

## LMZFL 10/3/135 3.5SW

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26  
D-32758 Detmold  
Germany

www.weidmueller.com



The compact installation terminal for the standard wire cross-section size of 2.5mm<sup>2</sup>.

Tension clamp connection with a 135° outlet direction, in variable pitch: 10.00 - 10.16 mm (1 part with 2 pitches).

Rated data:

- 24A at 40°C / 1000V (IEC) or 15A / 300V (UL)
- 0.13 - 2.5 mm<sup>2</sup> (IEC) / 26 - 14 AWG (UL)
- Flammability class according to UL 94: V0

Application benefits:

- Safe: ATEX certification Ex II 2GD / Ex e II (KEMA07 ATAEX0047U) optional
- Temperature resistant: long-term resistance up to 120°C provided by high-performance Wemid insulation material
- Adaptable: simple pitch adaptation from 10.00 to 10.16 mm (0.400 inch)
- Convenient: optional lever for simple opening of terminal point

### General ordering data

|              |   |
|--------------|---|
| Version      | Printed circuit board terminals, 10.00 mm, Number of poles: 3, 135°, Solder pin length (l): 3.5 mm, tinned, black, Tension clamp connection with actuator, Clamping range, max. : 2.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1953590000</a>  |
| Type         | LMZFL 10/3/135 3.5SW  |
| GTIN (EAN)   | 4032248662838   |
| Qty.         | 100 items   |
| Product data | IEC: 1000 V / 24 A / 0.13 - 2.5 mm <sup>2</sup><br>UL: 300 V / 15 A / AWG 26 - AWG 14   |
| 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                    | 15.6 mm     | Depth (inches)  | 0.6142 inch |
| Height                   | 20.24 mm    | Height (inches) | 0.7968 inch |
| Height of lowest version | 16.74 mm    | Width           | 32.9 mm     |
| Width (inches)           | 1.2953 inch | Net weight      | 5.25 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 LMZF | Wire connection method                     | Tension clamp connection with actuator |
| Mounting onto the PCB                        | THT solder connection         | Conductor outlet direction                 | 135°                                   |
| Pitch in mm (P)                              | 10.00 mm                      | Pitch in inches (P)                        | 0.394 "                                |
| Number of poles                              | 3                             | Pin series quantity                        | 1                                      |
| Fitted by customer                           | No                            | Number of rows                             | 1                                      |
| Max. adjacent poles per row                  | 12                            | Solder pin length (l)                      | 3.5 mm                                 |
| Solder pin dimensions                        | 0.8 x 0.8 mm                  | Solder eyelet hole diameter (D)            | 1.3 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-A                             |
| Stripping length                             | 6 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                                   |

## Material data

|                                       |            |                                       |                  |
|---------------------------------------|------------|---------------------------------------|------------------|
| Insulating material                   | Wemid (PA) | Colour                                | black            |
| Colour chart (similar)                | RAL 9011   | Insulating material group             | I                |
| Comparative Tracking Index (CTI)      | ≥ 600      | Moisture Level (MSL)                  |                  |
| UL 94 flammability rating             | V-0        | Contact material                      | Copper alloy     |
| Contact surface                       | tinned     | Coating                               | 4-10 µm SN       |
| Tinning type                          | matt       | Layer structure of solder connection  | 5...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.                    | 0.13 mm <sup>2</sup> |
| Clamping range, max.                    | 2.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min. | AWG 26               |

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|   |                      |
|---|----------------------|
| Wire connection cross section AWG, max.         | AWG 14               |
| Solid, min. H05(07) V-U                         | 0.13 mm <sup>2</sup> |
| Solid, max. H05(07) V-U                         | 2.5 mm <sup>2</sup>  |
| Flexible, min. H05(07) V-K                      | 0.13 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. | 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>  |

| Clampable conductor                    | Cross-section for conductor connection | Type                         | fine-wired                   |
|--|--|------------------------------|------------------------------|
|  |  | nominal                      | 0.5 mm <sup>2</sup>          |
| wire end ferrule                       | wire end ferrule                       | Stripping length             | nominal 8 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/12 OR</a>   |
|  |  | Stripping length             | nominal 6 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/6</a>       |
| Cross-section for conductor connection | wire end ferrule                       | Type                         | fine-wired                   |
|  |  | nominal                      | 0.75 mm <sup>2</sup>         |
|  |  | Stripping length             | nominal 8 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/12 W</a>   |
| Cross-section for conductor connection | wire end ferrule                       | Stripping length             | nominal 6 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/6</a>      |
|  |  | Type                         | fine-wired                   |
|  |  | nominal                      | 1 mm <sup>2</sup>            |
| Cross-section for conductor connection | wire end ferrule                       | Stripping length             | nominal 8 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H1.0/12 GE</a>   |
|  |  | Stripping length             | nominal 6 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H1.0/6</a>       |
| Cross-section for conductor connection | wire end ferrule                       | Type                         | fine-wired                   |
|  |  | nominal                      | 0.25 mm <sup>2</sup>         |
|  |  | Stripping length             | nominal 8 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.25/10 HBL</a> |
| Cross-section for conductor connection | wire end ferrule                       | Stripping length             | nominal 5 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.25/5</a>      |
|  |  | Type                         | fine-wired                   |
|  |  | nominal                      | 0.34 mm <sup>2</sup>         |
| Cross-section for conductor connection | wire end ferrule                       | Stripping length             | nominal 8 mm                 |
|  |  | Recommended wire-end ferrule | <a href="#">H0.34/10 TK</a>  |
|  |  | Stripping length             | nominal 5 mm                 |

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) | 24 A |
| Rated current, max. number of poles (Tu=20°C) | 24 A                   | Rated current, min. number of poles (Tu=40°C) | 24 A |

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|   |        |   |        |
|---|--------|---|--------|
| Rated current, max. number of poles (Tu=40°C)                             | 24 A   | Rated voltage for surge voltage class / pollution degree II/2         | 1000 V |
| Rated voltage for surge voltage class / pollution degree III/2            | 1000 V | Rated voltage for surge voltage class / pollution degree III/3        | 500 V  |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 8 kV   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 8 kV   |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 8 kV   |   |        |

### Rated data acc. to CSA

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V  | Rated voltage (Use group C / CSA) | 150 V  |
| Rated voltage (Use group D / CSA) | 300 V  | Rated current (Use group B / CSA) | 15 A   |
| Rated current (Use group C / CSA) | 15 A   | Rated current (Use group D / CSA) | 10 A   |
| Wire cross-section, AWG, min.     | AWG 26 | Wire cross-section, AWG, max.     | AWG 14 |

### 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 C / UL 1059) | 150 V  |
| Rated voltage (Use group D / UL 1059) | 300 V  | Rated current (Use group B / UL 1059) | 15 A   |
| Rated current (Use group C / UL 1059) | 15 A   | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 26 | Wire cross-section, AWG, max.         | AWG 14 |

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

### Packing

|           |           |            |           |
|-----------|-----------|------------|-----------|
| Packaging | Box       | VPE length | 50.00 mm  |
| VPE width | 135.00 mm | VPE height | 230.00 mm |

### Type tests

|                               |                |  |                               |  |
|-------------------------------|----------------|--|-------------------------------|--|
| Test: Durability of markings  | Standard       | DIN EN 60512-1-1 / 01.03   |                               |  |
|                               | Test           | mark of origin, type identification, type of material, approval marking UL, approval marking CSA, 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 0,13 mm <sup>2</sup>    |  |
|                               |                | Type of conductor and conductor cross-section  | flexible 0,13 mm <sup>2</sup> |  |
|                               |                | Type of conductor and conductor cross-section  | flexible 0,13 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 | AWG 26/19                    |
|   |   | Type of conductor and conductor cross-section | AWG 14/1                     |
|   |   | Type of conductor and conductor cross-section | AWG 14/19                    |
|   | Evaluation                                    | passed  |                              |
|   | Standard                                      | DIN EN 60999-1 section 9.4 / 12.00            |                              |
|   | Requirement                                   | 0.2 kg  |                              |
|   | Conductor type                                | Type of conductor and conductor cross-section | AWG 26/1                     |
|   |   | Type of conductor and conductor cross-section | AWG 26/19                    |
|   | Evaluation                                    | passed  |                              |
|   | Requirement                                   | 0.3 kg  |                              |
|   | Conductor type                                | Type of conductor and conductor cross-section | solid 0.5 mm <sup>2</sup>    |
|   |   | Type of conductor and conductor cross-section | stranded 0.5 mm <sup>2</sup> |
| Evaluation  | passed  |   |                              |
| Requirement   | 0.7 kg  |   |                              |
| Conductor type  | 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>                  |                              |
| Evaluation  | passed  |   |                              |
| Requirement   | 0.9 kg  |   |                              |
| Conductor type  | Type of conductor and conductor cross-section | AWG 14/1                                      |                              |
|   | Type of conductor and conductor cross-section | AWG 14/19                                     |                              |
| 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 26/1                     |
|   |   | Type of conductor and conductor cross-section | AWG 26/19                    |
|   | Evaluation                                    | passed  |                              |
|   | 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   |                              |

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|                |   |           |
|----------------|---|-----------|
| Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 |
|                | Type of conductor and conductor cross-section | H07V-K2.5 |
|                | Type of conductor and conductor cross-section | AWG 14/1  |
|                | Type of conductor and conductor cross-section | AWG 14/19 |
| 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. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

- Notes**
- 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.
  - 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 |             |             |

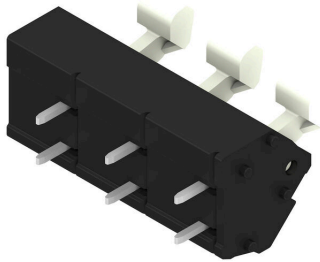
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Drawings

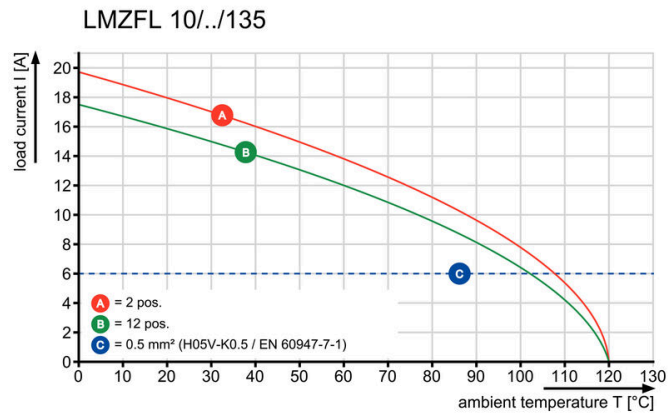
Product image



Dimensional drawing



Graph



Graph

