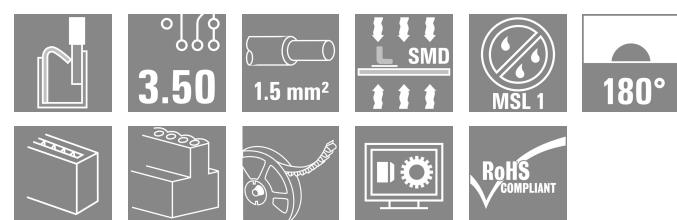
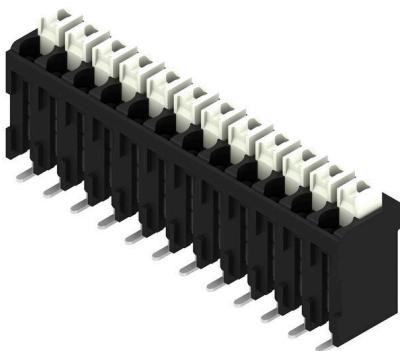


## LSF-SMD 3.50/12/180 SN BK RL

Weidmüller Interface GmbH & Co. KG  
Klingenbergsstraße 26  
D-32758 Detmold  
Germany

[www.weidmueller.com](http://www.weidmueller.com)

## Product image



The innovative quick connector - simple, safe and economical:

PCB terminals with spring connection and direct PUSH IN technology. A milestone in connection technology.

Amazingly simple and simply amazing in practice:

- Connect and easily detach solid wires or wires with wire-end ferrules without using tools
- Processed automatically in the reflow or vapour phase
- Potentials and clamping points marked clearly by coloured push buttons

World-class design-in and processing phases, and suitable for a vast range of applications.

PCB terminal for fully automatic assembly using reflow soldering (SMD), with PUSH IN wire connections. Conductor insertion and slider operation from the same direction (TOP).

- Solid & flexible conductors with wire-end ferrules need only to be inserted and they are ready.
- When connecting stranded wires without wire-end ferrules the actuating element is used to open the terminal point
- Intuitive handling – since the wire-entry area and handling area are clearly separated.
- Packaged in tape-on-reel
- Conductor outlet direction 180°

## General ordering data

Version	Printed circuit board terminals, 3.50 mm, Number of poles: 12, 180°, black, PUSH IN with actuator, Clamping range, max. : 1.5 mm <sup>2</sup> , Tape
Order No.	<a href="#">1250470000</a>
Type	LSF-SMD 3.50/12/180 SN BK RL
GTIN (EAN)	4050118041064
Qty.	180 items
Product data	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 12 A / AWG 24 - AWG 14
Packaging	Tape

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## Technical data

## Approvals

## Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate No. (cURus)	E60693

## Dimensions and weights

Depth	10.5 mm	Depth (inches)	0.4134 inch
Height	16.3 mm	Height (inches)	0.6417 inch
Height of lowest version	16.3 mm	Width	42.7 mm
Width (inches)	1.6811 inch	Net weight	7.43 g

## Temperatures

Continuous operating temp., max.	120 °C
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## Environmental Product Compliance

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

## System parameters

Product family	OMNIMATE Signal - series LSF	Wire connection method	PUSH IN with actuator
Mounting onto the PCB	SMD solder connection	Conductor outlet direction	180°
Pitch in mm (P)	3.50 mm	Pitch in inches (P)	0.138 "
Number of poles	12	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Coplanarity:	100 µm	Number of solder pins per pole	2
Stripping length	8 mm	L1 in mm	38.50 mm
L1 in inches	1.518 "	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
Volume resistance	1.60 mΩ		

## Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact material	Cu-alloy
Layer structure of solder connection	4...6 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.	-30 °C
Temperature range, installation, max.	120 °C		

## Conductors suitable for connection

Clamping range, min.	0.13 mm <sup>2</sup>
Clamping range, max.	1.5 mm <sup>2</sup>

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## Technical data

Wire connection cross section AWG, min. AWG 28

Wire connection cross section AWG, max. AWG 14

Solid, min. H05(07) V-U 0.2 mm<sup>2</sup>

Solid, max. H05(07) V-U 1.5 mm<sup>2</sup>

Flexible, min. H05(07) V-K 0.2 mm<sup>2</sup>

Flexible, max. H05(07) V-K 1.5 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, 0.75 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. 1.5 mm<sup>2</sup>

Clampable conductor

Cross-section for conductor connection

Type fine-wired

nominal 0.25 mm<sup>2</sup>

wire end ferrule

Stripping length nominal 10 mm

Recommended wire-end ferrule [H0,25/12 HBL](#)

Cross-section for conductor connection

Type fine-wired

nominal 0.34 mm<sup>2</sup>

wire end ferrule

Stripping length nominal 10 mm

Recommended wire-end ferrule [H0,34/12 TK](#)

Cross-section for conductor connection

Type fine-wired

nominal 0.5 mm<sup>2</sup>

wire end ferrule

Stripping length nominal 10 mm

Recommended wire-end ferrule [H0,5/14 OR](#)

Cross-section for conductor connection

Type fine-wired

nominal 0.75 mm<sup>2</sup>

wire end ferrule

Stripping length nominal 10 mm

Recommended wire-end ferrule [H0,75/14T HBL](#)

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) 17.5 A

Rated current, max. number of poles (Tu=20°C) 16 A Rated current, min. number of poles (Tu=40°C) 17.5 A

Rated current, max. number of poles (Tu=40°C) 14 A Rated voltage for surge voltage class / pollution degree II/2 320 V

Rated voltage for surge voltage class / pollution degree III/2 160 V Rated voltage for surge voltage class / pollution degree III/3 160 V

Rated impulse voltage for surge voltage class/ pollution degree II/2 2.5 kV Rated impulse voltage for surge voltage class/ pollution degree III/2 2.5 kV

Rated impulse voltage for surge voltage class/ contamination degree III/3 2.5 kV Short-time withstand current resistance 3 x 1 s with 80 A

## Rated data acc. to CSA

Institute (CSA) CSA Certificate No. (CSA) 200039-1664286

Rated voltage (Use group B / CSA) 300 V Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 10 A Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 28 Wire cross-section, AWG, max. AWG 14

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## Technical data

Reference to approval values	Specifications are maximum values, details - see approval certificate.
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## Rated data acc. to UL 1059

Institute (cURus)	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)	12 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

ESD Level packaging	static dissipative	Packaging	Tape
VPE length	330.00 mm	VPE width	330.00 mm
VPE height	63.00 mm	Tape depth (T2)	17.60 mm
Tape width (W)	56 mm	Tape pocket depth (K0)	17.10 mm
Tape pocket height (A0)	11.20 mm	Tape pocket width (B0)	43.70 mm
Tape pocket separation (P1)	20.00 mm	Tape hole separation (E)	1.75 mm
Tape pocket separation (F)	26.20 mm	Tape reel diameter Ø (A)	330 mm
Surface resistance	Rs = 109 - 1012 Ω	Width Pick & Place Pad (WPPP)	7.5 mm
Length Pick & Place Pad (LPPP)	8.5 mm	Diameter of the withdrawal surface (Ø Dmax)	9 mm

## Type tests

Test: Durability of markings	Test	mark of origin, type identification, pitch, approval marking UL, durability
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 solid 0.14 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 0.14 mm <sup>2</sup> and conductor cross-section
		Type of conductor solid 1.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor stranded 1.5 mm <sup>2</sup> and conductor cross-section
		Type of conductor AWG 24/1 and conductor cross-section
		Type of conductor AWG 22/19 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg

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## Technical data

Pull-out test	Conductor type	Type of conductor and conductor cross-section	AWG 24/1
		Type of conductor and conductor cross-section	AWG 24/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	stranded 0.25 mm <sup>2</sup>
		Type of conductor and conductor cross-section	solid 0.5 mm <sup>2</sup>
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 1.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 1.5 mm <sup>2</sup>
Pull-out test	Evaluation	passed	
	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 24/1
		Type of conductor and conductor cross-section	AWG 24/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	stranded 0.25 mm <sup>2</sup>
		Type of conductor and conductor cross-section	H05V-U0.5
	Evaluation	passed	
Pull-out test	Requirement	≥40 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
		Type of conductor and conductor cross-section	H07V-K1.5
	Evaluation	passed	
	Requirement	≥80 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	Evaluation	passed	
	Requirement	≥160 N	
	Evaluation	passed	

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**Technical data****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 push button colours on request</li><li>• Operating force of slider max. 40 N</li><li>• Rated current related to rated cross-section &amp; min. No. of poles.</li><li>• Wire end ferrule with plastic collar to DIN 46228/4</li><li>• Wire end ferrule without plastic collar to DIN 46228/1</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>• Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.</li><li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li></ul>

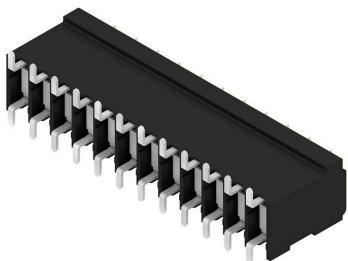
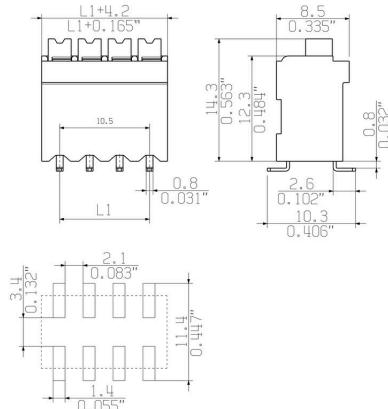
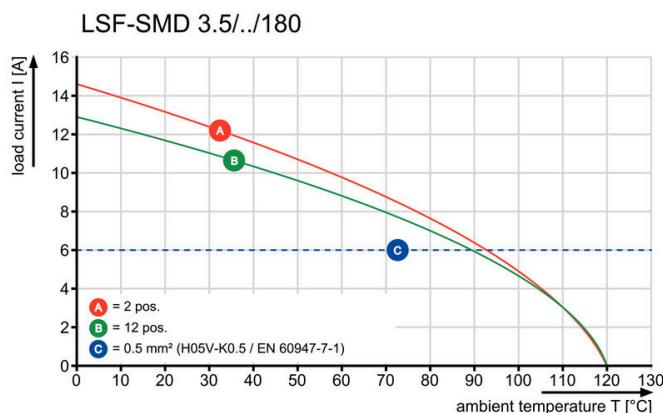
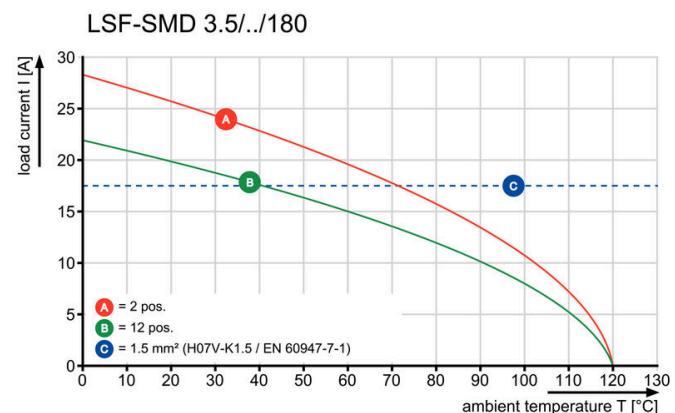
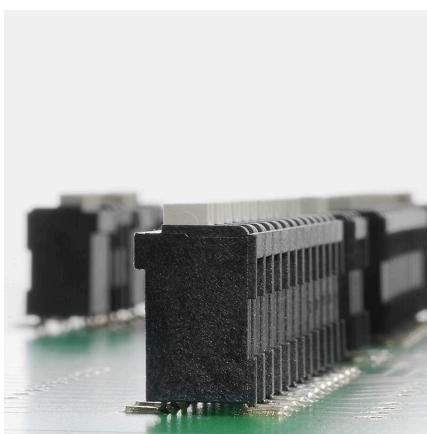
**Classifications**

ETIM 8.0	EC002643	ETIM 9.0	EC002643
ETIM 10.0	EC002643	ECLASS 14.0	27-46-01-01
ECLASS 15.0	27-46-01-01		

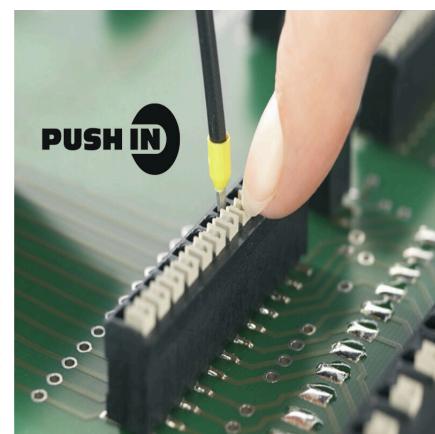
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**Drawings****Product image****Dimensional drawing****Graph****Graph****Product benefits**

Stable solder connection

**Product benefits**

PUSH IN wire connection

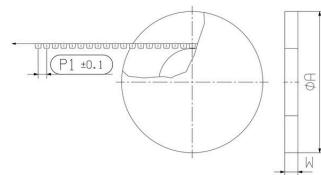
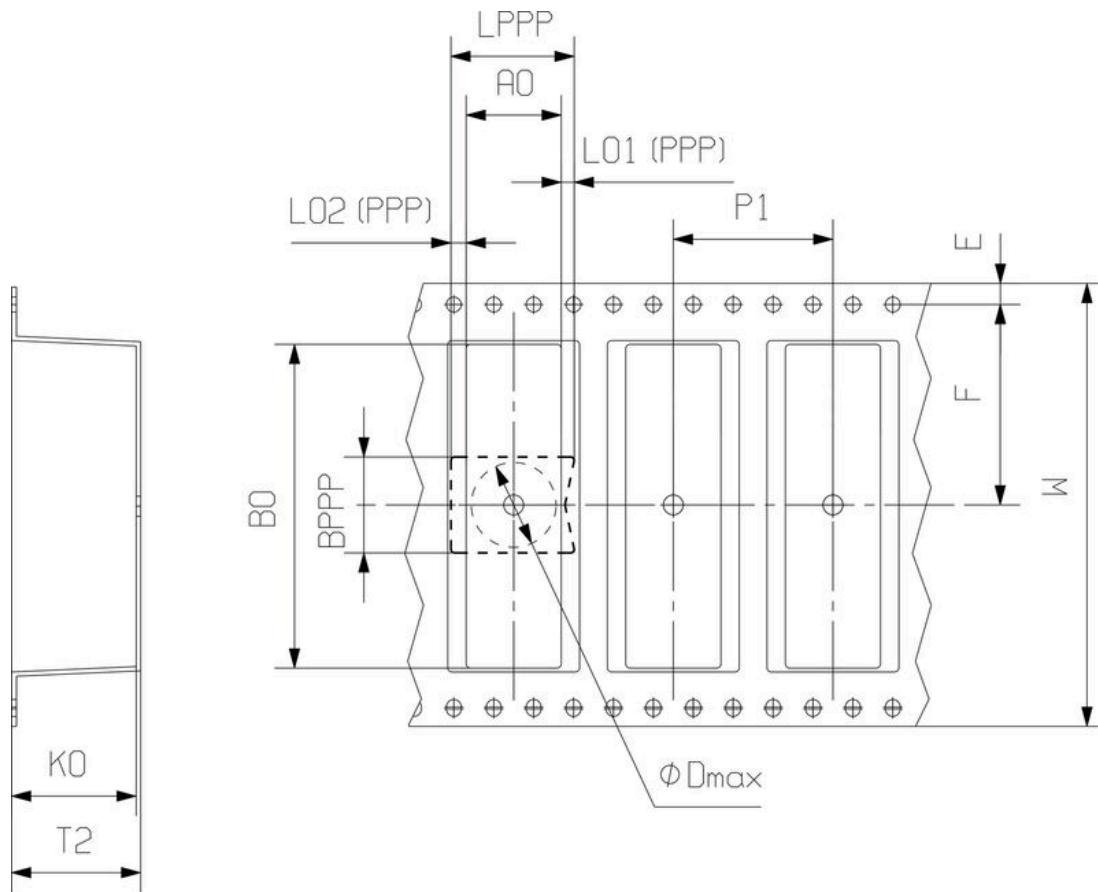
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**Drawings****Product benefits**

Packaged in tape-on-reel

**Dimensional drawing****Dimensional drawing**

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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 0.4X2.5X75	Version
Order No.	<a href="#">9008370000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248056330	
Qty.	1 ST	
Type	SDS 0.4X2.5X75	Version
Order No.	<a href="#">9009030000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248266944	
Qty.	1 ST	