

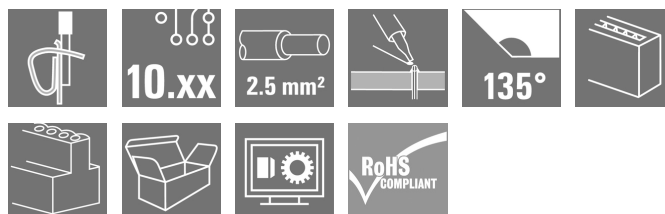
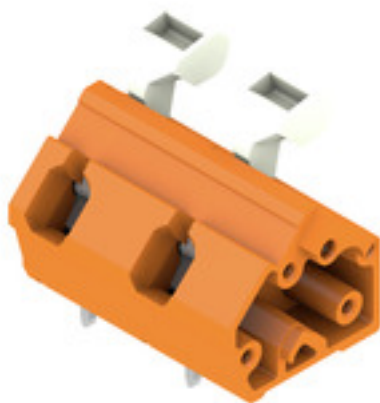
**LMZFL 10/2/135 3.5OR****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

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: 2, 135°, Solder pin length (l): 3.5 mm, tinned, orange, Tension clamp connection with actuator, Clamping range, max. : 2.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1953930000</a>                                                                                                                                                                                   |
| Type         | LMZFL 10/2/135 3.5OR                                                                                                                                                                                         |
| GTIN (EAN)   | 4032248662784                                                                                                                                                                                                |
| Qty.         | 100 pc(s).                                                                                                                                                                                                   |
| 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

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 15.6 mm    | Depth (inches)  | 0.614 inch |
| Height                   | 20.24 mm   | Height (inches) | 0.797 inch |
| Height of lowest version | 16.74 mm   | Width           | 22.9 mm    |
| Width (inches)           | 0.902 inch | Net weight      | 3.876 g    |

## 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 mm                         | Pitch in inches (P)                        | 0.394 "                                |
| Number of poles                              | 2                             | 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                                   | 10 mm                                  |
| L1 in inches                                 | 0.394 "                       | 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         | Insulating material group             | I      |
| Comparative Tracking Index (CTI)      | ≥ 600            | 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               |
| 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>  |

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## Technical data

|                     |                                                                                                                                                                        |                              |                              |      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------|------|
| Clampable conductor | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                     |                                                                                                                                                                        | nominal                      | 0.5 mm <sup>2</sup>          |      |
|                     | 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                                                                                                                                 | Type                         | fine-wired                   |      |
|                     |                                                                                                                                                                        | nominal                      | 0.75 mm <sup>2</sup>         |      |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.75/12 W</a>   |      |
|                     |                                                                                                                                                                        | Stripping length             | nominal                      | 6 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.75/6</a>      |      |
|                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                     |                                                                                                                                                                        | nominal                      | 1 mm <sup>2</sup>            |      |
|                     | 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                                                                                                                                 | Type                         | fine-wired                   |      |
|                     |                                                                                                                                                                        | nominal                      | 0.25 mm <sup>2</sup>         |      |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.25/10 HBL</a> |      |
|                     |                                                                                                                                                                        | Stripping length             | nominal                      | 5 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.25/5</a>      |      |
|                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                   |      |
|                     |                                                                                                                                                                        | nominal                      | 0.34 mm <sup>2</sup>         |      |
|                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal                      | 8 mm |
|                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.34/10 TK</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, 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         |  | 1,000 V |
| Rated voltage for surge voltage class / pollution degree III/2            |  | 1,000 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                   |  |                                                                       |  |         |

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## Technical data

## 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)



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 | 278 mm |
| VPE width | 162 mm | VPE height | 60 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                                                                                                    |

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|                                                           |                |                                                                                    |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------|
| 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 solid 0,13 mm <sup>2</sup> conductor cross-section           |
|                                                           |                | Type of conductor and flexible 0,13 mm <sup>2</sup> conductor cross-section        |
|                                                           |                | Type of conductor and flexible 0,13 mm <sup>2</sup> conductor cross-section        |
|                                                           |                | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section            |
|                                                           |                | Type of conductor and stranded 2.5 mm <sup>2</sup> conductor cross-section         |
|                                                           |                | Type of conductor and AWG 26/1 conductor cross-section                             |
|                                                           |                | Type of conductor and AWG 26/19 conductor cross-section                            |
|                                                           |                | Type of conductor and AWG 14/1 conductor cross-section                             |
|                                                           |                | Type of conductor and AWG 14/19 conductor cross-section                            |
|                                                           | 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 AWG 26/1 conductor cross-section                             |
|                                                           |                | Type of conductor and AWG 26/19 conductor cross-section                            |
|                                                           | Evaluation     | passed                                                                             |
|                                                           | Requirement    | 0.3 kg                                                                             |
|                                                           | Conductor type | Type of conductor and solid 0.5 mm <sup>2</sup> conductor cross-section            |
|                                                           |                | Type of conductor and stranded 0.5 mm <sup>2</sup> conductor cross-section         |
|                                                           | Evaluation     | passed                                                                             |
|                                                           | Requirement    | 0.7 kg                                                                             |
|                                                           | Conductor type | Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section            |
|                                                           |                | Type of conductor and stranded 2.5 mm <sup>2</sup> conductor cross-section         |
|                                                           | Evaluation     | passed                                                                             |
|                                                           | Requirement    | 0.9 kg                                                                             |
|                                                           | Conductor type | Type of conductor and AWG 14/1 conductor cross-section                             |
|                                                           |                | Type of conductor and AWG 14/19 conductor cross-section                            |
|                                                           | Evaluation     | passed                                                                             |

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|               |                |                                                         |
|---------------|----------------|---------------------------------------------------------|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00                      |
|               | Requirement    | ≥10 N                                                   |
|               | Conductor type | Type of conductor and AWG 26/1 conductor cross-section  |
|               |                | Type of conductor and AWG 26/19 conductor cross-section |
|               | Evaluation     | passed                                                  |
|               | Requirement    | ≥20 N                                                   |
|               | Conductor type | Type of conductor and H05V-U0.5 conductor cross-section |
|               |                | Type of conductor and H05V-K0.5 conductor cross-section |
|               | Evaluation     | passed                                                  |
|               | Requirement    | ≥50 N                                                   |
|               | Conductor type | Type of conductor and H07V-U2.5 conductor cross-section |
|               |                | Type of conductor and H07V-K2.5 conductor cross-section |
|               |                | Type of conductor and AWG 14/1 conductor cross-section  |
|               |                | Type of conductor and AWG 14/19 conductor cross-section |
|               | Evaluation     | passed                                                  |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | EC002643    | ETIM 9.0    | EC002643    |
| ETIM 10.0   | 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 | ECLASS 12.0 | 27-46-01-01 |
| ECLASS 13.0 | 27-46-01-01 | ECLASS 14.0 | 27-46-01-01 |
| ECLASS 15.0 | 27-46-01-01 |             |             |

## Environmental Product Compliance

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

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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 maximum humidity 70%, 36 months</li> </ul> |

## Approvals

Approvals



|                         |                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                     |
| UL File Number Search   | UL Website                                                                                                                                                                  |
| Certificate No. (cURus) | E60693                                                                                                                                                                      |

## Downloads

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Engineering Data                            | <a href="#">CAD data – STEP</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Product Change Notification                 | <a href="#">Material changeover of the levers in the LMZFL product family</a><br><a href="#">Änderung der Schichtdicke an der LMZF(L)</a><br><a href="#">Change in layer thickness at the LMZF(L)</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> |

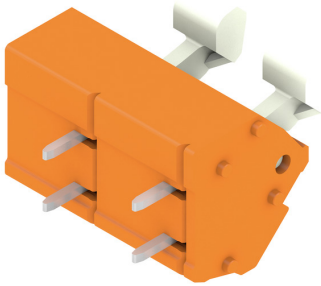
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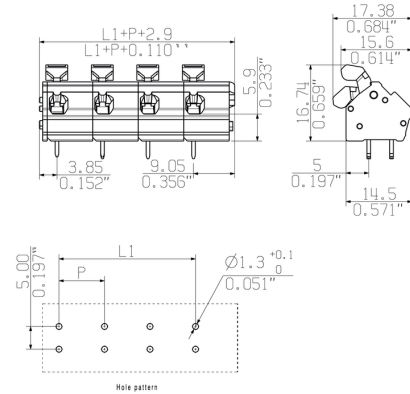
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## Drawings

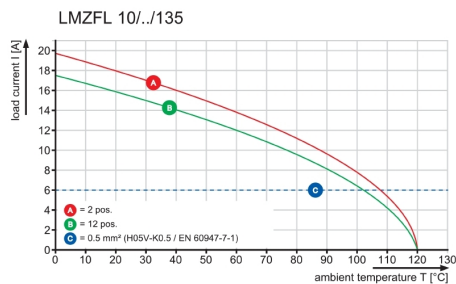
### Product image



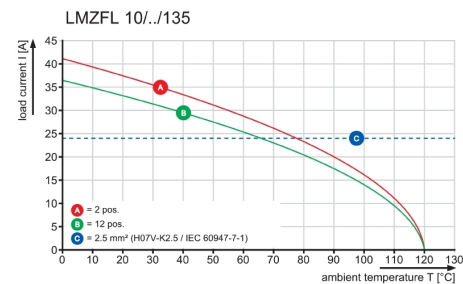
### Dimensional drawing



### Graph



### Graph



## Recommended wave soldering profiles

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### 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°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.