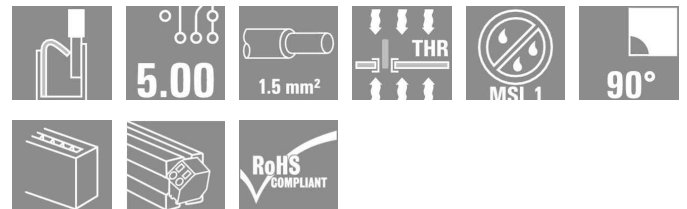


# OMNIMATE Signal - series LSF

## LSF-SMT 5.00/06/90 3.5SN BK TU

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com



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.

- 0.20 - 1.5 mm<sup>2</sup> (IEC) / 24 - 16 AWG (UL)
- 500 V (IEC) / 300 V (UL)
- 17.5 A (IEC) / 12 A (UL)

### General ordering data

|              |                                                                                                                                                                                          |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type         | LSF-SMT 5.00/06/90 3.5SN BK TU                                                                                                                                                           |
| Order No.    | <a href="#">1824780000</a>                                                                                                                                                               |
| Version      | PCB terminal, 5.00 mm, No. of poles: 6, 90°, Solder pin length (l): 3.5 mm, tinned, Black, PUSH IN spring connection, Clamping range, rated connection, max.: 1.5 mm <sup>2</sup> , Tube |
| GTIN (EAN)   | 4032248327331                                                                                                                                                                            |
| Qty.         | 18 pc(s).                                                                                                                                                                                |
| Product data | IEC: 500 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup><br>UL: 300 V / 12 A / AWG 24 - AWG 16                                                                                                    |
| Packaging    | Tube                                                                                                                                                                                     |

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## Technical data

### Dimensions and weights

|            |         |
|------------|---------|
| Net weight | 5.722 g |
|------------|---------|

### System characteristics

|                                                   |                              |                                            |                           |
|---------------------------------------------------|------------------------------|--------------------------------------------|---------------------------|
| Product family                                    | OMNIMATE Signal - series LSF | Wire connection method                     | PUSH IN spring connection |
| Mounting onto the PCB                             | Reflow solder connection     | Conductor outlet direction                 | 90°                       |
| Pitch in mm (P)                                   | 5 mm                         | Pitch in inches (P)                        | 0.197 inch                |
| No. of poles                                      | 6                            | Fitted by customer                         | Yes                       |
| Solder pin length (l)                             | 3.5 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                                   | 25 mm                     |
| L1 in inches                                      | 0.984 inch                   | Touch-safe protection acc. to DIN VDE 0470 | IP 20                     |
| Touch-safe protection acc. to DIN VDE 57 106      | Safe from finger touch       |                                            |                           |

### Material data

|                                       |        |                                       |        |
|---------------------------------------|--------|---------------------------------------|--------|
| Insulating material                   | LCP GF | Colour                                | Black  |
| UL 94 flammability rating             | V-0    | CTI                                   | ≥ 175  |
| Contact material                      | Cu-Leg | Contact surface                       | tinned |
| Contact base material                 | Cu-Leg | Operating temperature, min.           | -50 °C |
| Operating temperature, max.           | 100 °C | Temperature range, installation, min. | -30 °C |
| Temperature range, installation, max. | 100 °C |                                       |        |

### Connectable conductors

|                                                 |                      |                                                 |                      |
|-------------------------------------------------|----------------------|-------------------------------------------------|----------------------|
| Clamping range, rated connection, min.          | 0.13 mm <sup>2</sup> | Clamping range, rated connection, max.          | 1.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min.         | AWG 24               | Wire connection cross section AWG, max.         | AWG 16               |
| 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. 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>  |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm <sup>2</sup> | w. plastic collar ferrule, DIN 46228 pt 4, max. | 0.75 mm <sup>2</sup> |

### DIN IEC rating data

|                                                                       |                   |                                                                           |        |
|-----------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------|--------|
| Rated current, min. no. of poles (Tu=20°C)                            | 17.5 A            | Rated current, max. no. of poles (Tu=20°C)                                | 17.5 A |
| Rated current, number of poles (Tu=40°C), min                         | 17.5 A            | Rated current, number of poles (Tu=40°C), max.                            | 15 A   |
| Rated voltage for surge voltage class / pollution degree II/2         | 500 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 1 s with 80 A |                                                                           |        |

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**Technical data****CSA rating data**

Institute (CSA)



Rated voltage (Use group B)

300 V

Rated current (use group B) 10 A

Rated voltage (use group D) 300 V

Rated current (use group D) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 16

**UL 1059 rating data**

Rated voltage (use group B) 300 V

Rated current (use group B) 12 A

Rated voltage (use group D) 300 V

Rated current (use group D) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 16

**Classifications**

ETIM 3.0

EC001284

UNSPSC

30-21-18-01

eClass 6.2

27-26-11-01

eClass 7.1

27-44-04-01

**Notes**

Notes

- Additional push button colours on request
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- P on drawing = pitch
- Operating force of slider max. 40 N
- 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.
- Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.

**Approvals**

Approvals



ROHS

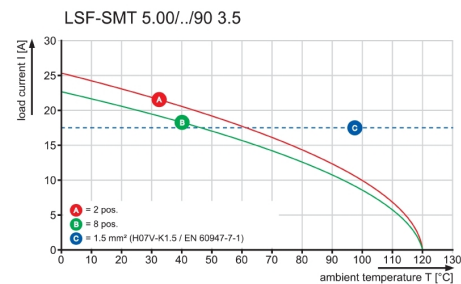
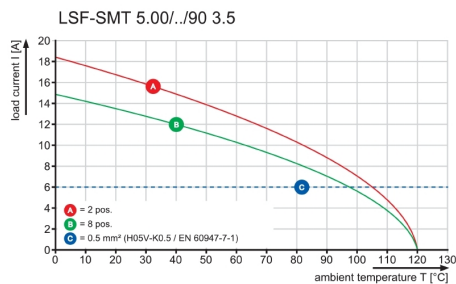
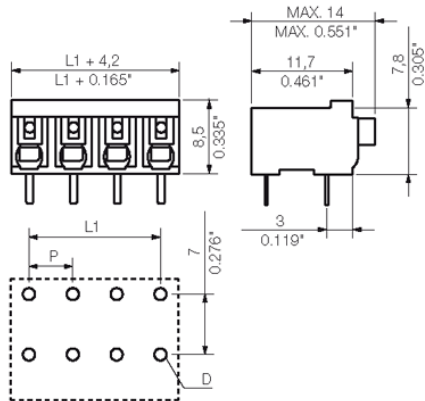
Conform

**Downloads**CAD Library (P-CAD Format - ASCII) [LSF-SMT.zip](#)CAD Library (P-CAD Format - Standard) [LSF-SMT.zip](#)[3-D model](#)

## OMNIMATE Signal - series LSF LSF-SMT 5.00/06/90 3.5SN BK TU

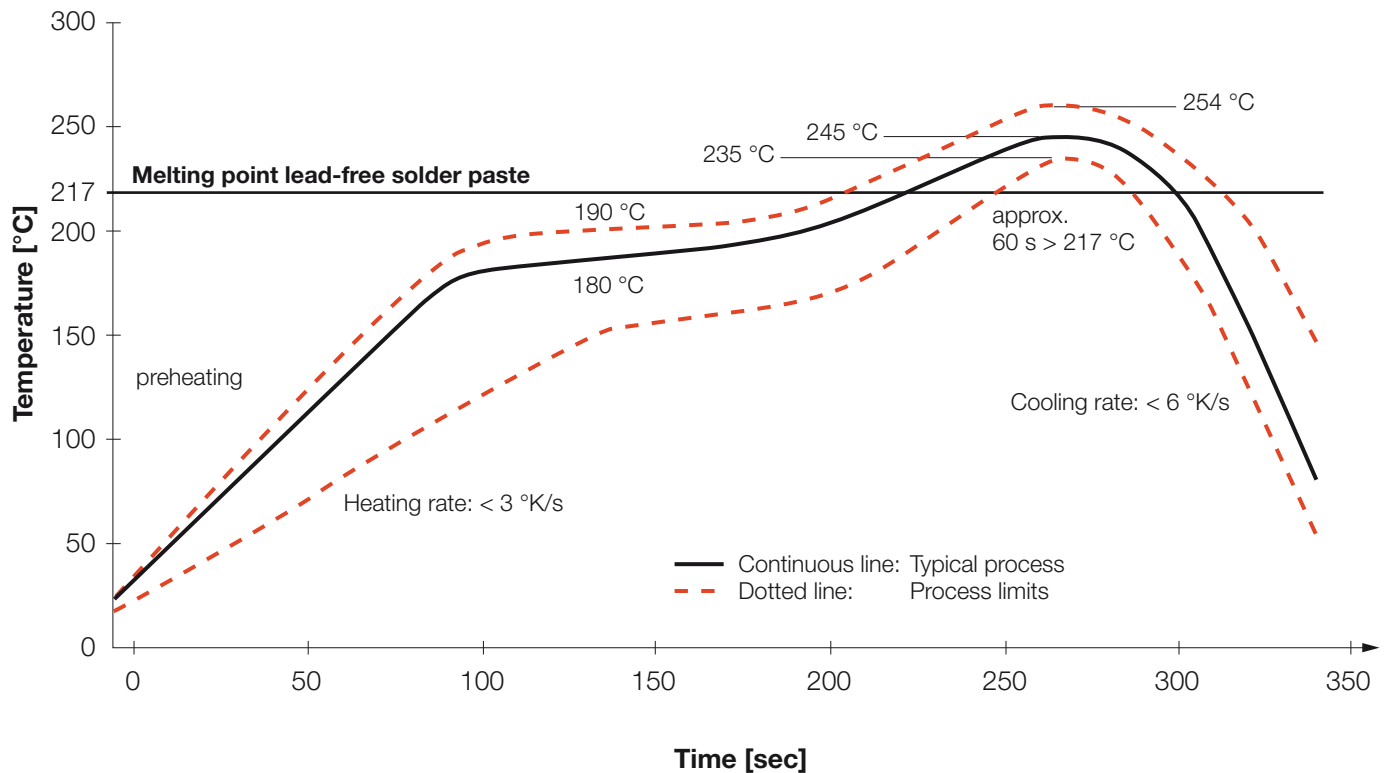
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## Drawings



## Recommended reflow soldering profile

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### Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically  $\leq +3\text{K/s}$ . In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at  $\geq -6\text{K/s}$  solder is cured. Board and components cool down while avoiding cold cracks.

