

## LMFS 5.08/18/90 3.5SN OR BX

Weidmüller Interface GmbH & Co. KG

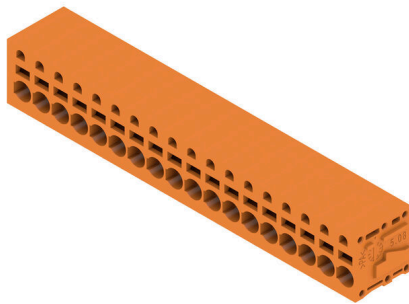
Klingenbergstraße 26

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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, 5.08 mm, Number of poles: 18, 90°, Solder pin length (l): 3.5 mm, tinned, orange, PUSH IN, Clamping range, max. : 2.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1331170000</a>   |
| Type         | LMFS 5.08/18/90 3.5SN OR BX  |
| GTIN (EAN)   | 4050118135008  |
| Qty.         | 15 items   |
| Product data | IEC: 400 V / 24 A / 0.2 - 2.5 mm <sup>2</sup><br>UL: 300 V / 20 A / AWG 24 - AWG 12  |
| Packaging    | Box  |

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## Technical data

## Approvals

Approvals



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

## Dimensions and weights

|                          |             |                 |             |
|--------------------------|-------------|-----------------|-------------|
| Depth                    | 15.2 mm     | Depth (inches)  | 0.5984 inch |
| Height                   | 18.3 mm     | Height (inches) | 0.7205 inch |
| Height of lowest version | 14.8 mm     | Width           | 94.06 mm    |
| Width (inches)           | 3.7031 inch | Net weight      | 24.66 g     |

## Environmental Product Compliance

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

## System parameters

|  |                              |  |          |
|--|------------------------------|--|----------|
| Product family                               | OMNIMATE Signal - series LMF | Wire connection method                     | PUSH IN  |
| Mounting onto the PCB                        | THT solder connection        | Conductor outlet direction                 | 90°      |
| Pitch in mm (P)                              | 5.08 mm                      | Pitch in inches (P)                        | 0.200 "  |
| Number of poles                              | 18                           | 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                   | 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                                   | 86.36 mm |
| L1 in inches                                 | 3.400 "                      | 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  |
| Moisture Level (MSL)                  |                  | 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.                    | 0.12 mm <sup>2</sup> |
| Clamping range, max.                    | 2.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min. | AWG 24               |

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|   |  |                              |                            |       |
|---|--|------------------------------|----------------------------|-------|
| Wire connection cross section AWG, max.         | AWG 12                                 |                              |                            |       |
| Solid, min. H05(07) V-U                         | 0.2 mm <sup>2</sup>                    |                              |                            |       |
| Solid, max. H05(07) V-U                         | 2.5 mm <sup>2</sup>                    |                              |                            |       |
| Flexible, min. H05(07) V-K                      | 0.2 mm <sup>2</sup>                    |                              |                            |       |
| Flexible, max. H05(07) V-K                      | 2.5 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. | 2.5 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.       | 2.5 mm <sup>2</sup>                    |                              |                            |       |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm                        |                              |                            |       |
| 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)

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## Technical data

### Rated data acc. to IEC

|   |                            |   |                   |
|---|----------------------------|---|-------------------|
| tested acc. to standard   | IEC 60664-1, IEC 60947-7-4 | 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 |

### 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) | 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 | 338.00 mm |
| VPE width | 130.00 mm | VPE height | 27.00 mm  |

### Type tests

|                               |                |   |                               |
|-------------------------------|----------------|---|-------------------------------|
| Test: Durability of markings  | Standard       | IEC 61984 section 6.2 and 7.3.2 / 10.11   |                               |
|                               | Test           | mark of origin, type identification, type of material, approval marking UL, approval marking CSA, durability, pitch, date clock |                               |
|                               | Evaluation     | available   |                               |
| Test: Clampable cross section | Standard       | IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 03.11  |                               |
|                               | 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 2.5 mm <sup>2</sup>     |
|                               |                | Type of conductor and conductor cross-section   | stranded 2.5 mm <sup>2</sup>  |
|                               |                | Type of conductor and conductor cross-section   | AWG 26/1                      |

Technical data

|   |                |   |           |  |
|---|----------------|---|-----------|--|
| Test for damage to and accidental loosening of conductors |                | Type of conductor and conductor cross-section | AWG26/19  |  |
|   |                | Type of conductor and conductor cross-section | AWG 14/1  |  |
|   |                | Type of conductor and conductor cross-section | AWG 12/19 |  |
|   | Evaluation     | passed  |           |  |
|   | Standard       | IEC 60999-1 section 9.4 / 11.99               |           |  |
|   | Requirement    | 0.3 kg  |           |  |
|   | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |  |
|   |                | Type of conductor and conductor cross-section | H05V-K0.5 |  |
|   | Evaluation     | passed  |           |  |
|   | Requirement    | 0.7 kg  |           |  |
| Pull-out test   | Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 |  |
|   |                | Type of conductor and conductor cross-section | H07V-K2.5 |  |
|   | Evaluation     | passed  |           |  |
|   | Standard       | IEC 60999-1 section 9.5 / 11.99               |           |  |
|   | Requirement    | ≥20 N   |           |  |
|   | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |  |
|   |                | Type of conductor and conductor cross-section | H05V-K0.5 |  |
|   | Evaluation     | passed  |           |  |
|   | Requirement    | ≥50 N   |           |  |
|   | Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 |  |
| Type of conductor and conductor cross-section             |                | H07V-K2.5                                     |           |  |
| 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. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

- Notes
- Additional variants on request
  - Rated current related to rated cross-section & min. No. of poles.
  - Wire end ferrule without plastic collar to DIN 46228/1
  - Wire end ferrule with plastic collar to DIN 46228/4
  - 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.
  - The test point can only be used as potential-pickup point.
  - Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

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## Technical data

### 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 |             |             |

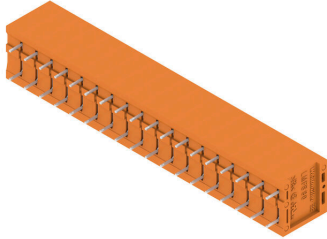
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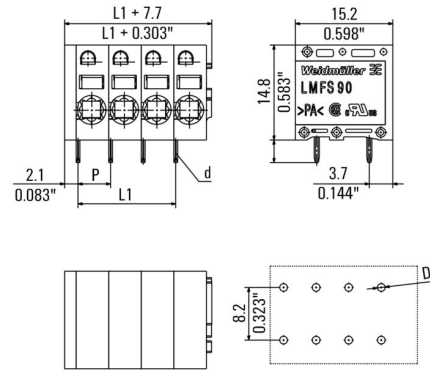
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Drawings

Product image



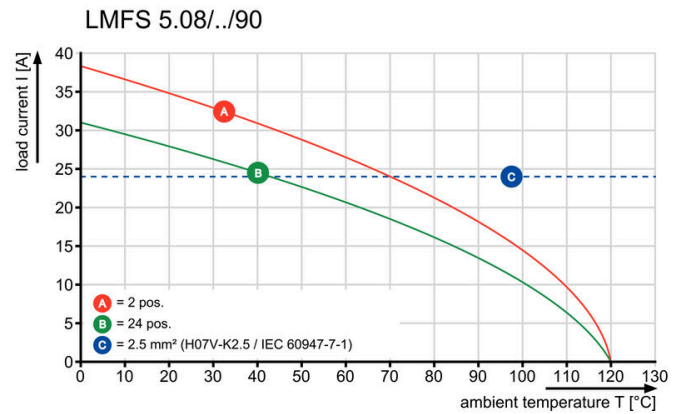
Dimensional drawing



Graph



Graph



**Drawings**

**Product benefits**



Optional conductor outlet  
directionStable mechanical design

**Product benefits**



High reliability of the current capacity

**Product benefits**



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

**Product benefits**



Maintenance through test point