LP2N 5.08/12/90 4.5SN OR BX

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

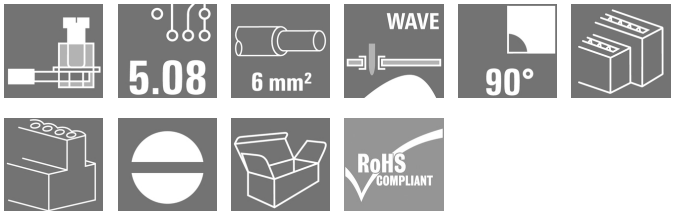
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Product image



Similar to illustration



Single- and multi-row PCB terminal with proven clamping yoke connection at 5.08 mm pitch, conductor outlet direction 90°. Suitable for conductor cross-sections up to 6.0 mm².

General ordering data

Version	Printed circuit board terminals, 5.08 mm, Number of poles: 12, 90°, Solder pin length (l): 4.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm², Box
Order No.	1632560000
Type	LP2N 5.08/12/90 4.5SN OR BX
GTIN (EAN)	4008190208936
Qty.	20 pc(s).
Product data	IEC: 500 V / 32 A / 0.5 - 6 mm² UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box
Delivery status	This article will no longer be available in the future.
Available until	2022-03-30
Alternative product	1977500000

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Technical data

Dimensions and weights

Depth	21.8 mm	Depth (inches)	0.858 inch
Height	35.5 mm	Height (inches)	1.398 inch
Height of lowest version	31 mm	Width	33.62 mm
Width (inches)	1.324 inch	Net weight	22.55 g

System parameters

Product family	OMNIMATE Signal - series LP	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	5.08 mm	Pitch in inches (P)	0.2 inch
Number of poles	12	Pin series quantity	2
Fitted by customer	Yes	Number of rows	2
Max. adjacent poles per row	48	Solder pin length (l)	4.5 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	25.4 mm	L1 in inches	1 inch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Protection degree	IP20	Volume resistance	1.20 mΩ

Material data

Insulating material	PA	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-2
Contact material	Cu-alloy	Contact surface	tinned
Coating	1-3 µm Ni, 4-6 µm SN	Tinning type	matt
Layer structure of solder connection	4...6 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 mm²	Clamping range, max.	6 mm²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.5 mm²	Solid, max. H05(07) V-U	6 mm²
Flexible, min. H05(07) V-K	0.5 mm²	Flexible, max. H05(07) V-K	4 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm²	w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm²	w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm²
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)	28 A	Rated current, min. number of poles (Tu=40°C)	32 A
Rated current, max. number of poles (Tu=40°C)	24 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

Institute (CSA)		Certificate No. (CSA)	200039-1202191
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
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)	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	176 mm
VPE width	71 mm	VPE height	47 mm

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	EC002643	ETIM 9.0	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
ECLASS 12.0	27-46-01-01	ECLASS 13.0	27460101

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

Approvals

Approvals	
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693

Downloads

Product Change Notification	PCN_2016_273_PL32_Loss_of_nickle_LL_LP_Family_EN PCN_2016_273_PL32_Wegfall_Unternickelung_LL_LP_Familie_DE
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN FL DRIVES DE

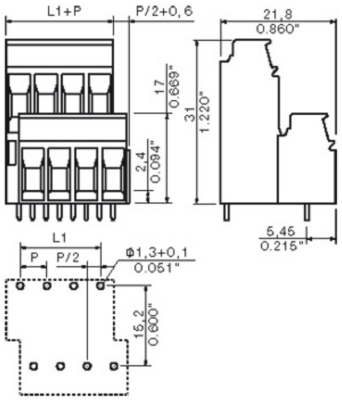
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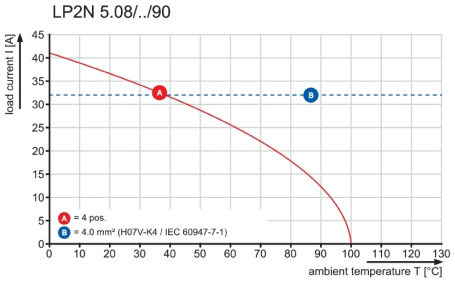
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Drawings

Dimensional drawing



Graph



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Accessories

Function indicators



Everything under control:
The function indicator is easy to retrofit and clearly indicates the switching state at the clamping point - also available with large format marking holder. One of the most versatile and efficient terminal printing systems with 5mm pitch: the Weidmüller LP series.
- Holder for 3mm standard LEDs
- Simple installation on the back of SP series terminals.
- Optional marking holder for advanced marking options (WS10/5 and WS12/5, see markings)

The easiest, most reliable way of monitoring switching states.
In brief: minimum effort, maximum reliability.

General ordering data

Type	LPA FA3 BZ	Version	Product data	Packaging
Order No.	1496260000	Printed circuit board terminals, Accessories, Function indicator, black,		Box
GTIN (EAN)	4008190101862	Number of poles: 3		
Qty.	50 pc(s).			

Type	LPA FA2 BZ	Version	Product data	Packaging
Order No.	1496160000	Printed circuit board terminals, Accessories, Function indicator, black,		Box
GTIN (EAN)	4008190100988	Number of poles: 2		
Qty.	50 pc(s).			

Type	LPA FA2	Version	Product data	Packaging
Order No.	1495960000	Printed circuit board terminals, Accessories, Function indicator, black,		Box
GTIN (EAN)	4008190173500	Number of poles: 2		
Qty.	50 pc(s).			

Type	LPA FA3	Version	Product data	Packaging
Order No.	1496060000	Printed circuit board terminals, Accessories, Function indicator, black,		Box
GTIN (EAN)	4008190062330	Number of poles: 3		
Qty.	50 pc(s).			

Marker holder



Finds space on the smallest terminal:
The marking holder is easy to retrofit and provides a large additional labelling space - the Weidmüller LP series is one of the most versatile and efficient terminal printing systems with 5mm pitch.
3 steps to clear, legible labels:
The most professional, convenient method of marking clamping points direct on the module - no confusion between clamping points and no incorrect wiring connections.
Minimum effort, maximum effect.

General ordering data

Type	LPA BZ3	Version	Product data	Packaging
Order No.	1497360000	Printed circuit board terminals, Accessories, Marker holder, black,		Box
GTIN (EAN)	4008190127022	Number of poles: 3		
Qty.	100 pc(s).			

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Accessories

Type	LPA BZ2	Version	Product data	Packaging
Order No.	1497260000	Printed circuit board terminals, Accessories, Marker holder, black,		Box
GTIN (EAN)	4008190027902	Number of poles: 2		
Qty.	100 pc(s).			

Mounting blocks



Minor component, major effect:
Clip-on attachment elements increase the mechanical resilience of the circuit board terminals.
Clip-on or pre-assembled - always the right solution:
- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- Suitable for all outlet directions

Maximum stability, minimum effort:
- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

General ordering data

Type	LPBB SW	Version	Product data	Packaging
Order No.	1747560000	Printed circuit board terminals, Accessories, Mounting block, black,		Box
GTIN (EAN)	4008190992248	Number of poles: 1		
Qty.	100 pc(s).			
Type	LPBB MU SW	Version	Product data	Packaging
Order No.	1747550000	Printed circuit board terminals, Accessories, Mounting block, black,		Box
GTIN (EAN)	4008190992231	Number of poles: 1		
Qty.	100 pc(s).			
Type	LPBB OR	Version	Product data	Packaging
Order No.	1747540000	Printed circuit board terminals, Accessories, Mounting block, orange,		Box
GTIN (EAN)	4008190992224	Number of poles: 1		
Qty.	100 pc(s).			
Type	LPBB MU OR	Version	Product data	Packaging
Order No.	1747530000	Printed circuit board terminals, Accessories, Mounting block, orange,		Box
GTIN (EAN)	4008190992217	Number of poles: 1		
Qty.	100 pc(s).			

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Accessories

Cross-connections



Large potential for small terminals.
For efficient electrical distribution directly at the connection:
- Isolated comb rail
- Available with the most standard pole numbers
- Easy to shorten

Simply reduce in size to match the number of poles and connect with the conductor in a single working procedure.
For retrofitting or deliberate reduction of the thermal load on the PCB.

General ordering data

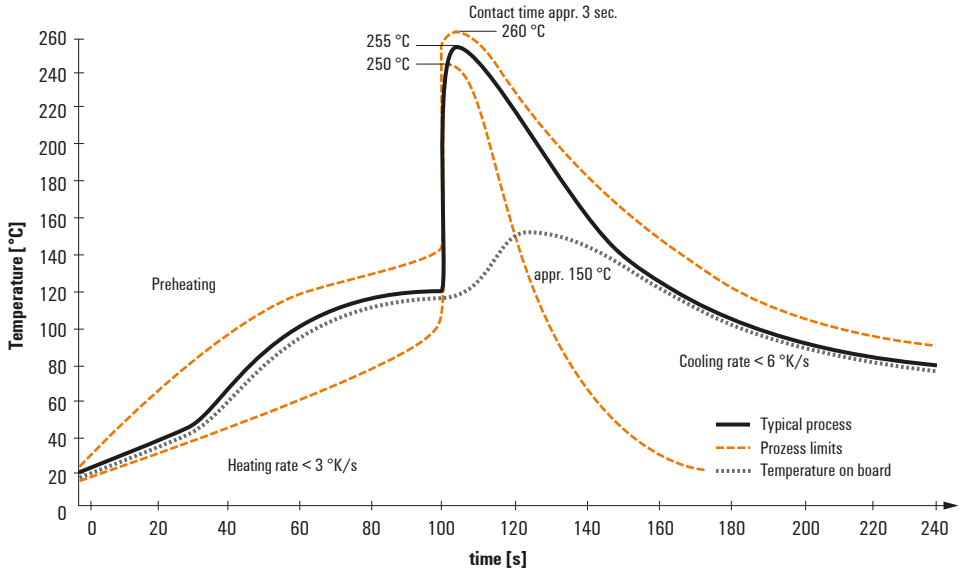
Type	LPA QB 4	Version	Product data	Packaging
Order No.	1472400000	Printed circuit board terminals, Accessories, Cross-connector, Number		Box
GTIN (EAN)	4008190053918	of poles: 4		
Qty.	50 pc(s).			
Type	LPA QB 2	Version	Product data	Packaging
Order No.	1472200000	Printed circuit board terminals, Accessories, Cross-connector, Number		Box
GTIN (EAN)	4008190096298	of poles: 2		
Qty.	50 pc(s).			
Type	LPA QB 3	Version	Product data	Packaging
Order No.	1472300000	Printed circuit board terminals, Accessories, Cross-connector, Number		Box
GTIN (EAN)	4008190093914	of poles: 3		
Qty.	50 pc(s).			

Wave Solder Profile

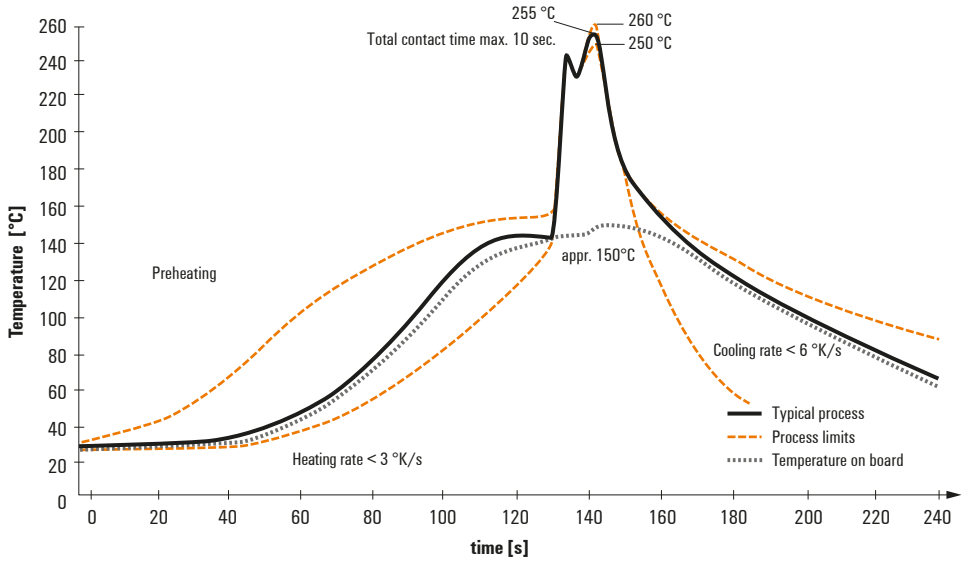
Recommended wave solderding profiles

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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.