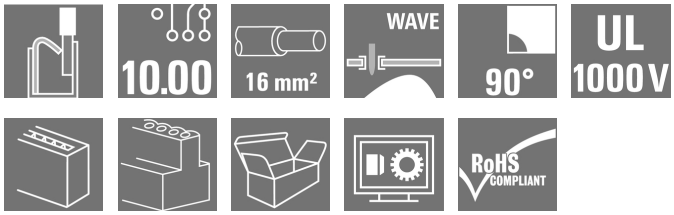
OMNIMATE Power - series LU
LUF 10.00/01/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com





The sturdy, direct connection for extreme current and voltage requirements in all power electronics applications such as solar inverters, frequency converters, servo-controllers and power supplies.

General ordering data

Type	LUF 10.00/01/90 5.0SN BK BX
Order No.	1988590000
Version	PCB terminal, 10.00 mm, No. of poles: 1, 90°, Solder pin length (l): 5 mm, Black, PUSH IN with actuator, Clamping range, max. : 16 mm², Box
GTIN (EAN)	4050118373134
Qty.	50 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm² UL: 300 V / 61 A / AWG 18 - AWG 6
Packaging	Box

OMNIMATE Power - series LU
LUF 10.00/01/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

Dimensions and weights

Width	11.58 mm	Width (inches)	0.456 inch
Height	47.03 mm	Height (inches)	1.852 inch
Height of lowest version	42.03 mm	Depth	26.45 mm
Depth (inches)	1.041 inch	Net weight	11.282 g

System parameters

Product family	OMNIMATE Power - series LU	Wire connection method	PUSH IN with actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	10 mm	Pitch in inches (P)	0.394 inch
No. of poles	1	Fitted by customer	No
Solder pin length (l)	5 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder eyelet hole diameter (D)	1.6 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
Number of solder pins per pole	6	Screwdriver blade	0.8 x 4.0
Stripping length	18 mm	L1 in mm	0 mm
L1 in inches	0 inch	Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged
Touch-safe protection acc. to DIN VDE 57 106	touch-safe with connected connectors from 6 mm²		

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 base material	E-Cu
Layer structure of solder connection	4-6 µm Sn matt	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Max. relative humidity during storage	80 %
Operating temperature, min.	-40 °C	Operating temperature, max.	120 °C

Conductors suitable for connection

Clamping range, min.	0.5 mm²	Clamping range, max.	16 mm²
Wire connection cross section AWG, min.	AWG 20	Wire connection cross section AWG, max.	AWG 4
Solid, min. H05(07) V-U	0.5 mm²	Solid, max. H05(07) V-U	16 mm²
Stranded, min. H07V-R	6 mm²	Stranded, max. H07V-R	16 mm²
Flexible, min. H05(07) V-K	0.5 mm²	Flexible, max. H05(07) V-K	16 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm²	w. plastic collar ferrule, DIN 46228 pt 4, max.	16 mm²
w. wire end ferrule, DIN 46228 pt 1, min	0.5 mm²	w. wire end ferrule, DIN 46228 pt 1, max.	16 mm²
Plug gauge acc. to EN 60999 a x b; Ø	5.3mm (B6)		

OMNIMATE Power - series LU
LUF 10.00/01/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

Rated data acc. to IEC

tested acc. to standard	IEC 60947-7-4	Rated current, min. no. of poles (Tu=20°C)	76 A
Rated current, max. no. of poles (Tu=20°C)	76 A	Rated current, min. no. of poles (Tu=40°C)	76 A
Rated current, max. 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/2	690 V	Rated voltage for surge voltage class / pollution degree III/3	630 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 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		

Rated data acc. to CSA

Rated voltage (Use group B)	300 V	Rated voltage (Use group C)	1,000 V
Rated voltage (use group D)	600 V	Rated current (use group B)	61 A
Rated current (use group C)	61 A	Rated current (use group D)	5 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 6

Rated data acc. to UL 1059

Institute (cURus)	c US	Certificate No. (cURus)	E60693
Rated voltage (use group B)	300 V	Rated voltage (use group C)	1,000 V
Rated voltage (use group D)	600 V	Nominal voltage (use group E)	1,000 V
Rated current (use group B)	61 A	Rated current (use group C)	61 A
Rated current (use group D)	5 A	Nominal current (use group E)	61 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 6
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packaging

Packaging	Box	Packaging unit (VPE) length	0 MTR
Packaging unit (VPE) width	0 MTR	Packaging unit (VPE) height	0 MTR

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 9.1	27-44-04-01

OMNIMATE Power - series LU
LUF 10.00/01/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

Notes

Notes	• 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. • The test point can only be used as potential-pickup point.
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.

Approvals

Approvals	
ROHS	Conform

Downloads

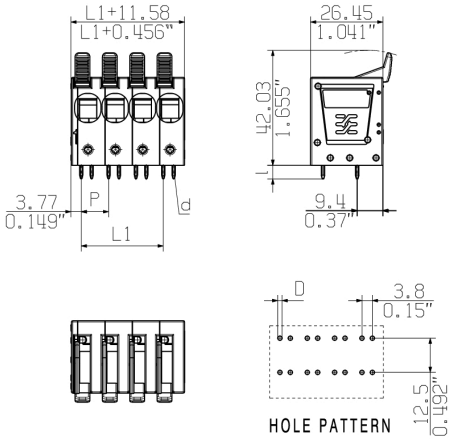
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL APPL_INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP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

OMNIMATE Power - series LU
LUF 10.00/01/90 5.0SN BK BX

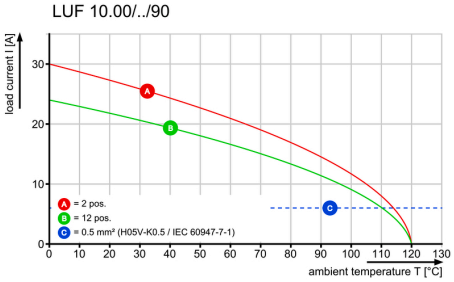
Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Drawings

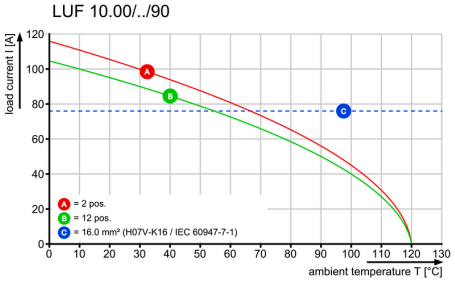
Dimensional drawing



Derating curve



Derating curve

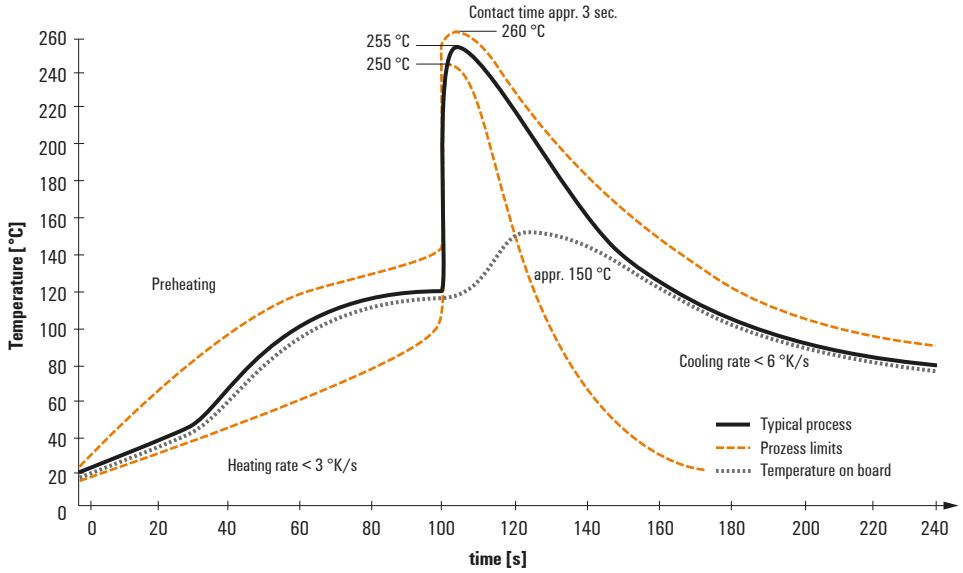


Wave Solder Profile

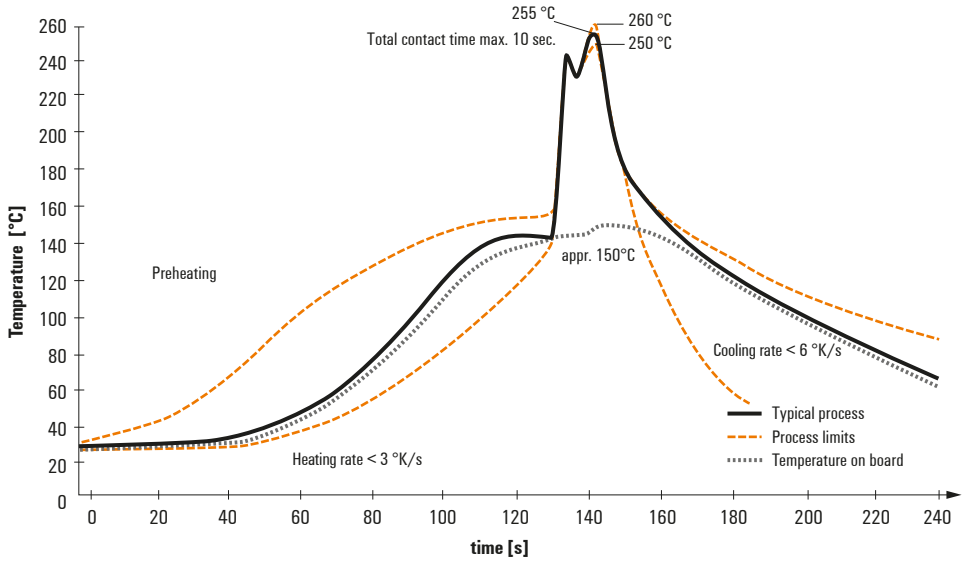
Recommended wave solderding profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 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.

We reserve the right to make technical changes.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

WeidmÃ¼ller:

1031470000 1608570000 1649300000 8690200000 1608830000 1804580000 1906650000 1124150000
1289470000 1622940000 1760040000 1779950000 2535780000 1784180000 1818090500 1950200000
1121990000 1127570000 8951460000 9456650000 1607520000 1609820000 1786450000 2642470000
024892 SAKS3 1013450000 9037380000 0303620000 1221360000 1890260000