

LU 10.16/03/90 4.5SN BK BX

Weidmüller Interface GmbH & Co. KG

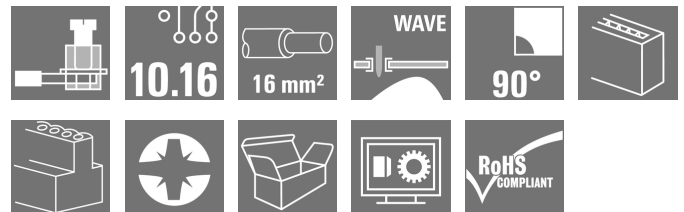
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



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.	1921450000
Type	LU 10.16/03/90 4.5SN BK BX
GTIN (EAN)	4032248659579
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 6, 2023 5:34:22 PM CET

LU 10.16/03/90 4.5SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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	Width	30.48 mm
Width (inches)	1.2 inch	Net weight	28.7 g

Temperatures

Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
-----------------------------	--------	-----------------------------	--------

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	Number of rows	1
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	Protection degree	IP20
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

Creation date March 6, 2023 5:34:22 PM CET

LU 10.16/03/90 4.5SN BK BX

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

www.weidmueller.com

Technical data

w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm²
 min.

w. plastic collar ferrule, DIN 46228 pt 4, 10 mm²
 max.

w. wire end ferrule, DIN 46228 pt 1, 2.5 mm²
 min.

w. wire end ferrule, DIN 46228 pt 1, 10 mm²
 max.

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	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	wire end ferrule	Type	fine-wired
		nominal	4 mm ²
wire end ferrule	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	wire end ferrule	Type	fine-wired
		nominal	6 mm ²
wire end ferrule	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	wire end ferrule	Type	fine-wired
		nominal	10 mm ²
wire end ferrule	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		Rated current, min. number of poles (Tu=20°C)	
	IEC 60664-1, IEC 61984		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

Creation date March 6, 2023 5:34:22 PM CET

LU 10.16/03/90 4.5SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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	141 mm
VPE width	104 mm	VPE height	39 mm

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	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

LU 10.16/03/90 4.5SN BK BX

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

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	<ul style="list-style-type: none"> • 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 average humidity 70%, 36 months

Approvals

Approvals



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

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Engineering Data	WSCAD
Product Change Notification	20220201 Visual change OMNIMATE® Power PCB terminal blocks and connectors 20220201 Visuelle Änderung OMNIMATE® Power Leiterplattenklemmen und -steckverbinder
User Documentation	QR-Code product handling video
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN PO OMNIMATE EN

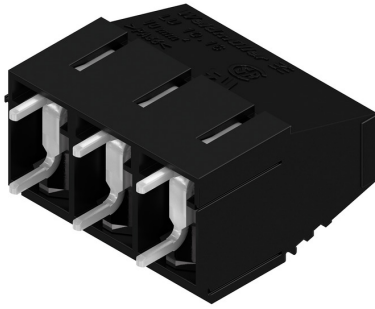
LU 10.16/03/90 4.5SN BK BX

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

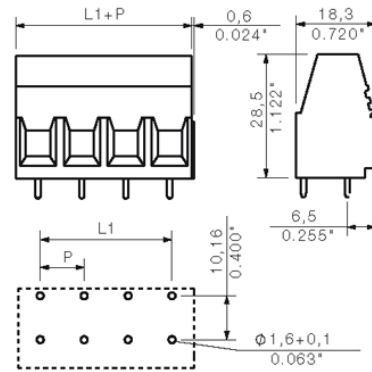
www.weidmueller.com

Drawings

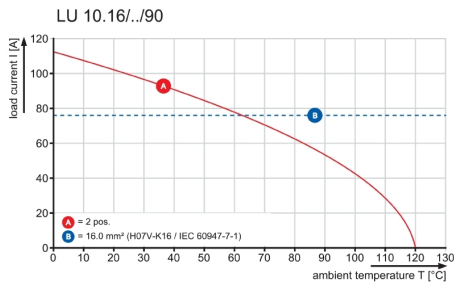
Product image



Dimensional drawing

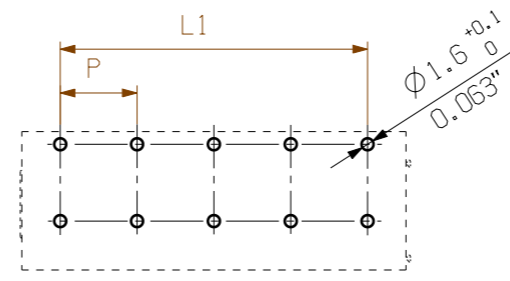
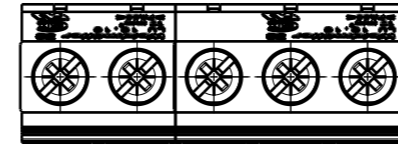
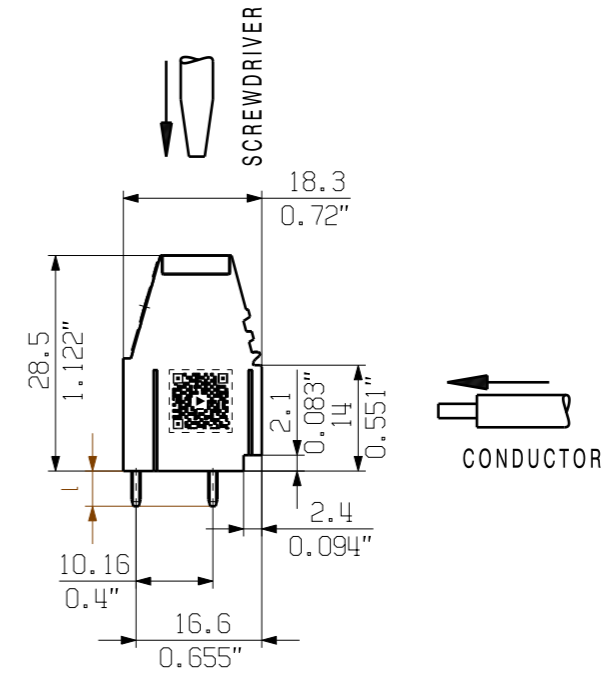
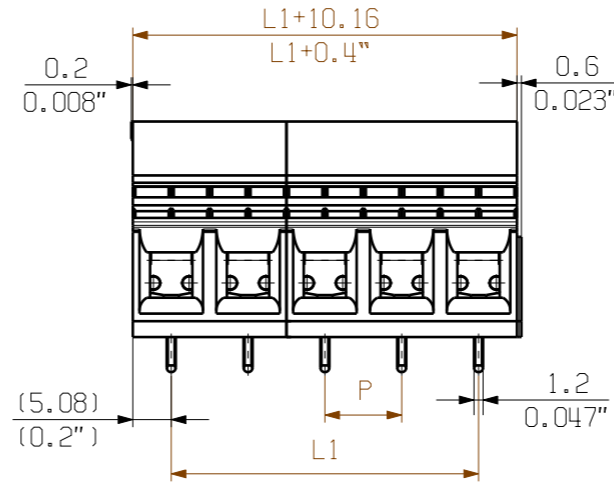


Graph

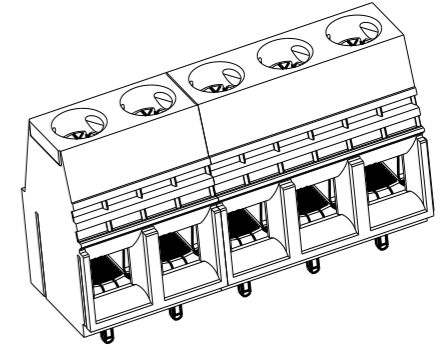


The reproduction, distribution and utilization of this document as well as the communication of its contents to others without explicit authorization is prohibited. Offenders will be held liable for the payment of damages. Weidmüller exclusively reserves the right to file for patents, utility models or designs.

© Weidmüller Interface GmbH & Co. KG



HOLE PATTERN



12	111,76	4,400
11	101,60	4,000
10	91,44	3,600
9	81,28	3,200
8	71,12	2,800
7	60,96	2,400
6	50,80	2,000
5	40,64	1,600
4	30,48	1,200
3	20,32	0,800
2	10,16	0,400
n	L1 [mm]	L1 [inch]

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

SHOWN: LU10.16/05/90 2STI

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.

GENERAL TOLERANCE: DIN ISO 2768-mK		Prim PLM Part No.: 027097		Prim ERP Part No.: 1934140000	
102098		04			
First Issue Date 16.02.2018		Modification			
		Date		Name	
Scale: 2:1		Drawn		Responsible	
Size: A3		Approved		Name	
Drawings Assembly		Date		Name	
		16.02.2018		Administrator	
		12.11.2018		Amann, Alexand	
				Lang, Thomas	
				21382 Drawing no. Issue no. Sheet 01 of 01 sheets	
LU10.16/.. /90... LEITERPLATTENKLEMME PCB TERMINAL					
Product file: 7232 LU 10.16					

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.