

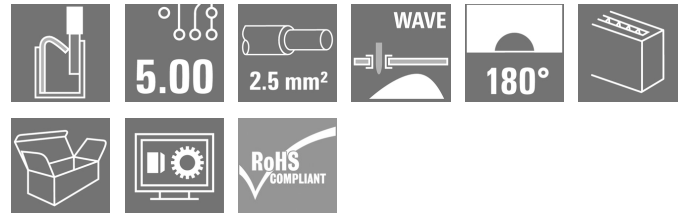
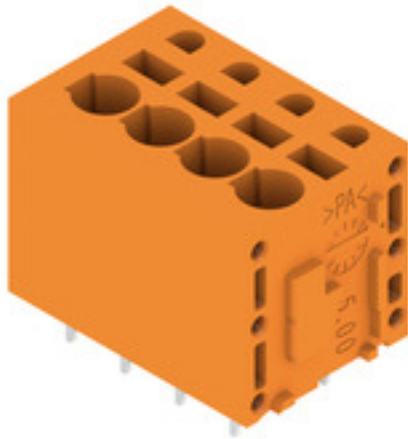
**LMFS 5.00/04/180 3.5SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

The new LMF allows us to meet the current market requirements for a PCB terminal with PUSH IN connection system for wire cross-sections up to 2.5 mm<sup>2</sup>

- PUSH IN connection system
- LMF with pusher for opening the terminal point
- LMFS without pusher, the terminal point is opened with a screwdriver
- Integrated test point
- 90° and 180° wire outlet direction

**General ordering data**

Version	Printed circuit board terminals, 5.00 mm, Number of poles: 4, 180°, Solder pin length (l): 3.5 mm, tinned, orange, PUSH IN without actuator, Clamping range, max. : 2.5 mm <sup>2</sup> , Box
Order No.	<a href="#">1330450000</a>
Type	LMFS 5.00/04/180 3.5SN OR BX
GTIN (EAN)	4050118134346
Qty.	70 pc(s).
Product data	IEC: 400 V / 24 A / 0.5 - 2.5 mm <sup>2</sup> UL: 300 V / 20 A / AWG 24 - AWG 12
Packaging	Box

Creation date July 16, 2024 12:37:18 PM CEST

Catalogue status 13.07.2024 / We reserve the right to make technical changes.

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## Technical data

## Dimensions and weights

Depth	14.8 mm	Depth (inches)	0.583 inch
Height	18.7 mm	Height (inches)	0.736 inch
Height of lowest version	15.2 mm	Width	22.7 mm
Width (inches)	0.894 inch	Net weight	6.914 g

## System parameters

Product family	OMNIMATE Signal - series LMF	Wire connection method	PUSH IN without actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	180°
Pitch in mm (P)	5 mm	Pitch in inches (P)	0.197 "
Number of poles	4	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Max. adjacent poles per row	24	Solder pin length (l)	3.5 mm
Solder pin dimensions	d = 0.8 mm, 0.6 x 0.8 mm	Solder eyelet hole diameter (D)	1.1 mm
Solder eyelet hole diameter tolerance (D)+	0.1 mm	Number of solder pins per pole	2
Screwdriver blade	0.6 x 3.5	Screwdriver blade standard	DIN 5264
Stripping length	10 mm	L1 in mm	15 mm
L1 in inches	0.591 "	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Protection degree	IP20

## Material data

Insulating material	Wemid (PA)	Colour	orange
Colour chart (similar)	RAL 2000	Comparative Tracking Index (CTI)	≥ 600
UL 94 flammability rating	V-0	Contact material	Cu-alloy
Contact surface	tinned	Coating	4-6 µm SN
Tinning type	matt	Layer structure of solder connection	4...8 µm Sn matt
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
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, min.	0.2 mm <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 24
Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.25 mm <sup>2</sup>
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

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## Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired		
		nominal	0.5 mm <sup>2</sup>		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	<a href="#">H0.5/16 OR</a>		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	<a href="#">H0.5/10</a>		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	0.75 mm <sup>2</sup>		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	<a href="#">H0.75/16 W</a>		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	<a href="#">H0.75/10</a>		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	1 mm <sup>2</sup>		
	wire end ferrule	Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	<a href="#">H1.0/16D R</a>		
		Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	<a href="#">H1.0/10</a>		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	1.5 mm <sup>2</sup>		
	wire end ferrule	Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	<a href="#">H1.5/10</a>		
		Stripping length	nominal	12 mm	
		Recommended wire-end ferrule	<a href="#">H1.5/16 R</a>		
	Cross-section for conductor connection	Type	fine-wired		
		nominal	2.5 mm <sup>2</sup>		
	wire end ferrule	Stripping length	nominal	10 mm	
		Recommended wire-end ferrule	<a href="#">H2.5/10</a>		
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)				

## Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	24 A
Rated current, max. number of poles (Tu=20°C)	24 A	Rated current, min. number of poles (Tu=40°C)	24 A
Rated current, max. number of poles (Tu=40°C)	24 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 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	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

## Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	20 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 12

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## Technical data

## Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059) 300 V

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group B / UL 1059) 20 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 12

Reference to approval values Specifications are maximum values, details - see approval certificate.

## Packing

Packaging	Box	VPE length	349 mm
VPE width	138 mm	VPE height	32 mm

## Type tests

Test: Durability of markings	Test	mark of origin, type identification, pitch, approval marking UL, durability
	Evaluation	passed
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02
	Conductor type	Type of conductor and solid 0.14 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 0.14 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 24/1 conductor cross-section
		Type of conductor and AWG 24/19 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed

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## Technical data

Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg
	Conductor type	Type of conductor and AWG 24/1 conductor cross-section
		Type of conductor and AWG 24/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and stranded 0.25 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 0.5 mm <sup>2</sup> conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
Pull-out test	Conductor type	Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
	Conductor type	Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed
	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥10 N
	Conductor type	Type of conductor and AWG 24/1 conductor cross-section
		Type of conductor and AWG 24/19 conductor cross-section
	Evaluation	passed
	Conductor type	Type of conductor and stranded 0.25 mm <sup>2</sup> conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section
		Type of conductor and H07V-K1.5 conductor cross-section
	Conductor type	Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed
	Requirement	≥40 N

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## Technical data

## Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	EC002643	ETIM 9.0	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

## Environmental Product Compliance

REACH SVHC	/
RoHS Compliance Status	Compliant without exemption

## 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	<ul style="list-style-type: none"> <li>• Additional variants 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> <li>• The test point can only be used as potential-pickup point.</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

## Approvals

Approvals	
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Downloads**Approval/Certificate/Document of Con-  
formity[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

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Brochures

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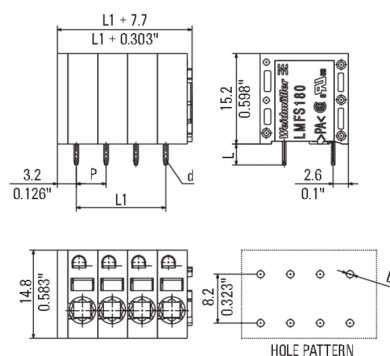
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## Drawings

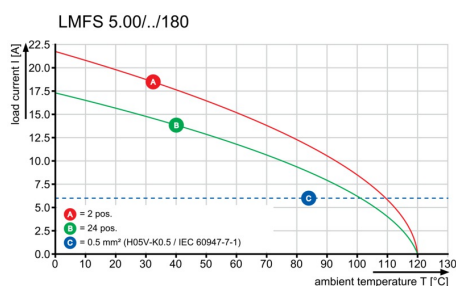
## Product image



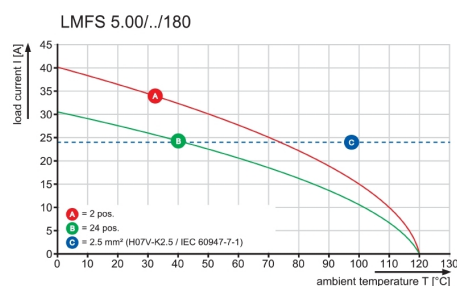
## Dimensional drawing



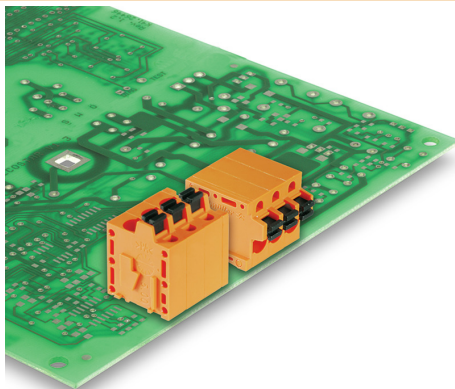
## Graph



## Graph

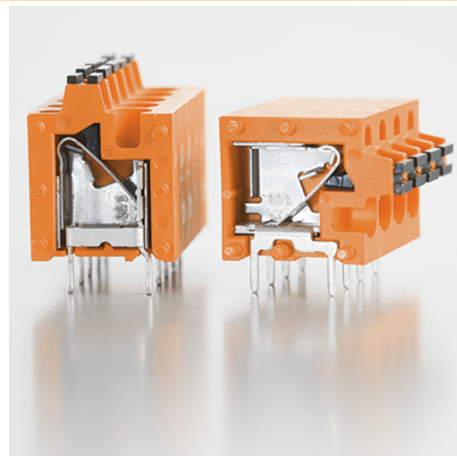


## Product benefits



Optional conductor outlet direction  
 Stable mechanical design

## Product benefits



High reliability of the current capacity



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# Drawings

### Product benefits



Direct conductor entry  
Cross section up to 2.5 mm<sup>2</sup>

### Product benefits



Maintenance through test point

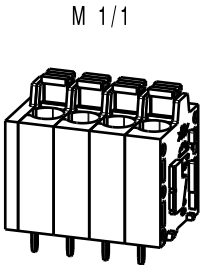
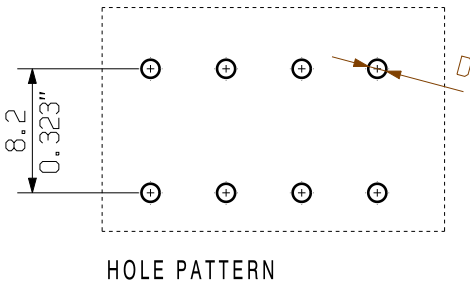
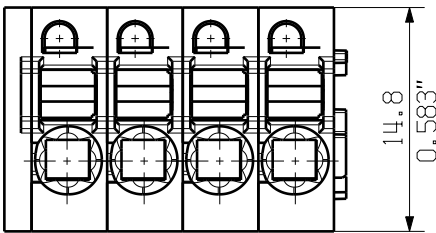
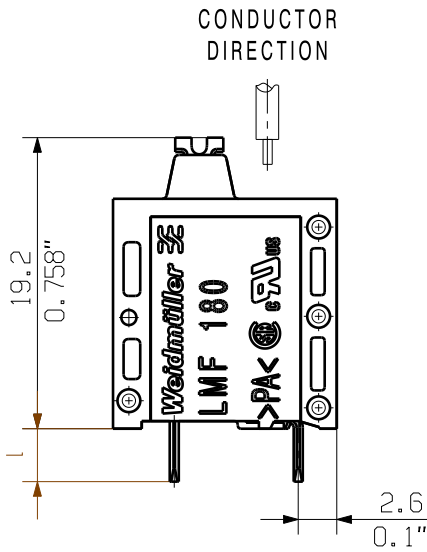
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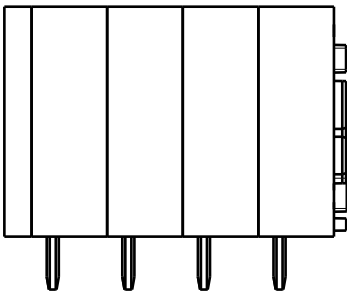
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DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING

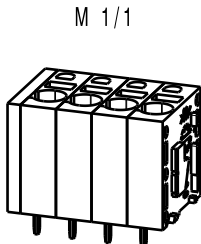
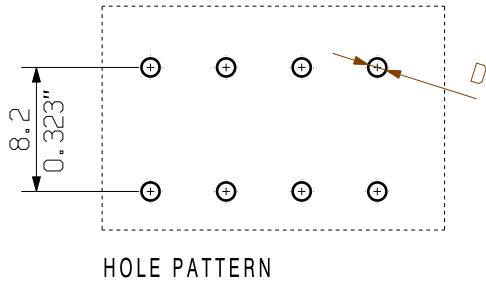
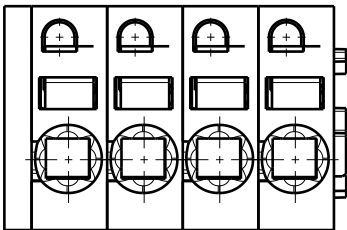
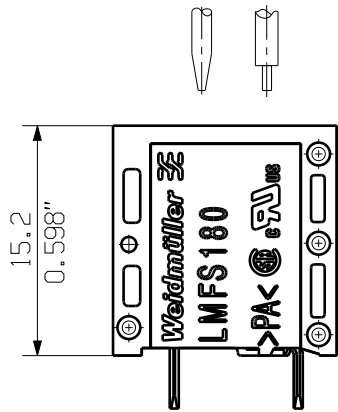
ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE  
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED



SHOWN: LMFS 5.00/04/180 3.5



SCREWDRIVER AND  
CONDUCTOR DIRECTION



P = 5.00 RASTER PITCH  
D =  $\varnothing 1.1 +0.1$   
0.043"  
d =  $0.6 \times 0.8$   
 $0.024 \times 0.031$ "  
l =  $3.5$   
0.138"

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.  
The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.  
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.  
Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.  
Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

24	115.00	4.528
23	110.00	4.331
22	105.00	4.134
21	100.00	3.937
20	95.00	3.740
19	90.00	3.543
18	85.00	3.346
17	80.00	3.150
16	75.00	2.953
15	70.00	2.756
14	65.00	2.559
13	60.00	2.362
12	55.00	2.165
11	50.00	1.969
10	45.00	1.772
9	40.00	1.575
8	35.00	1.378
7	30.00	1.181
6	25.00	0.984
5	20.00	0.787
4	15.00	0.591
3	10.00	0.394
2	5.00	0.197
n	POLZAHL POLES	L1 [mm] L1 [inch]

GENERAL TOLERANCE: DIN ISO 2768-m		70657/4 26.06.13 TIELKER_S 01		CAT.NO.: . . .	
RoHS COMPLIANT		MODIFICATION		Weidmüller	
DRAWN		DATE	NAME	C 55662 03	
RESPONSIBLE		25.01.2012	REGLIN_A	DRAWING NO. SHEET 01 OF 01 SHEETS	
CHECKED		26.06.2013	SCHMITZ_T	ISSUE NO.	
APPROVED		26.06.2013	HECKERT_M	PRODUCT FILE: LMF 5.0X 7403	
SCALE: 2/1		HANKE_D		LMF... 5.00/.../180 ... LEITERPLATTENKLEMME PCB TERMINAL	
SUPERSEDES: .					

## Recommended wave soldering profiles

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Fax: +49 5231 14-292083  
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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.