

LSF-SMD 5.00/05/135 SN BK RL

Weidmüller Interface GmbH & Co. KG

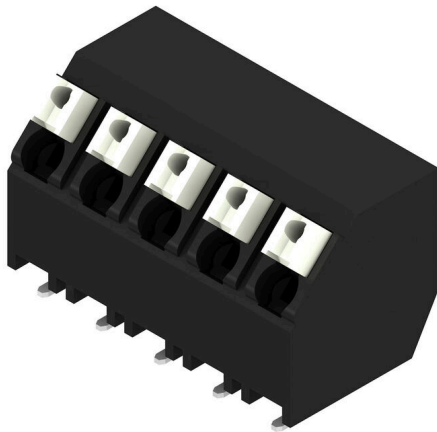
Klingenbergstraße 26

D-32758 Detmold

Germany

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 135°

General ordering data

| | |
|--------------|--|
| Version | Printed circuit board terminals, 5.00 mm, Number of poles: 5, 135°, black, PUSH IN with actuator, Clamping range, max. : 1.5 mm², Tape |
| Order No. | 1473720000 |
| Type | LSF-SMD 5.00/05/135 SN BK RL |
| GTIN (EAN) | 4050118280357 |
| Qty. | 210 items |
| Product data | IEC: 500 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 12 A / AWG 28 - AWG 14 |
| Packaging | Tape |

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Technical data

Approvals

Approvals



ROHS Conform
UL File Number Search [UL Website](#)
Certificate No. (cURus) E60693

Dimensions and weights

| | | | |
|--------------------------|-------------|-----------------|-------------|
| Depth | 12.7 mm | Depth (inches) | 0.5 inch |
| Height | 14.45 mm | Height (inches) | 0.5689 inch |
| Height of lowest version | 14.45 mm | Width | 24.2 mm |
| Width (inches) | 0.9528 inch | Net weight | 5.56 g |

Temperatures

Continuous operating temp., max. 120 °C

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 | 135° |
| Pitch in mm (P) | 5.00 mm | Pitch in inches (P) | 0.197 " |
| Number of poles | 5 | 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 | 20.00 mm |
| L1 in inches | 0.787 " | 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 of operational elements | white | 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 ² |
| Clamping range, max. | 1.5 mm ² |

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|---|--|--|--|------------|
| 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 ² | | | |
| Solid, max. H05(07) V-U | 1.5 mm ² | | | |
| Flexible, min. H05(07) V-K | 0.2 mm ² | | | |
| Flexible, max. H05(07) V-K | 1.5 mm ² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm ² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 0.75 mm ² | | | |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.25 mm ² | | | |
| w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm ² | | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.25 mm ² | |
| | 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 ² | |
| | 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 ² | |
| | 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 ² | |
| | 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) | 12 A |
| Rated current, max. number of poles (Tu=20°C) | 12 A | Rated current, min. number of poles (Tu=40°C) | 12 A |
| Rated current, max. number of poles (Tu=40°C) | 12 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 1s 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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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

| | | | |
|-----------------------------|--------------------------|-------------------------------|-----------|
| ESD Level packaging | static dissipative | Packaging | Tape |
| VPE length | 332.00 mm | VPE width | 332.00 mm |
| VPE height | 64.00 mm | Tape depth (T2) | 15.70 mm |
| Tape width (W) | 56 mm | Tape pocket depth (K0) | 15.20 mm |
| Tape pocket height (A0) | 11.30 mm | Tape pocket width (B0) | 44.06 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 ϕ (A) | 330 mm |
| Surface resistance | Rs = 109 - 1012 Ω | | |

Type tests

| | | | | |
|---|----------------|--|-------------------------------|--|
| Test: Durability of markings | Test | mark of origin, type identification, pitch, approval marking UL, durability | | |
| | Evaluation | available | | |
| 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 ² | |
| | | Type of conductor and conductor cross-section | stranded 0.14 mm ² | |
| | | Type of conductor and conductor cross-section | solid 1.5 mm ² | |
| | | Type of conductor and conductor cross-section | stranded 1.5 mm ² | |
| | | 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 | | |
| 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 | |

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| | | | |
|---------------|----------------|---|-------------------------------|
| | | 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 ² |
| | | Type of conductor and conductor cross-section | solid 0.5 mm ² |
| | Evaluation | passed | |
| | Requirement | 0.4 kg | |
| | Conductor type | Type of conductor and conductor cross-section | solid 1.5 mm ² |
| | | Type of conductor and conductor cross-section | stranded 1.5 mm ² |
| | | Type of conductor and conductor cross-section | AWG 16/1 |
| | | Type of conductor and conductor cross-section | AWG 16/19 |
| | Evaluation | passed | |
| Pull-out test | 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 ² |
| | | Type of conductor and conductor cross-section | H05V-K0.5 |
| | Evaluation | passed | |
| | 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 |
| | | Type of conductor and conductor cross-section | AWG 16/1 |
| | | Type of conductor and conductor cross-section | AWG 16/19 |
| Evaluation | passed | | |

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.

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fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

Notes

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

Classifications

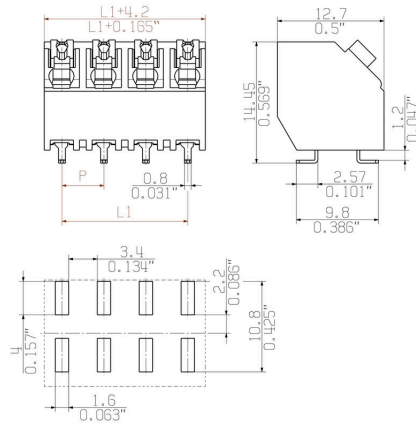
| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC002643 | ETIM 9.0 | EC002643 |
| ETIM 10.0 | EC002643 | ECLASS 14.0 | 27-46-01-01 |
| ECLASS 15.0 | 27-46-01-01 | | |

Drawings

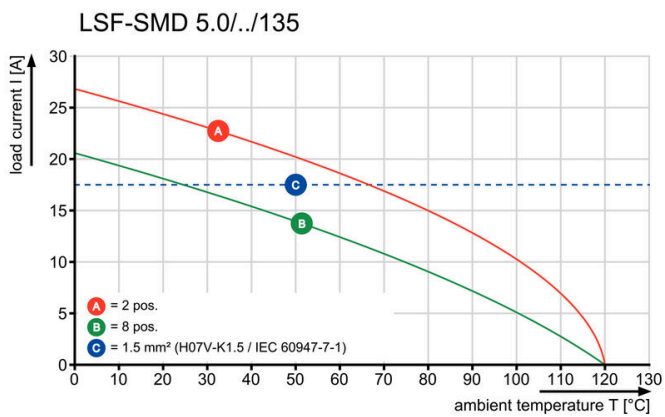
Product image



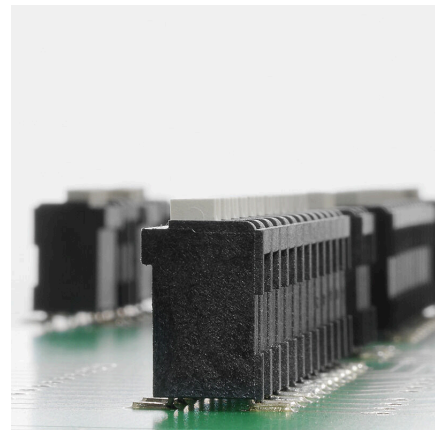
Dimensional drawing



Graph



Product benefits



Stable solder connection

Product benefits



PUSH IN wire connection

Product benefits



Packaged in tape-on-reel

Dimensional drawing



Dimensional drawing

