

LU 10.16/03/90 4.5SN GY BX SO

Weidmüller Interface GmbH & Co. KG

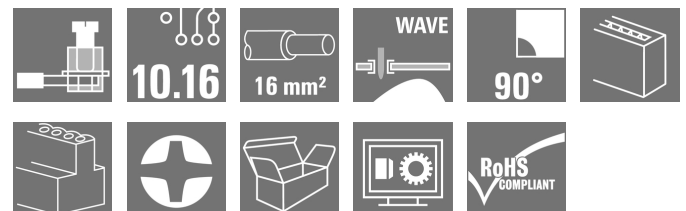
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Similar to illustration

This PCB terminal provides connections for 76 A and 16 mm² conductor cross-section with proven clamping yoke connection at 10.16 mm pitch, conductor outlet direction in 90° design.

General ordering data

Version	Printed circuit board terminals, 10.16 mm, Number of poles: 3, 90°, Solder pin length (l): 4.5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 16 mm ² , Box
Order No.	1854290000
Type	LU 10.16/03/90 4.5SN GY BX SO
GTIN (EAN)	4032248392070
Qty.	20 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm ² UL: 300 V / 65 A / AWG 26 - AWG 6
Packaging	Box

Creation date March 25, 2021 8:47:43 PM CET

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Technical data

Dimensions and weights

Depth	18.3 mm	Depth (inches)	0.72 inch
Height	33 mm	Height (inches)	1.299 inch
Height of lowest version	28.5 mm	Net weight	28 g
Width	30.48 mm	Width (inches)	1.2 inch

System parameters

Product family	OMNIMATE Power - series LU	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	10.16 mm	Pitch in inches (P)	0.4 inch
Number of poles	3	Pin series quantity	1
Fitted by customer	Yes	Max. adjacent poles per row	10
Solder pin length (l)	4.5 mm	Solder pin dimensions	1.2 x 1.2 mm
Solder pin dimensions = d tolerance	0 / -0,15 mm	Solder eyelet hole diameter (D)	1.6 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	Number of solder pins per pole	2
Screwdriver blade	1.0 x 5.5	Screwdriver blade standard	DIN 5264
Tightening torque, min.	1.2 Nm	Tightening torque, max.	2.2 Nm
Clamping screw	M 4	Stripping length	12 mm
L1 in mm	20.32 mm	L1 in inches	0.8 inch
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Volume resistance	0.50 mΩ		

Material data

Insulating material	Wemid (PA)	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-0
Contact material	E-Cu	Contact surface	tinned
Layer structure of solder connection	1.5...3 μm Ni / 4...6 μm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	120 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	120 °C		

Conductors suitable for connection

Clamping range, min.	0.14 mm ²
Clamping range, max.	16 mm ²
Wire connection cross section AWG, min.	AWG 22
Wire connection cross section AWG, max.	AWG 8
Solid, min. H05(07) V-U	0.5 mm ²
Solid, max. H05(07) V-U	16 mm ²
Stranded, min. H07V-R	6 mm ²
Stranded, max. H07V-R	16 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	16 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	10 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	2.5 mm ²

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Technical data

w. wire end ferrule, DIN 46228 pt 1, max.	10 mm ²			
Plug gauge in accordance with EN 60999 a x b; ø	5.4 mm x 5.1 mm; 5.3 mm			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H2.5/12	
		Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H2.5/19D BL	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	4 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H4.0/12	
		Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H4.0/20D GR	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	6 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H6.0/12	
Stripping length		nominal	14 mm	
Recommended wire-end ferrule		H6.0/20 SW		
Cross-section for conductor connection	Type	fine-wired		
	nominal	10 mm ²		
wire end ferrule	Stripping length	nominal	15 mm	
	Recommended wire-end ferrule	H10.0/22 EB		
	Stripping length	nominal	12 mm	
	Recommended wire-end ferrule	H10.0/12		
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)			

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	76 A
Rated current, max. number of poles (Tu=20°C)	72 A	Rated current, min. number of poles (Tu=40°C)	76 A
Rated current, max. number of poles (Tu=40°C)	62 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	690 V	Rated voltage for surge voltage class / pollution degree III/3	690 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	6 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	6 kV	Short-time withstand current resistance	2 x 1s with 700 A

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Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1198743

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group C / CSA) 150 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 65 A

Rated current (Use group C / CSA) 65 A

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 22

Wire cross-section, AWG, max. AWG 6

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 C / UL 1059) 150 V

Rated voltage (Use group D / UL 1059) 600 V

Rated current (Use group B / UL 1059) 65 A

Rated current (Use group C / UL 1059) 65 A

Rated current (Use group D / UL 1059) 5 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 6

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	39 mm
VPE width	105 mm	VPE height	140 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

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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	<ul style="list-style-type: none"> • 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. • 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
Engineering Data	WSCAD
User Documentation	QR-Code product handling video

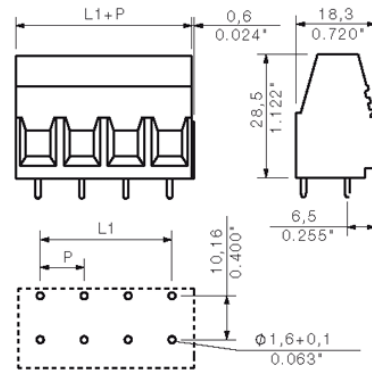
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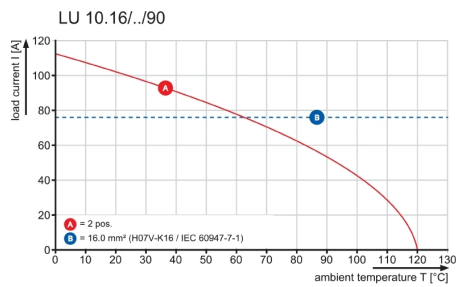
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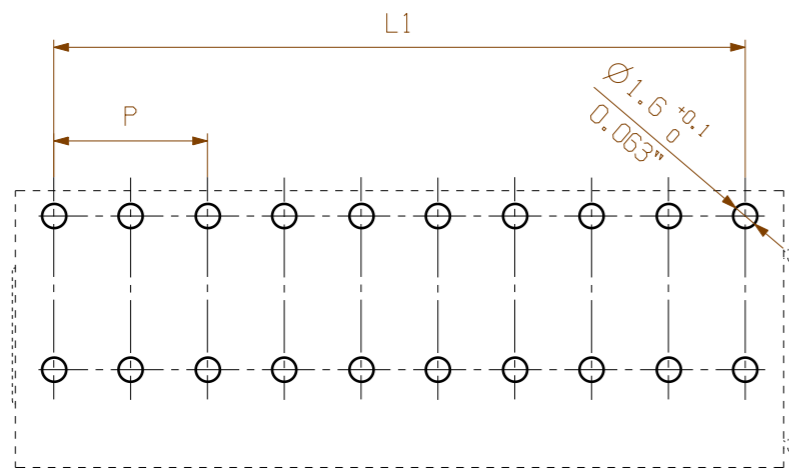
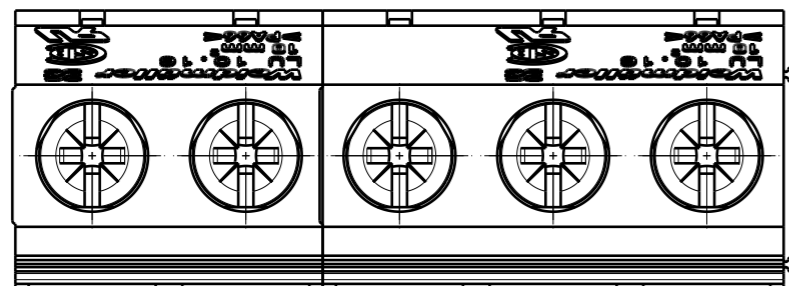
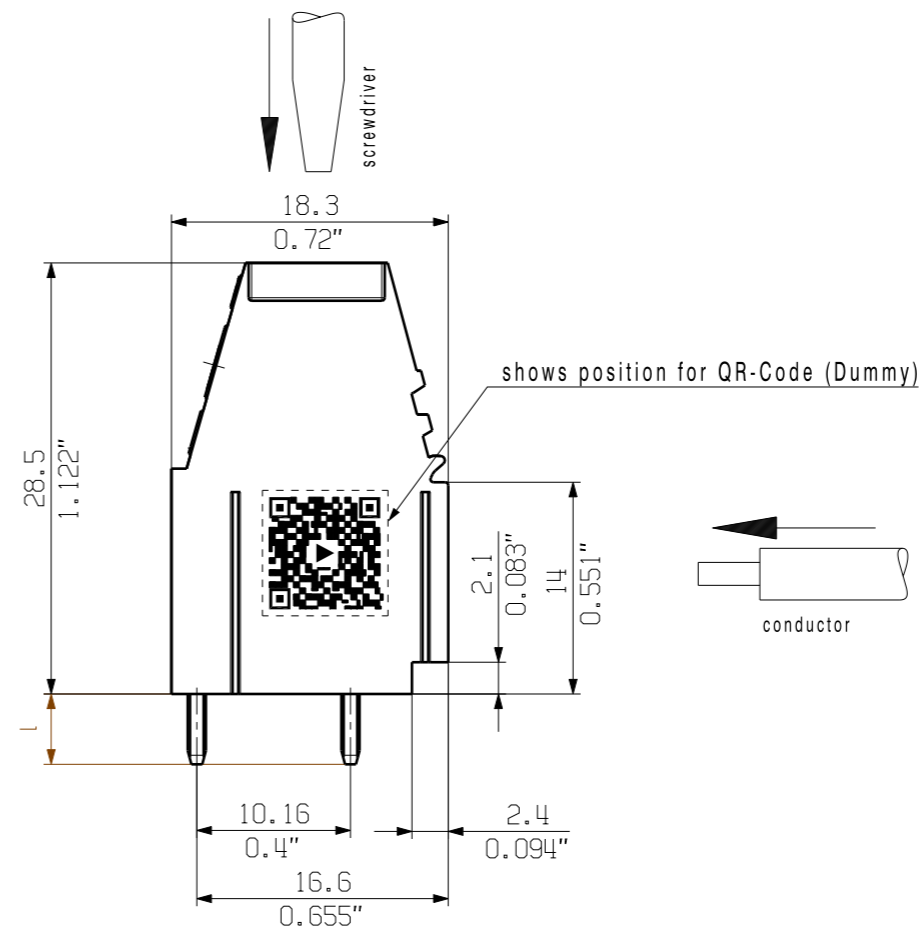
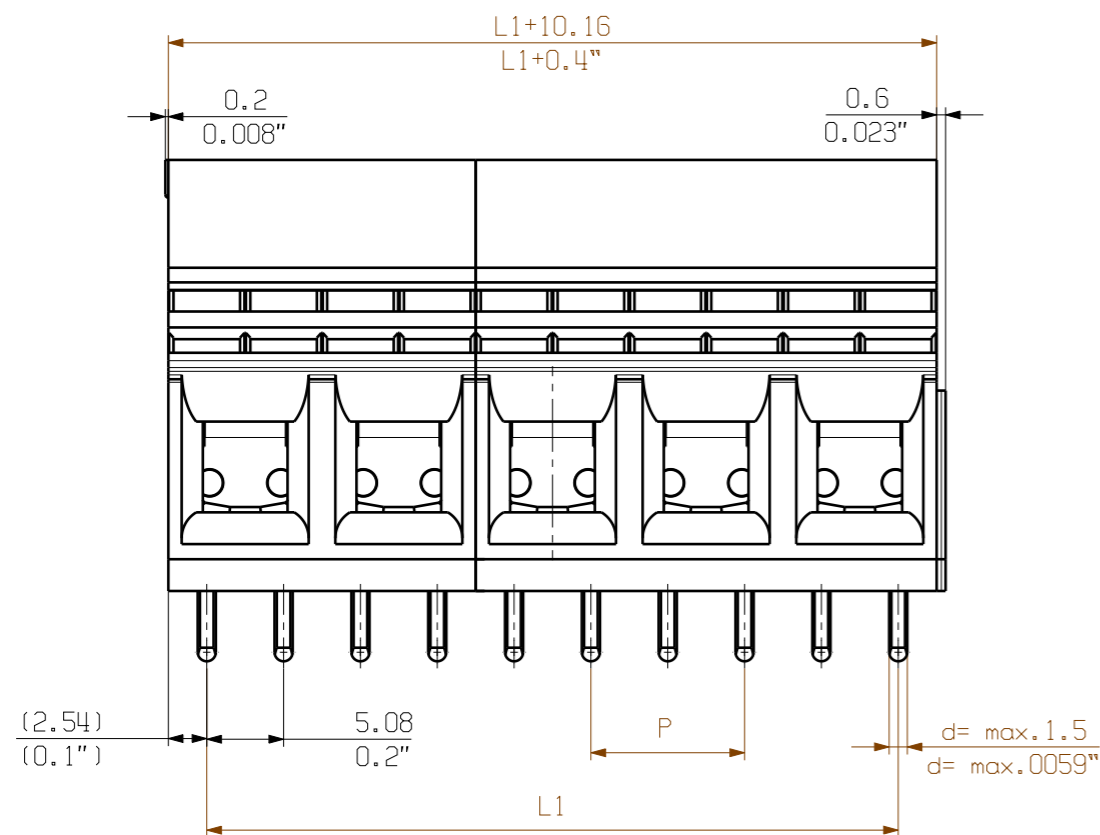
Drawings

Dimensional drawing



Graph



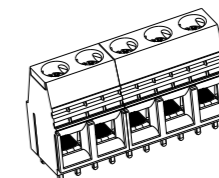


For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

shown : LU 10.16/05/90

l = solder pin length (4.5/3.2)
 P = pitch (10.16)
 n = no of poles



12	116,84	4,600
11	106,68	4,200
10	96,52	3,800
9	86,36	3,400
8	76,20	3,000
7	66,04	2,600
6	55,88	2,200
5	45,72	1,800
4	35,56	1,400
3	25,40	1,000
2	15,24	0,600
n	L1[mm]	L1 [Inch]

GENERAL TOLERANCE: DIN ISO 2768-mK		Prim PLM Part No.: 017733		Prim ERP Part No.: 1635920000	
102098		04			
First Issue Date 16.02.2018		Modification			
		Date		Name	
Scale: 2:1		Drawn		16.02.2018 Administrator	
Size: A3		Responsible		Amann, Alexand	
Drawings Assembly		Approved		12.11.2018 Lang, Thomas	
				Drawing no. 21310 Issue no. 10 Sheet 01 of 01 sheets	
LU 10.16/././90 LEITERPLATTENKLEMME PCB TERMINAL					
Product file: 7232 LU 10.16					

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.