

OMNIMATE Power - series LU
LU 10.16/05/90 3.2SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

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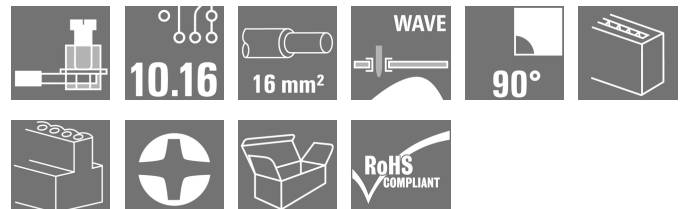
Fax: +49 5231 14-292083

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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**

Type	LU 10.16/05/90 3.2SN BK BX
Order No.	2457370000
Version	Printed circuit board terminals, 10.16 mm, No. of poles: 5, 90°, Solder pin length (l): 3.2 mm, black, Clamping yoke connection, Clamping range, max.: 16 mm ² , Box
GTIN (EAN)	4050118472097
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

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Technical data

Dimensions and weights

Width	50.8 mm	Width (inches)	2 inch
Height	31.7 mm	Height (inches)	1.248 inch
Height of lowest version	28.5 mm	Depth	18.3 mm
Depth (inches)	0.72 inch	Net weight	48.501 g

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
No. of poles	5	Fitted by customer	Yes
Max. adjacent poles per row	10	Solder pin length (l)	3.2 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	4	Screwdriver blade	1.0 x 5.5
Screwdriver blade standard	DIN 5264	Tightening torque, min.	1.2 Nm
Tightening torque, max.	1.5 Nm	Clamping screw	M 4
Stripping length	12 mm	L1 in mm	40.64 mm
L1 in inches	1.6 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
CTI	≥ 600	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	Contact material	E-Cu
Layer structure of solder connection	1.5-3 µm Ni / 4-6 µm Sn matt	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Max. relative humidity during storage	80 %
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, 2.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 10 mm ² max.	
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, 10 mm²
max.Plug gauge in accordance with EN 5.4 mm x 5.1 mm; 5.3 mm
60999 a x b; ø

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm ²	
	AEH	Stripping length	nominal	12 mm
		Stripping length	nominal	14 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	4 mm ²	
	AEH	Stripping length	nominal	12 mm
		Stripping length	nominal	14 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	6 mm ²	
	AEH	Stripping length	nominal	12 mm
		Stripping length	nominal	14 mm
	Cross-section for conductor connection	Type	fine-wired	
		nominal	10 mm ²	
	AEH	Stripping length	nominal	15 mm
		Stripping length	nominal	12 mm

Max. clamping range 16 mm²
Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. no. of poles
(Tu=20°C)

72 A

Rated current, max. no. of poles
(Tu=40°C)

62 A

Rated voltage for surge voltage class /
pollution degree III/2

690 V

Rated impulse voltage for surge voltage
class/ pollution degree II/2

4 kV

Rated impulse voltage for surge voltage
class/ contamination degree III/3

6 kV

Rated current, min. no. of poles
(Tu=20°C)

76 A

Rated current, min. no. of poles
(Tu=40°C)

76 A

Rated voltage for surge voltage class /
pollution degree II/2

1,000 V

Rated voltage for surge voltage class /
pollution degree III/3

690 V

Rated impulse voltage for surge voltage
class/ pollution degree III/2

6 kV

Short-time withstand current resistance

2 x 1 s with 700 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 C / CSA)

65 A

Wire cross-section, AWG, min.

AWG 22

Rated voltage (Use group C / CSA)

150 V

Rated current (Use group B / CSA)

65 A

Rated current (Use group D / CSA)

10 A

Wire cross-section, AWG, max.

AWG 6

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)

600 V

Rated current (Use group C / UL 1059)

65 A

Wire cross-section, AWG, min.

AWG 26

Reference to approval values

Specifications are
maximum values, details -
see approval certificate.

Rated voltage (Use group C / UL 1059)

150 V

Rated current (Use group B / UL 1059)

65 A

Rated current (Use group D / UL 1059)

5 A

Wire cross-section, AWG, max.

AWG 6

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Technical data

Packing

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

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

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.
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Approvals

Approvals



ROHS	Conform
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Downloads

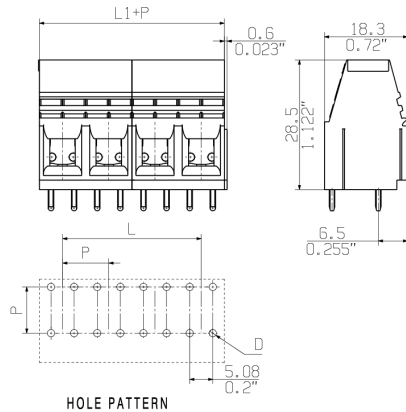
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL APPL INVERTER EN FL BASE STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	STEP
Motion controllers white paper	Download Whitepaper
User Documentation	QR-Code product handling video
White Paper UL 600 V	Download Whitepaper

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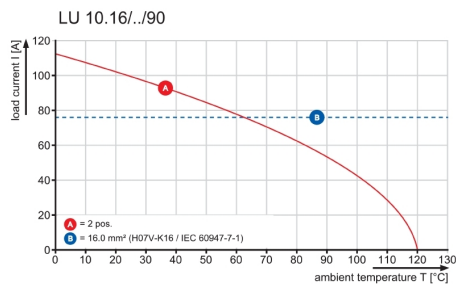
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Drawings

Dimensional drawing



Graph

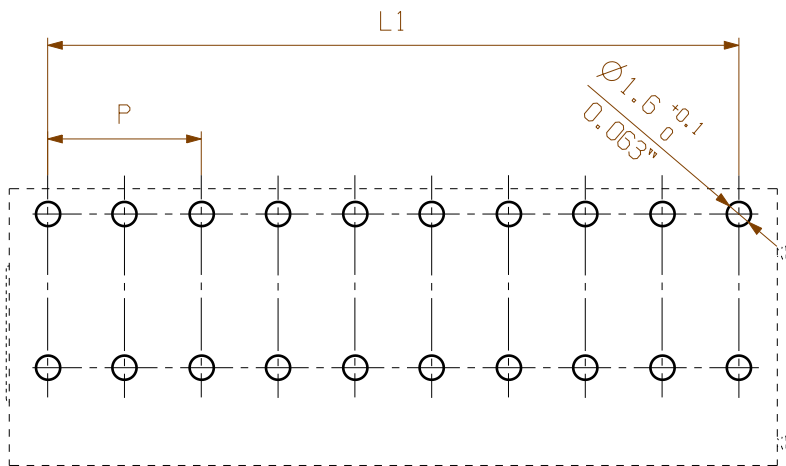
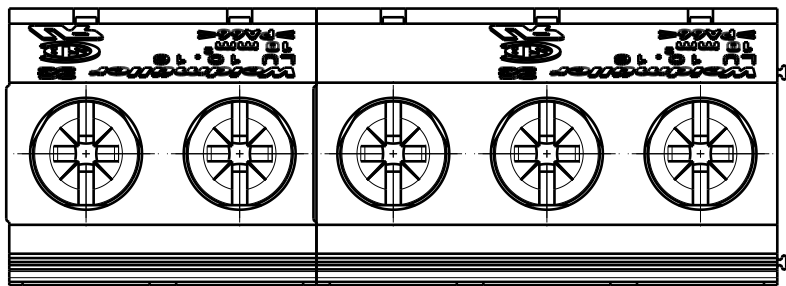
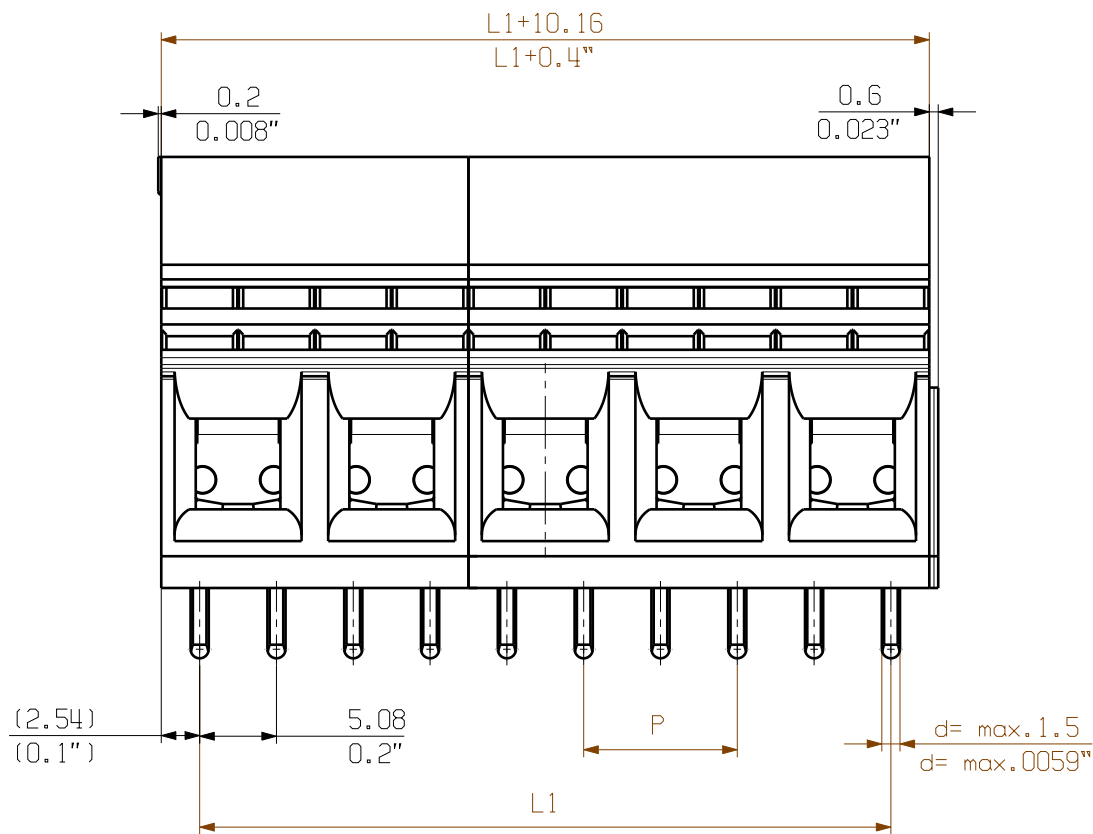


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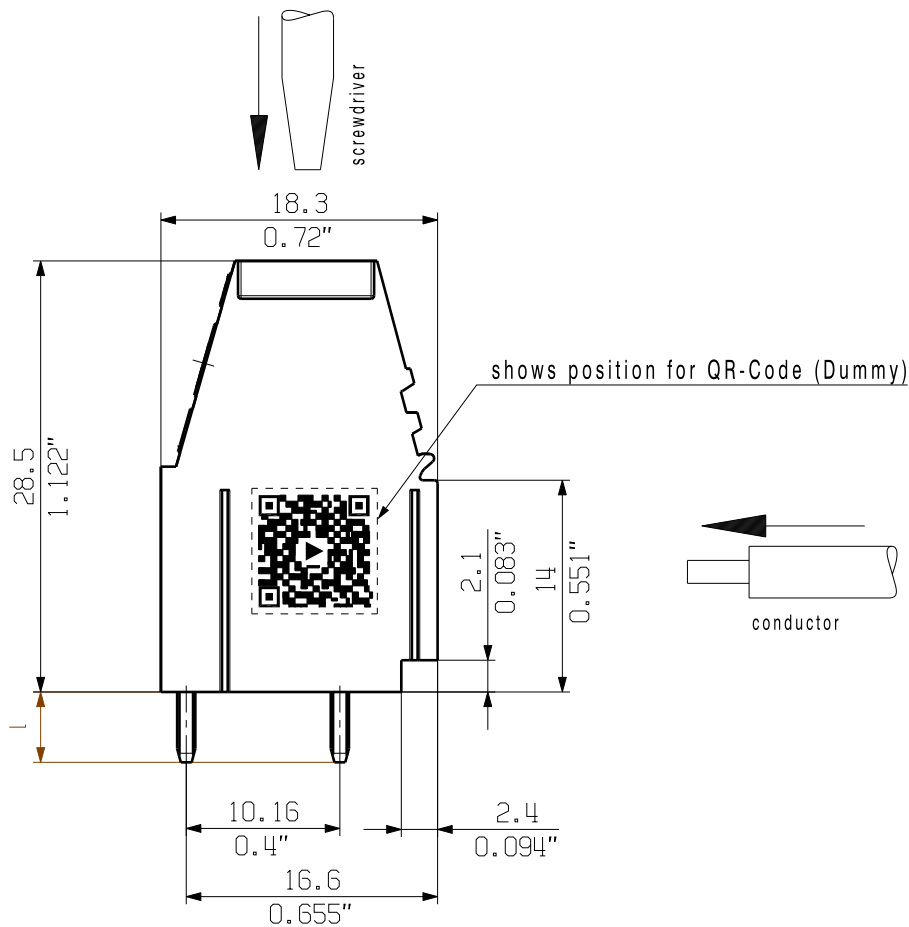
Dimensions without tolerances are no check dimensions

The English version is binding



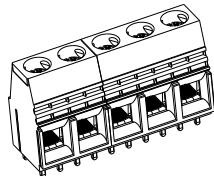
For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance with IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is 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		Weidmüller	
First Issue Date 16.02.2018		Modification		Drawing no. 21310 Issue no. 10	
Scale: 2:1		Size: A3		Sheet 01 of 01 sheets	
Drawings Assembly		Date 16.02.2018		Name Administrator	
		Responsible		Amann, Alexand	
		Approved		Lang, Thomas	
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.

We reserve the right to make technical changes.