

OMNIMATE Power - series LU
LU 10.16/03/90 4.5SN BK BX
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

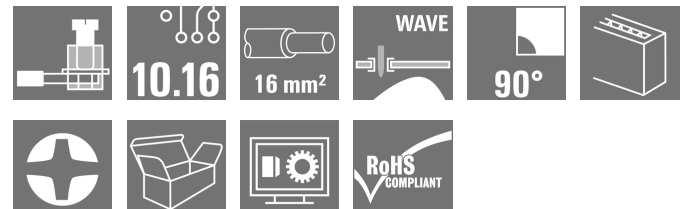
D-32758 Detmold

Germany

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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.

- 0.50 - 16.0mm² (IEC) / 26 - 6 AWG (UL)
- 1000 V (IEC) / 300 V (UL)
- 76A (IEC) / 60 A (UL)

General ordering data

Type	LU 10.16/03/90 4.5SN BK BX
Order No.	1921450000
Version	PCB terminal, 10.16 mm, No. of poles: 3, 90°, Solder pin length (l): 4.5 mm, tinned, Black, Clamping yoke connection, Clamping range, max.: 16 mm ² , Box
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

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Technical data
Dimensions and weights

Net weight 28.85 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	3	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.	1.5 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
CTI	≥ 600	Insulation resistance	≥ 10 ⁸ Ω
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.	-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, 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	w. wire end ferrule, DIN 46228 pt 1, max.	10 mm ²
Plug gauge acc. to EN 60999 a x b; Ø	5.4 mm x 5.1 mm; 5.3 mm		


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Technical data
Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Tu=20°C)	76 A
Rated current, max. no. of poles (Tu=20°C)	72 A	Rated current, min. no. of poles (Tu=40°C)	76 A
Rated current, max. no. 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

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1198743
Rated voltage (Use group B)	300 V	Rated voltage (Use group C)	150 V
Rated voltage (use group D)	300 V	Rated current (use group B)	65 A
Rated current (use group C)	65 A	Rated current (use group D)	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)	300 V	Rated voltage (use group C)	150 V
Rated voltage (use group D)	600 V	Rated current (use group B)	65 A
Rated current (use group C)	65 A	Rated current (use group D)	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.		

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 7.1	27-44-04-01
eClass 8.1	27-44-04-01	eClass 9.0	27-44-04-01
eClass 9.1	27-44-04-01		

Data sheet

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Technical data

Notes

- | | |
|-------|--|
| 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. |
|-------|--|

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

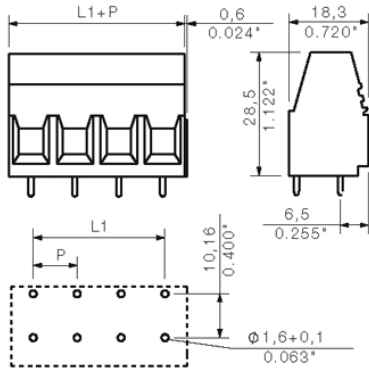
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL APPL. INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN_WSCAD
Engineering Data	STEP
Motion controllers white paper	Download Whitepaper
White Paper UL 600 V	Download Whitepaper

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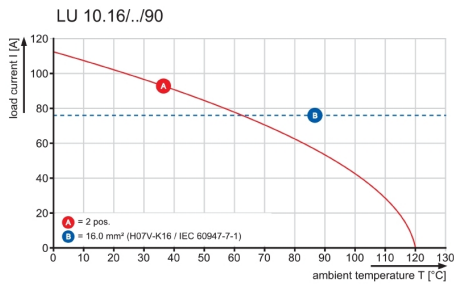
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Drawings

Dimensional drawing



Graph



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.