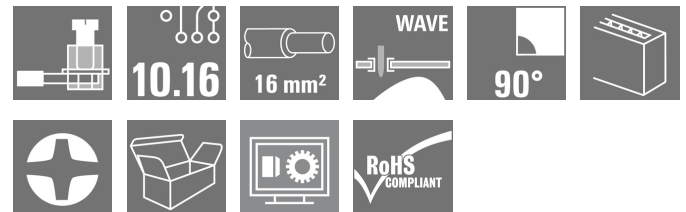


## OMNIMATE Power - series LU LU 10.16/02/90 4.5SN GY BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
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This PCB terminal provides connections for 76 A and 16 mm<sup>2</sup> conductor cross-section with proven clamping yoke connection at 10.16 mm pitch, conductor outlet direction in 90° design.

- 0.50 - 16.0mm<sup>2</sup> (IEC) / 26 - 6 AWG (UL)
- 1000 V (IEC) / 300 V (UL)
- 76A (IEC) / 60 A (UL)

### General ordering data

Type	LU 10.16/02/90 4.5SN GY BX
Order No.	<a href="#">1648310000</a>
Version	PCB terminal, 10.16 mm, No. of poles: 2, 90°, Solder pin length (l): 4.5 mm, tinned, Pebble grey, Clamping yoke connection, Clamping range, rated connection, max.: 16 mm <sup>2</sup> , Box
GTIN (EAN)	4008190291174
Qty.	20 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm <sup>2</sup> UL: 300 V / 65 A / AWG 26 - AWG 6
Packaging	Box

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**Technical data****Dimensions and weights**

Net weight	17.91 g
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**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	2	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	10.16 mm
L1 in inches	0.4 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	Pebble grey
Colour chart (similar)	RAL 7032	Insulating material group	I
CTI	≥ 600	Insulation resistance	≥ 10 <sup>8</sup> 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, rated connection, min.	0.14 mm <sup>2</sup>	Clamping range, rated connection, max.	16 mm <sup>2</sup>
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 <sup>2</sup>	Solid, max. H05(07) V-U	16 mm <sup>2</sup>
Stranded, min. H07V-R	6 mm <sup>2</sup>	Stranded, max. H07V-R	16 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>	Flexible, max. H05(07) V-K	16 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	2.5 mm <sup>2</sup>	w. plastic collar ferrule, DIN 46228 pt 4, max.	10 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	2.5 mm <sup>2</sup>	w. wire end ferrule, DIN 46228 pt 1, max.	10 mm <sup>2</sup>
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 (Ta = 20°C)	76 A
Rated current, max. no. of poles (Ta = 20°C)	72 A	Rated current, min. no. of poles (Ta = 40°C)	76 A
Rated current, max. no. of poles (Ta = 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
UNSPSC	30-21-18-01	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

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**Technical data****Notes**

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• P on drawing = pitch</li> <li>• 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.</li> </ul>
IPC conformity	The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

**Approvals**

Approvals



ROHS

Conform

**Downloads**

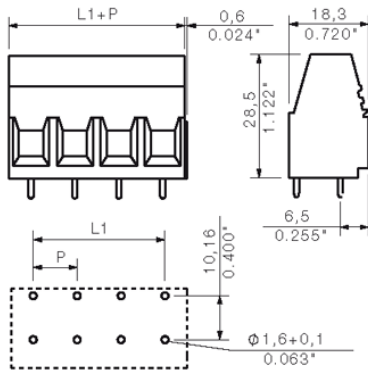
Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">FL APPL_INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD, Zuken E3.S</a>
Engineering Data	<a href="#">LU.zip</a>
Motion controllers white paper	<a href="#">Download Whitepaper</a>
White Paper UL 600 V	<a href="#">Download Whitepaper</a>

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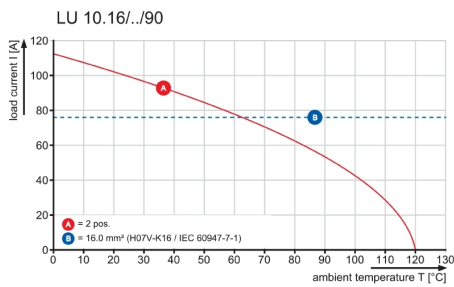
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**Drawings**

**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.