

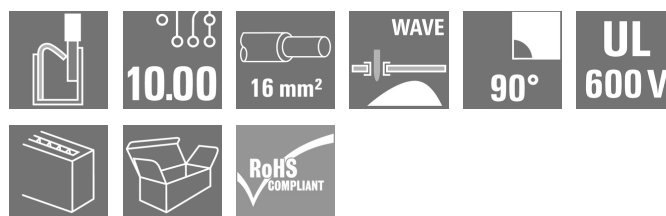
LUFS 10.00/03/90V 5.0SN BK BX
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image


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

Version	Printed circuit board terminals, 10.00 mm, Number of poles: 3, 90°, Solder pin length (l): 5 mm, black, PUSH IN without actuator, Clamping range, max.: 16 mm ² , Box
Order No.	2500460000
Type	LUFS 10.00/03/90V 5.0SN BK BX
GTIN (EAN)	4050118604603
Qty.	40 pc(s).
Product data	IEC: 1000 V / 101 A / 0.5 - 25 mm ² UL: 600 V / 53 A / AWG 18 - AWG 4
Packaging	Box

Creation date May 16, 2025 3:40:32 AM CEST

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Technical data
Dimensions and weights

Depth	28.55 mm	Depth (inches)	1.124 inch
Height	35 mm	Height (inches)	1.378 inch
Height of lowest version	30 mm	Width	31.8 mm
Width (inches)	1.252 inch	Net weight	28.8 g

System parameters

Product family	OMNIMATE Power - series LU	Wire connection method	PUSH IN without actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	10 mm	Pitch in inches (P)	0.394 "
Number of poles	3	Pin series quantity	1
Fitted by customer	No	Number of rows	1
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	20 mm
L1 in inches	0.787 "	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	Protection degree	IP20

Material data

Insulating material	Wemid (PA)	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-0
Contact base material	E-Cu	Contact material	Cu-alloy
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
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
Wire connection cross section AWG, min.	AWG 18
Wire connection cross section AWG, max.	AWG 4
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	25 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	25 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, 0.5 mm ² min.	
w. wire end ferrule, DIN 46228 pt 1, 16 mm ² max.	
Plug gauge in accordance with EN 60999 a x b; ø	5.3mm (B6)

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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)			

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Technical data
Rated data acc. to IEC

tested acc. to standard	IEC 60947-7-4	Rated current, min. number of poles (Tu=20°C)	101 A
Rated current, max. number of poles (Tu=20°C)	77.8 A	Rated current, min. number of poles (Tu=40°C)	90.2 A
Rated current, max. number of poles (Tu=40°C)	69.8 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		

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)	53 A
Rated current (Use group C / CSA)	53 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 4

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)	53 A	Rated current (Use group C / UL 1059)	53 A
Rated current (Use group D / UL 1059)	5 A	Rated current (Use group F / UL 1059)	53 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 4
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	269 mm
VPE width	175 mm	VPE height	45 mm

Type tests

Test: Durability of markings	Standard	IEC 60947-1 section 8.2.4.5.1 / 06.07, IEC 60512-1-1:2002-02
	Test	mark of origin, type identification, pitch, durability, stripping length
	Evaluation	available

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Test: Clampable cross section	Standard	IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 03.11
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section
		Type of conductor and stranded 0.5 mm ² conductor cross-section
		Type of conductor and solid 16 mm ² conductor cross-section
		Type of conductor and stranded 16 mm ² conductor cross-section
		Type of conductor and H07V-U16 conductor cross-section
		Type of conductor and H07V-U6 conductor cross-section
		Type of conductor and H07V-K16 conductor cross-section
		Type of conductor and AWG 4 conductor cross-section
	Evaluation	passed
Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1 section 9.4 / 11.99
	Requirement	0.3 kg
	Conductor type	Type of conductor and AWG 20/1 conductor cross-section
		Type of conductor and AWG 20/19 conductor cross-section
		Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	2.9 kg
	Conductor type	Type of conductor and H07V-U16 conductor cross-section
		Type of conductor and H07V-K16 conductor cross-section
	Evaluation	passed
	Requirement	4,5 kg
	Conductor type	Type of conductor and AWG 4/7 conductor cross-section
		Type of conductor and AWG 4/19 conductor cross-section
	Evaluation	passed

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Pull-out test	Standard	IEC 60999-1 section 9.5 / 11.99
	Requirement	≥20 N
	Conductor type	Type of conductor and AWG 20/1 conductor cross-section
		Type of conductor and AWG 20/19 conductor cross-section
		Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥100 N
	Conductor type	Type of conductor and H07V-U16 conductor cross-section
		Type of conductor and H07V-K16 conductor cross-section
	Evaluation	passed
	Requirement	≥ 135 N
	Conductor type	Type of conductor and AWG 4/7 conductor cross-section
		Type of conductor and AWG 4/19 conductor cross-section
	Evaluation	passed

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	EC002643	ETIM 9.0	EC002643
ETIM 10.0	EC002643	ECLASS 9.0	27-44-04-01
ECLASS 9.1	27-44-04-01	ECLASS 10.0	27-44-04-01
ECLASS 11.0	27-46-01-01	ECLASS 12.0	27-46-01-01
ECLASS 13.0	27-46-01-01	ECLASS 14.0	27-46-01-01
ECLASS 15.0	27-46-01-01		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

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Important note

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.
Notes	• Additional variants 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. • The single-position PCB terminal block can be used for voltages up to 1500 V (DC) and 1000 V (AC). The relevant device standard and the appropriate required clearances and creepage distances should be observed in the application • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Product Change Notification	20210909 Color Change of Actuator to LLF(S) and LUF(S) Family 20210909 LLF(S) und LUF(S) Familie - Farbänderung des Betätigungselementes Optimierung des QR-Codes auf den Produkten der OMNIMATE Power Leiterplattenanschlussklemmen Optimization QR- Code on OMNIMATE POWER PCB Terminals
User Documentation	QR-Code product handling video Assembly instruction_Montageanleitung_LLFS_LUFS_EN_DE
Catalogues	Catalogues in PDF-format

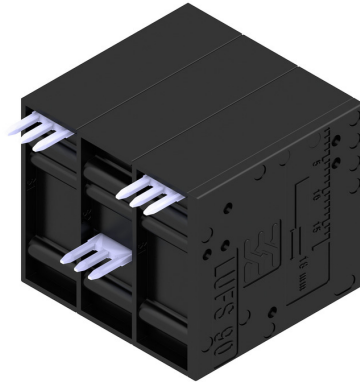
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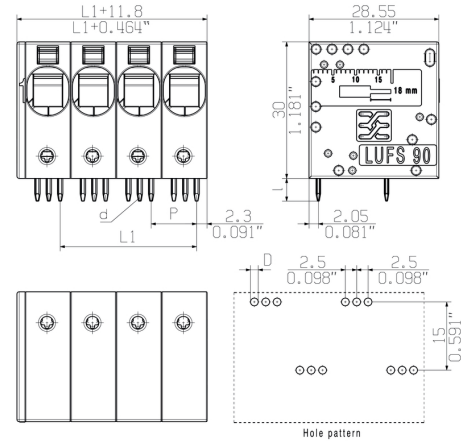
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Drawings

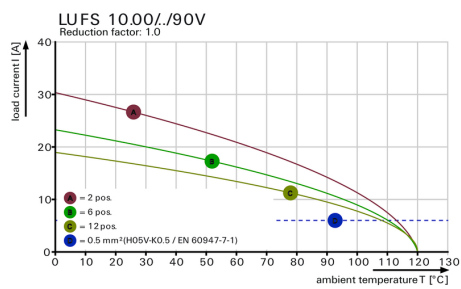
Product image



Dimensional drawing

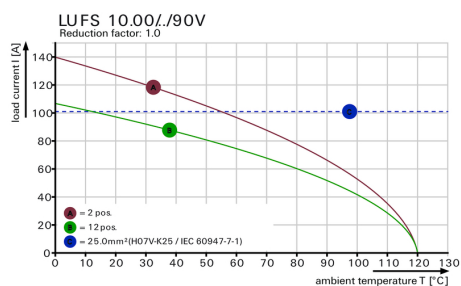


Derating curve



Derating curve

Derating curve



Product benefits



Power up to UL 600 V
Offset solder pins

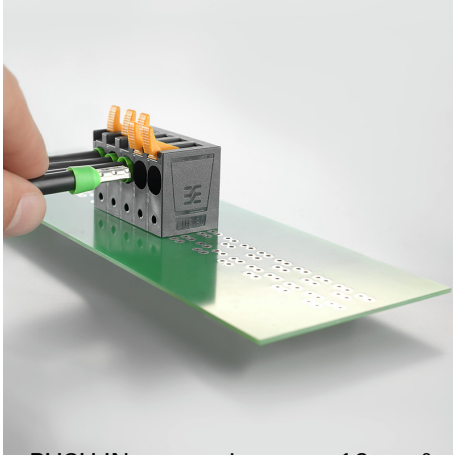
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Drawings

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.