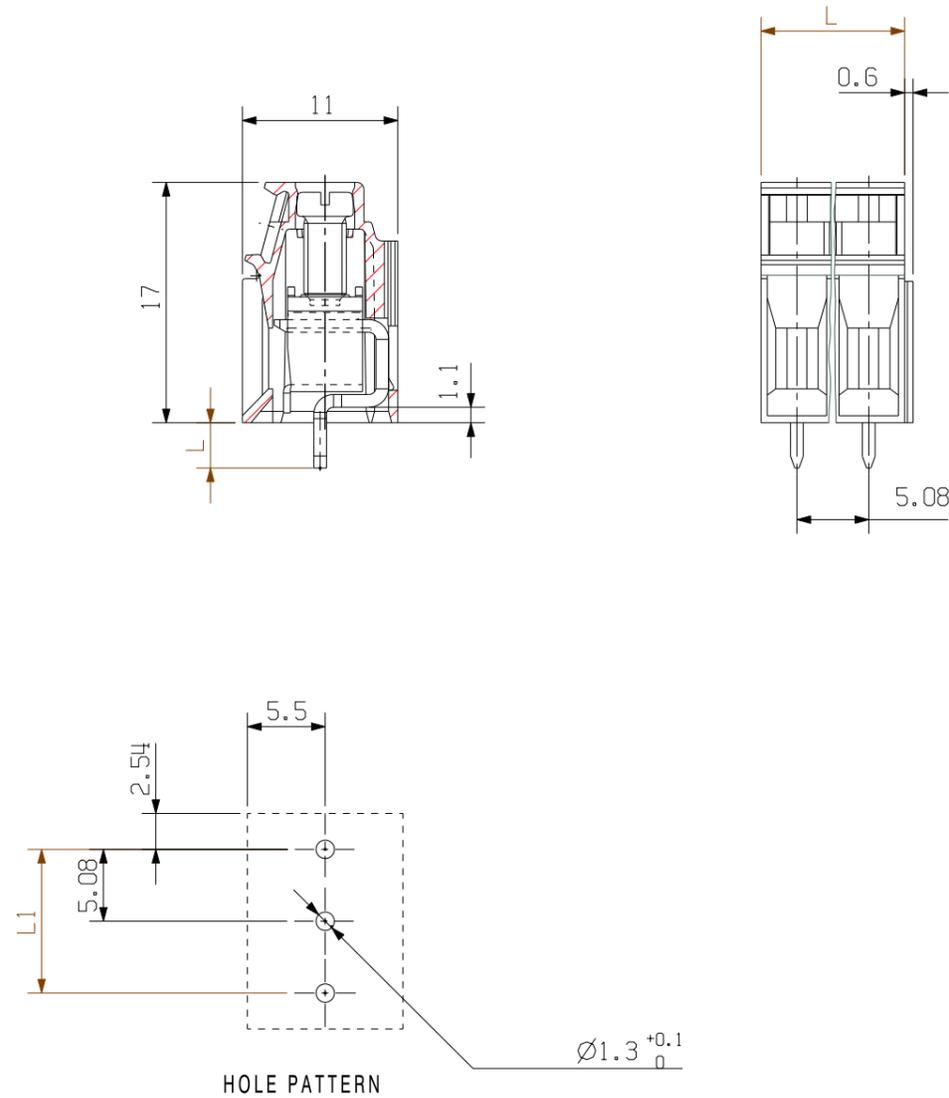
Graph



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

DIE DEUTSCHE VERSION IST VERBINDLICH
 THE GERMAN VERSION IS BINDING

WEITERGABE SOWIE VERVIELFAELTIGUNG 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 GESCHMACKSMUSTERREINBRINGUNG VORBEHALTEN.
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For the mounting on PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.

The necessary creepage and clearance paths must be observed in the relevant equipment standards in accordance with IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3.

Weidmüller PCB components are rated in accordance with the DIN EN 61984 standard, and are valid for its field of application. If the components are used in accordance with the intended purpose, the components will meet all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress.

HOLE PATTERN TOLERANCES TO
 DIN IEC 326 PART 3 VERY FINE

24	121,92	116,84
23	116,84	111,76
22	111,76	106,68
21	106,68	101,60
20	101,60	96,52
19	96,52	91,44
18	91,44	86,36
17	86,36	81,28
16	81,28	76,20
15	76,20	71,12
14	71,12	66,04
13	66,04	60,96
12	60,96	55,88
11	55,88	50,80
10	50,80	45,72
9	45,72	40,64
8	40,64	35,56
7	35,56	30,48
6	30,48	25,40
5	25,40	20,32
4	20,32	15,24
3	15,24	10,16
2	10,16	5,08
n	L	L1

	METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05		50801/5 14.08.12 HELIS_MA 03		CAT.NO.: 4 29993 02	
	MODIFICATION				DRAWING NO. SHEET 01 OF 01 SHEETS ISSUE NO.	
		DATE 20.01.2009	NAME HELIS_MA	LP THR 5.08 LEITERPLATTENKLEMME PCB TERMINAL		
SCALE: 2/1 SUPERSEDES: .		RESPONSIBLE KRUG_M	CHECKED 28.08.2012 HECKERT_M			
		APPROVED HECKERT_M	PRODUCT FILE: LP../90			

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
 Klängenbergstraße 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.

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.