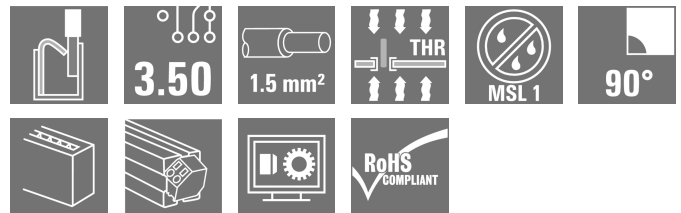
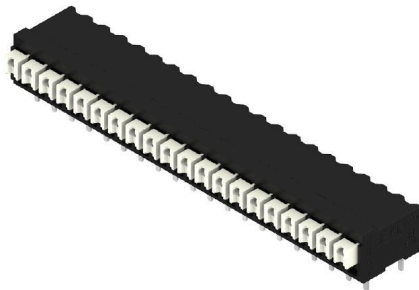


**LSF-SMT 3.50/20/90 3.5SN BK TU****Weidmüller Interface GmbH & Co. KG**Klingenbergstraße 26  
D-32758 Detmold  
Germany[www.weidmueller.com](http://www.weidmueller.com)**Product image**

PCB terminal for fully automatic assembly in reflow soldering (SMT), with PUSH IN conductor connection system. Conductor inserted and slider operated in same direction (TOP). Packed in box or as tape on reel. Pin lengths optimised at 1.5 mm or 3.5 mm.

**General ordering data**

Version	Printed circuit board terminals, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 3.5 mm, black, PUSH IN with actuator, Clamping range, max.: 1.5 mm², Tube
Order No.	<a href="#">1870450000</a>
Type	LSF-SMT 3.50/20/90 3.5SN BK TU
GTIN (EAN)	4032248447800
Qty.	7 ST
Product data	IEC: 320 V / 17.5 A / 0.2 - 1.5 mm² UL: 300 V / 12 A / AWG 28 - AWG 14
Packaging	Tube

Creation date 03.08.2025 12:46:47 MEZ

Catalogue status / Drawings

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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	14.75 mm	Depth (inches)	0.5807 inch
Height	12 mm	Height (inches)	0.4724 inch
Height of lowest version	8.5 mm	Width	70.7 mm
Width (inches)	2.7835 inch	Net weight	13.2 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	THT/THR solder connection	Conductor outlet direction	90°
Pitch in mm (P)	3.50 mm	Pitch in inches (P)	0.138 "
Number of poles	20	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Solder pin length (l)	3.5 mm	Solder pin length tolerance	0 / -0.3 mm
Solder pin dimensions	0.35 x 0.8 mm	Solder pin dimensions = d tolerance	0 / -0.1 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	Stripping length	8 mm
L1 in mm	66.50 mm	L1 in inches	2.618 "
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		

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## Conductors suitable for connection

Clamping range, min.	0.13 mm <sup>2</sup>			
Clamping range, max.	1.5 mm <sup>2</sup>			
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	<a href="#">H0.25/12 HBL</a>	
		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	<a href="#">H0.34/12 TK</a>	
		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	<a href="#">H0.5/14 OR</a>	
		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	<a href="#">H0.75/14T HBL</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)	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 1s with 80 A

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## Technical data

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

## 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 28	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

Packaging	Tube	VPE length	556.00 mm
VPE width	21.00 mm	VPE height	15.00 mm
Surface resistance	Rs = 109 - 1012 Ω		

## Type tests

Test: Durability of markings	Standard	DIN EN 60512-1-1 / 01.03	
	Test	mark of origin, type identification, pitch, durability	
	Evaluation	available	
	Test	approval marking UL	
	Evaluation	on packaging label	
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 conductor cross-section	solid 0.14 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 0.14 mm <sup>2</sup>
		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>
		Type of conductor and conductor cross-section	AWG 24/1
		Type of conductor and conductor cross-section	AWG 24/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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 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	
Pull-out test	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>
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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	
	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	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
		Type of conductor and conductor cross-section	H07V-K1.5
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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

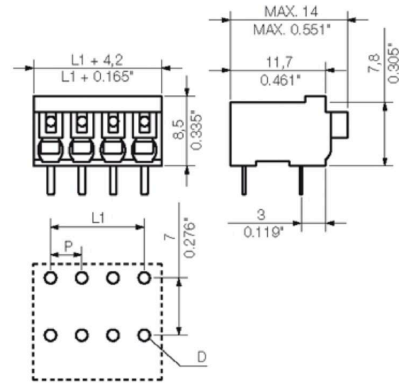
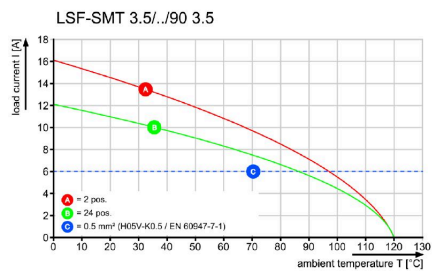
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ETIM 8.0	EC002643	ETIM 9.0	EC002643
ETIM 10.0	EC002643	ECLASS 9.0	27-44-04-01
ECLASS 9.1	27-44-04-01	ECLASS 10.0	27-44-04-01
ECLASS 11.0	27-46-01-01	ECLASS 12.0	27-46-01-01
ECLASS 13.0	27-46-01-01	ECLASS 14.0	27-46-01-01
ECLASS 15.0	27-46-01-01		

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**Drawings**
**Product image**

**Dimensional drawing**

**Graph**

**Graph**
