OMNIMATE Power - series LU
LUF 15.00/07/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
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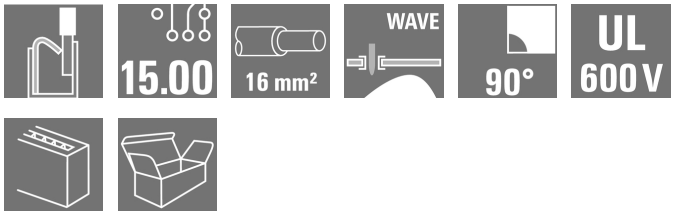

The sturdy, direct connection for extreme current and voltage requirements in all power electronics applications such as solar inverters, frequency converters, servo-controllers and power supplies.

General ordering data

Type	LUF 15.00/07/90 5.0SN BK BX
Order No.	2491940000
Version	Printed circuit board terminals, 15.00 mm, No. of poles: 7, 90°, Solder pin length (l): 5 mm, black, PUSH IN with actuator, Clamping range, max. : 16 mm², Box
GTIN (EAN)	4050118604344
Qty.	10 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm² UL: 600 V / 61 A / AWG 18 - AWG 6
Packaging	Box

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Technical data

Dimensions and weights

Width	101.58 mm	Width (inches)	3.999 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	87.76 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)	15 mm	Pitch in inches (P)	0.591 inch
No. of poles	7	Fitted by customer	No
Solder pin length (l)	5 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder eyelet hole diameter (D)	1.7 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
Number of solder pins per pole	4	Screwdriver blade	0.8 x 4.0
Stripping length	18 mm	L1 in mm	90 mm
L1 in inches	3.543 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 code	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
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 18	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	10 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

Rated data acc. to IEC

Rated current, min. no. of poles (Tu=20°C)	76 A	Rated current, max. no. of poles (Tu=20°C)	73 A
Rated current, min. no. of poles (Tu=40°C)	71 A	Rated current, max. no. of poles (Tu=40°C)	65 A
Rated voltage for surge voltage class / pollution degree II/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/3	1,000 V	Rated impulse voltage for surge voltage class/ pollution degree II/2	8 kV
Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV	Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV

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Technical data

Rated data acc. to CSA

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

Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	600 V	Rated voltage (Use group C / UL 1059)	600 V
Rated voltage (Use group D / UL 1059)	600 V	Rated voltage (Use group F / UL 1059)	1,000 V
Rated current (Use group B / UL 1059)	61 A	Rated current (Use group C / UL 1059)	61 A
Rated current (Use group D / UL 1059)	5 A	Rated current (Use group F / UL 1059)	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	VPE length	319 mm
VPE width	132 mm	VPE height	52 mm

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

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.

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Technical data

Approvals

Approvals

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
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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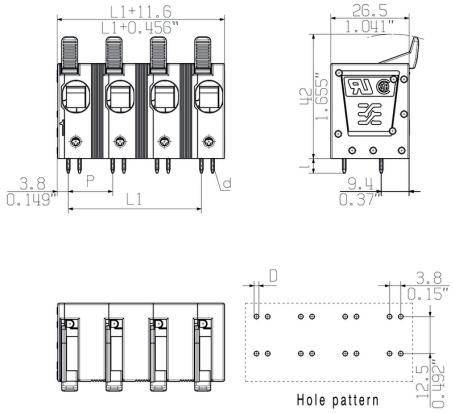
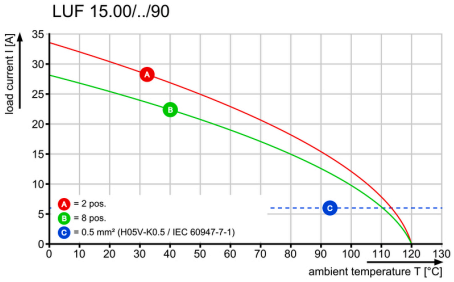
Drawings

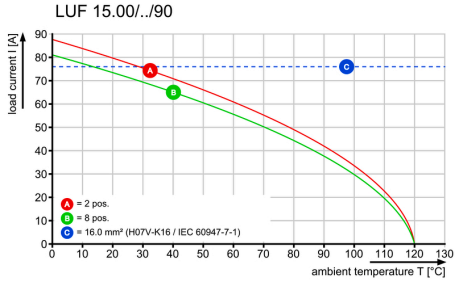
Dimensional drawing



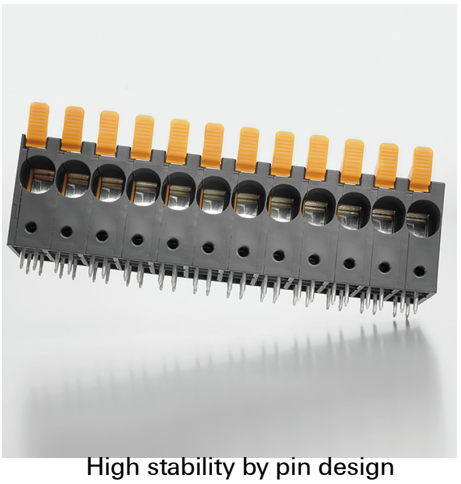
Derating curve



Derating curve



Product benefits



- High stability by pin design

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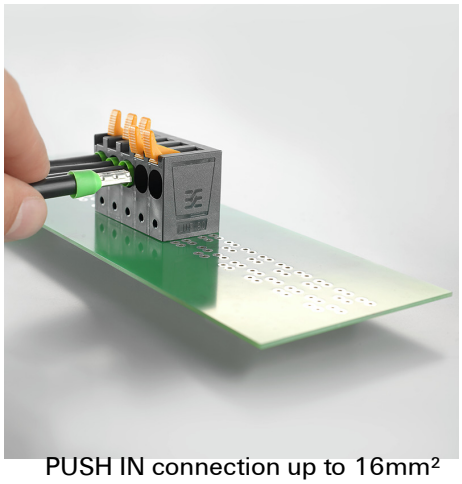
Drawings

Product image



- PUSH IN connection up to 16mm²
- Allow tool-free operation

Wave Solder Profile

Recommended wave solderding profiles

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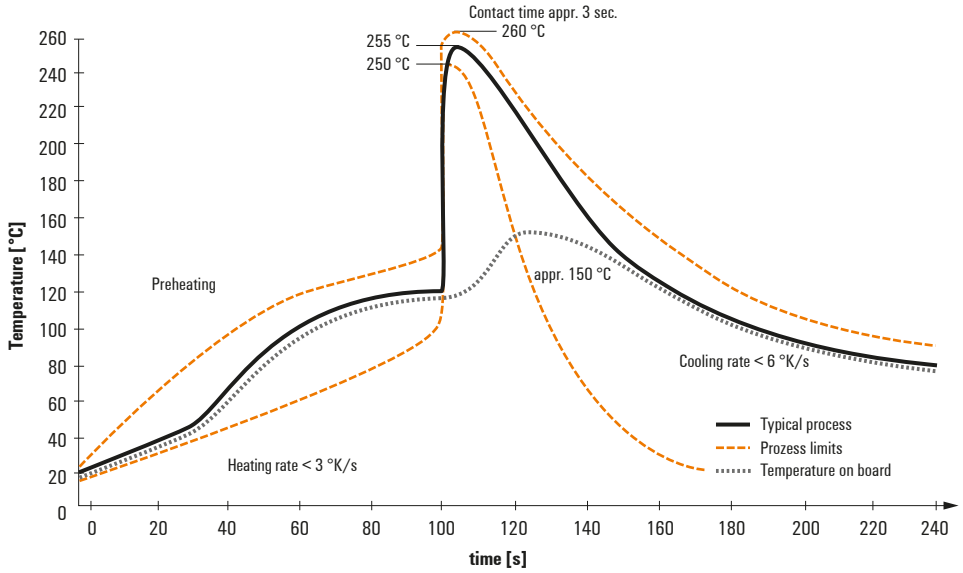
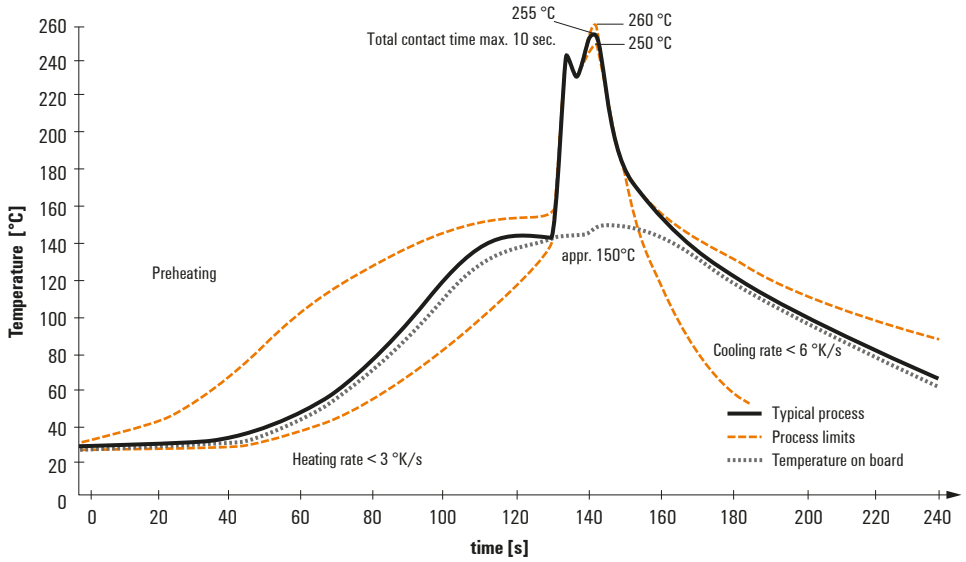
Single Wave:



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.