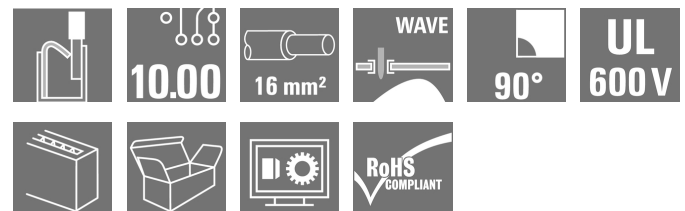


OMNIMATE Power - series LU

LUF 10.00/04/90V 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Product image



Similar to illustration

High-performance PCB terminal with a PUSH IN connection system for conductor cross-sections up to 16 mm².

- Fast connection without tools thanks to pushers to open the contact point, or direct plug-in method
- Securely closed contact point, with the "Connection Safety Concept" the conductor is always clamped securely
- Integrated test point for PS 2.0 test plug
- Central tip test point for test probes on the upper side of the terminal
- Increased derating reserves because WEMID insulating material is used.
- Conductor outlet direction of 180°

General ordering data

Type	LUF 10.00/04/90V 5.0SN BK BX
Order No.	2453710000
Version	Printed circuit board terminals, 10.00 mm, Number of poles: 4, 90°, Solder pin length (l): 5 mm, black, PUSH IN with actuator, Clamping range, max.: 16 mm², Box
GTIN (EAN)	4050118483734
Qty.	30 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm² UL: 600 V / 58 A / AWG 18 - AWG 6
Packaging	Box

Creation date May 2, 2020 2:19:51 PM CEST

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Technical data

Dimensions and weights

Width	41.58 mm	Width (inches)	1.637 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	42.167 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
Number of poles	4	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	2	Screwdriver blade	0.8 x 4.0
Stripping length	18 mm	L1 in mm	30 mm
L1 in inches	1.181 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 mm ²		

Material data

Insulating material	Wemid (PA)	Colour	black
Colour of operational elements	orange	Material of operational elements	PA4T GF
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	Contact base material	E-Cu
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	Operating temperature, min.	-40 °C
Operating temperature, max.	120 °C		

Conductors suitable for connection

Clamping range, min.	0.5 mm ²
Clamping range, max.	16 mm ²
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, 0.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 16 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	16 mm ²
Plug gauge in accordance with EN 60999 a x b; ø	5.3mm (B6)

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Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	2.5 mm ²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H2.5/25D BL
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H2.5/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	4 mm ²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H4.0/26D GR
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H4.0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	6 mm ²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H6.0/26 SW
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H6.0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	10 mm ²
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	H10.0/28 EB
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H10.0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	16 mm ²
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	H16.0/28 GN
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H16.0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	1.5 mm ²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H1.5/24 R
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H1.5/18
Reference text	Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P)		
Max. clamping range	16 mm ²		

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Technical data
Rated data acc. to IEC

tested acc. to standard

IEC 60947-7-4

 Rated current, max. number of poles
 (Tu=20°C)

76 A

 Rated current, max. number of poles
 (Tu=40°C)

76 A

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

690 V

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

6 kV

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

8 kV

 Rated current, min. number of poles
 (Tu=20°C)

76 A

 Rated current, min. number 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

1,000 V

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

6 kV

Rated data acc. to CSA

Rated voltage (Use group B / CSA)

600 V

Rated voltage (Use group D / CSA)

600 V

Rated current (Use group C / CSA)

58 A

Wire cross-section, AWG, min.

AWG 18

Rated voltage (Use group C / CSA)

600 V

Rated current (Use group B / CSA)

58 A

Rated current (Use group D / CSA)

5 A

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 D / UL 1059)

600 V

Rated current (Use group C / UL 1059)

58 A

Wire cross-section, AWG, min.

AWG 18

Reference to approval values

 Specifications are
 maximum values, details -
 see approval certificate.

Rated voltage (Use group C / UL 1059)

600 V

Rated current (Use group B / UL 1059)

58 A

Rated current (Use group D / UL 1059)

5 A

Wire cross-section, AWG, max.

AWG 6

Packing

Packaging

Box

VPE width

170 mm

VPE length

280 mm

VPE height

45 mm

Classifications

ETIM 6.0

EC002643

eClass 9.0

27-44-04-01

eClass 10.0

27-44-04-01

ETIM 7.0

EC002643

eClass 9.1

27-44-04-01

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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](#)

White paper power electronics connected correctly

[Download Whitepaper](#)

User Documentation

[QR-Code product handling video](#)

White paper UL 600 V

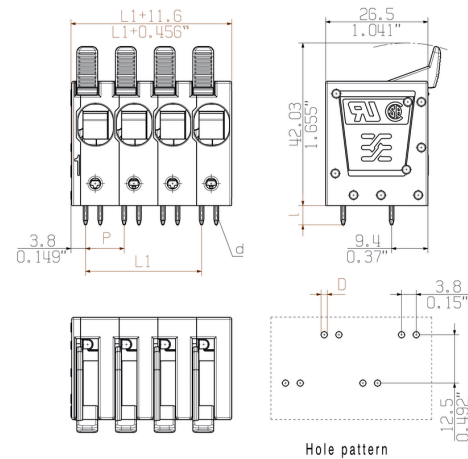
[Download Whitepaper](#)

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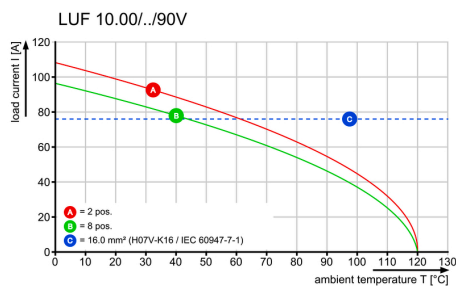
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Drawings

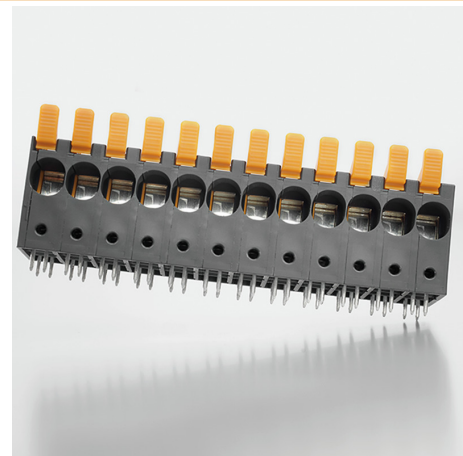
Dimensional drawing



Graph



Product benefits



High stability through pin design

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Accessories

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip



General ordering data

Type	SDS 0.8X4.0X100	Version
Order No.	9008340000	Screwdriver, Blade width (B): 4 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4032248056293	thickness (A): 0.8 mm
Qty.	1 pc(s).	

Additional accessories



No task is too small when creating the perfect solution.

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but essential details:

- Test plugs ensure reliable pick-up from diagnostic sockets

In tandem with the manufacturing process and application.

General ordering data

Type	PS 2.0 MC	Version	Product data	Packaging
Order No.	0310000000	PCB plug-in connector, Accessories, Test plug, red, Number of poles: 1		Box
GTIN (EAN)	4008190000059			
Qty.	20 pc(s).			

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Accessories**Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

**General ordering data**

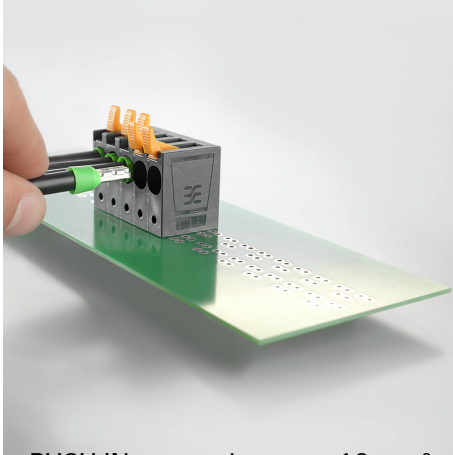
Type	SDIS 0.8X4.0X100	Version
Order No.	9008400000	Screwdriver, Blade width (B): 4 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4032248056361	thickness (A): 0.8 mm
Qty.	1 pc(s).	

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Drawings

Product benefits



PUSH IN connection up to 16 mm²

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.