

**LM2NZF 5.08/18/135 3.5SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

The high-performance device interface with a high connection density, for standard 2.5mm<sup>2</sup> cross-section wires.

Multi-tier PCB terminal in 5.08 mm pitch, with the maintenance-free tension clamp connection in 135° outlet direction.

Rated data:

- 15A / 630V (IEC) or 10A / 300V (UL)
- 0.20 - 2.5mm<sup>2</sup> (IEC) / 26 - 14 AWG (UL)
- Flammability class according to UL 94: V2

Application benefits:

- Simple change of connection method - layout is compatible with multi-tier screw terminals.

**General ordering data**

|              |                                                                                                                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | Printed circuit board terminals, 5.08 mm, Number of poles: 18, 135°, Solder pin length (l): 3.5 mm, orange, Tension-clamp connection, Clamping range, max.: 2.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1764880000</a>                                                                                                                                                            |
| Type         | LM2NZF 5.08/18/135 3.5SN OR BX                                                                                                                                                        |
| GTIN (EAN)   | 4032248103119                                                                                                                                                                         |
| Qty.         | 20 pc(s).                                                                                                                                                                             |
| Product data | IEC: 630 V / 15 A / 0.2 - 2.5 mm <sup>2</sup><br>UL: 300 V / 10 A / AWG 24 - AWG 14                                                                                                   |
| Packaging    | Box                                                                                                                                                                                   |

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 24.05 mm   | Depth (inches)  | 0.947 inch |
| Height                   | 29.1 mm    | Height (inches) | 1.146 inch |
| Height of lowest version | 25.6 mm    | Width           | 46.42 mm   |
| Width (inches)           | 1.828 inch | Net weight      | 25.45 g    |

## System parameters

|                                              |                               |                                            |                          |
|----------------------------------------------|-------------------------------|--------------------------------------------|--------------------------|
| Product family                               | OMNIMATE Signal - series LMZF | Wire connection method                     | Tension-clamp connection |
| Mounting onto the PCB                        | THT solder connection         | Conductor outlet direction                 | 135°                     |
| Pitch in mm (P)                              | 5.08 mm                       | Pitch in inches (P)                        | 0.2 inch                 |
| Number of poles                              | 18                            | Pin series quantity                        | 2                        |
| Fitted by customer                           | No                            | Solder pin length (l)                      | 3.5 mm                   |
| Solder pin dimensions                        | 0.7 x 1.0 mm                  | Solder eyelet hole diameter (D)            | 1.3 mm                   |
| Solder eyelet hole diameter tolerance (D)+   | 0.1 mm                        | Number of solder pins per pole             | 1                        |
| Screwdriver blade                            | 0.6 x 3.5                     | Screwdriver blade standard                 | DIN 5264-A               |
| Stripping length                             | 7.5 mm                        | L1 in mm                                   | 40.64 mm                 |
| L1 in inches                                 | 1.6 inch                      | 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                            | 2.10 mΩ                       |                                            |                          |

## Material data

|                                       |          |                                       |        |
|---------------------------------------|----------|---------------------------------------|--------|
| Insulating material                   | PA       | Colour                                | orange |
| Colour chart (similar)                | RAL 2000 | Insulating material group             | I      |
| Comparative Tracking Index (CTI)      | ≥ 600    | UL 94 flammability rating             | V-0    |
| Storage temperature, min.             | -40 °C   | Storage temperature, max.             | 70 °C  |
| Operating temperature, min.           | -50 °C   | Operating temperature, max.           | 100 °C |
| Temperature range, installation, min. | -25 °C   | Temperature range, installation, max. | 100 °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 24               |
| 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                                              | 2.5 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, 1.5 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>  |
| Plug gauge in accordance with EN 60999 a x b; ø                      | 2.4 mm x 1.5 mm      |

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|                     |                                                                                                                                                                        |                              |                        |      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------|------|
| Clampable conductor | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired             |      |
|                     |                                                                                                                                                                        | nominal                      | 1.5 mm²                |      |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                | 7 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H1.5/7</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, max. number of poles (Tu=20°C)                             | 12 A                   | Rated current, min. number of poles (Tu=20°C)                         | 15 A  |  |
| Rated current, max. number of poles (Tu=40°C)                             | 10 A                   | Rated current, min. number of poles (Tu=40°C)                         | 13 A  |  |
| Rated voltage for surge voltage class / pollution degree III/2            | 320 V                  | Rated voltage for surge voltage class / pollution degree II/2         | 630 V |  |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 4 kV                   | Rated voltage for surge voltage class / pollution degree III/3        | 250 V |  |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV                   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV  |  |

## 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) | 10 A   | Rated current (Use group D / CSA) | 10 A   |
| Wire cross-section, AWG, min.     | AWG 24 | Wire cross-section, AWG, max.     | AWG 14 |

## Rated data acc. to UL 1059

|                                       |        |                                       |        |
|---------------------------------------|--------|---------------------------------------|--------|
| 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) | 10 A   | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 24 | Wire cross-section, AWG, max.         | AWG 14 |

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 184 mm |
| VPE width | 110 mm | VPE height | 39 mm  |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | 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 |             |             |

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## 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>Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>Wire end ferrule without plastic collar to DIN 46228/1</li> <li>Wire end ferrule with plastic collar to DIN 46228/4</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>Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |

## Approvals

Approvals



ROHS

Conform

## Downloads

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Engineering Data                            | <a href="#">STEP</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Brochures                                   | <a href="#">FL DRIVES EN</a><br><a href="#">FL ANALO.SIGN.CONV. EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FL INDUSTR.CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL BASE STATION EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a><br><a href="#">PO OMNIMATE EN</a> |

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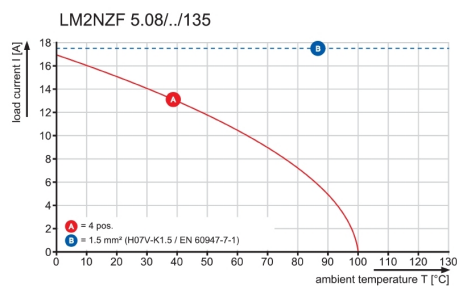
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings

## Dimensional drawing

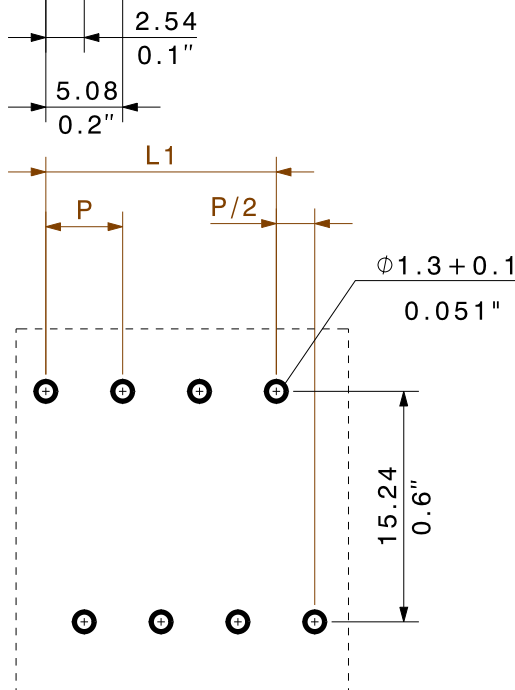
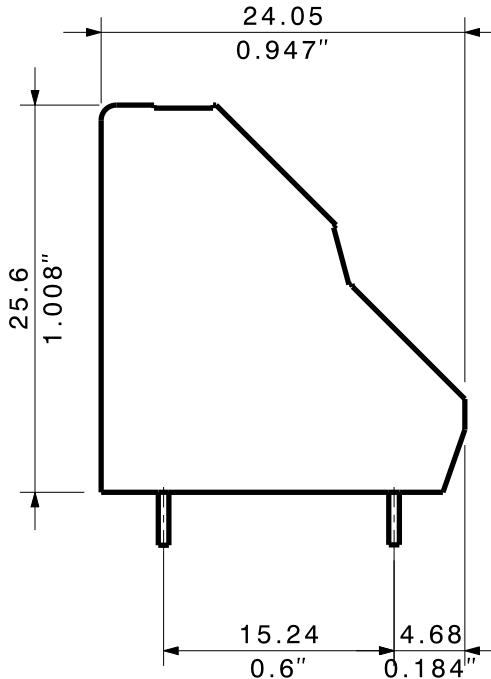
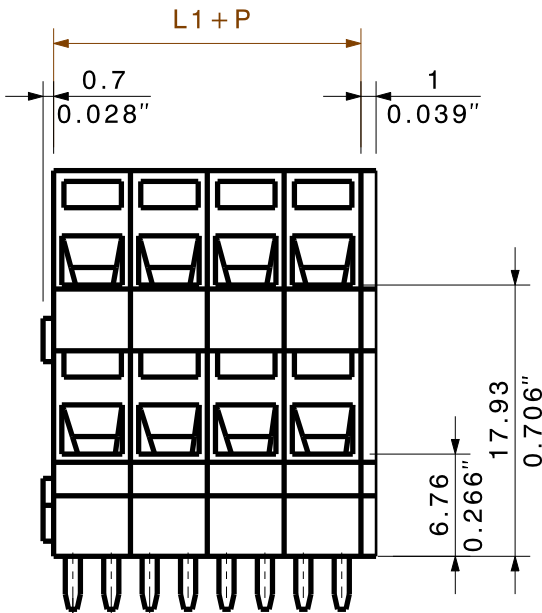


## Graph



MASSE OHNE TOLERANZ SIND KEINE PRUEFFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



HOLE PATTERN

P=RASTER/PITCH=5.08  
SHOWN: LM2NZF 5.08/08/135

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

|                            |                   |
|----------------------------|-------------------|
| 64                         | 106,68            |
| 60                         | 101,60            |
| 40                         | 96,52             |
| 38                         | 91,44             |
| 36                         | 86,36             |
| 34                         | 81,28             |
| 32                         | 76,20             |
| 30                         | 71,12             |
| 28                         | 66,04             |
| 26                         | 60,96             |
| 24                         | 55,88             |
| 22                         | 50,80             |
| 20                         | 45,72             |
| 18                         | 40,64             |
| 16                         | 35,56             |
| 14                         | 30,48             |
| 12                         | 25,40             |
| 10                         | 20,32             |
| 8                          | 15,24             |
| 6                          | 10,16             |
| 4                          | 5,08              |
| POL-ZAHL<br>NO OF<br>POLES | MASS L1<br>DIM L1 |

METRIC TOLERANCES:

X. = ±0.3  
X.X = ±0.1  
X.XX = ±0.05

68997/5  
28.02.13 HELIS\_MA 01

MODIFICATION



DRAWN DATE NAME

RESPONSIBLE KRUG\_M

CHECKED 28.02.2013 HECKERT\_M

APPROVED HECKERT\_M

SCALE: 2/1

SUPERSEDES: .

Weidmüller

CAT.NO.: .  
C 27770 11

DRAWING NO. SHEET 01 OF 01 SHEETS  
ISSUE NO.

LM2NZF 5.08/./135...  
LEITERPLATTENANSCHLUSSKLEMME  
PCB-TERMINAL

PRODUCT FILE: LM2NZF 5.08

7195

## Recommended wave soldering profiles

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

### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of  $260 \text{ }^{\circ}\text{C}$ . In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.