# LM 5.00/02/90 3.5SN GN BX

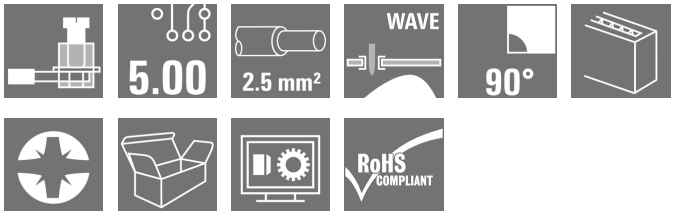
**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image



Similar to illustration




PCB terminal with proven clamping yoke connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°, 135° and 180°. Suitable for conductor cross-sections up to 2.5 mm².

### General ordering data

| | |
|---|---|
| Version | Printed circuit board terminals, 5.00 mm, Number of poles: 2, 90°, Solder pin length (l): 3.5 mm, tinned, Pale green, Clamping yoke connection, Clamping range, max. : 2.5 mm², Box |
| Order No. | 1715370000 |
| Type | LM 5.00/02/90 3.5SN GN BX |
| GTIN (EAN) | 4008190365257 |
| Qty. | 174 pc(s). |
| Product data | IEC: 630 V / 17.5 A / 0.2 - 2.5 mm²<br>UL: 300 V / 15 A / AWG 24 - AWG 14 |
| Packaging | Box |

Creation date October 11, 2022 7:31:22 PM CEST

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## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 10 mm | Depth (inches) | 0.394 inch |
| Height | 17.3 mm | Height (inches) | 0.681 inch |
| Height of lowest version | 13.8 mm | Width | 10.55 mm |
| Width (inches) | 0.415 inch | Net weight | 2.416 g |

### System parameters

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Signal - series LM | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 5 mm | Pitch in inches (P) | 0.197 inch |
| Number of poles | 2 | Pin series quantity | 1 |
| Fitted by customer | Yes | Max. adjacent poles per row | 24 |
| Solder pin length (l) | 3.5 mm | Solder pin dimensions | 0.95 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 | 1 | Screwdriver blade | 0.6 x 3.5 |
| Screwdriver blade standard | DIN 5264 | Tightening torque, min. | 0.4 Nm |
| Tightening torque, max. | 0.5 Nm | Clamping screw | M 2.5 |
| Stripping length | 6 mm | L1 in mm | 5 mm |
| L1 in inches | 0.197 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 | 1.20 mΩ | | |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | Wemid (PA) | Colour | Pale green |
| Colour chart (similar) | RAL 6021 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Insulation strength | ≥ $10^8$ Ω |
| UL 94 flammability rating | V-0 | Contact material | Copper alloy |
| Contact surface | tinned | Coating | 1-3 µm Ni, 4-6 µm SN |
| Tinning type | matt | Layer structure of solder connection | 1...3 µm Ni / 4...6 µm Sn matt |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -50 °C | Operating temperature, max. | 120 °C |
| Temperature range, installation, min. | -25 °C | Temperature range, installation, max. | 120 °C |

### Conductors suitable for connection

| | |
|---|---|
| Clamping range, min. | 0.2 mm² |
| Clamping range, max. | 2.5 mm² |
| Wire connection cross section AWG, min. | AWG 24 |
| Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.2 mm² |
| Solid, max. H05(07) V-U | 2.5 mm² |
| Flexible, min. H05(07) V-K | 0.2 mm² |
| Flexible, max. H05(07) V-K | 2.5 mm² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm² |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 1.5 mm² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.25 mm² |

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## Technical data

| | | | |
|---|---|---|---|
| w. wire end ferrule, DIN 46228 pt 1, max. | 1.5 mm² | | |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm; 1.9mm | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.5 mm² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0,5/12 OR |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H0,5/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.75 mm² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0,75/12 W |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H0,75/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 1 mm² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H1,0/12 GE |
| | | Stripping length | nominal 6 mm |
| | | Recommended wire-end ferrule | H1,0/6 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.25 mm² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0,25/10 HBL |
| | | Stripping length | nominal 5 mm |
| | | Recommended wire-end ferrule | H0,25/5 |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.34 mm² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0,34/10 TK |
| 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) | 17.5 A |
| Rated current, max. number of poles (Tu=20°C) | 16 A | Rated current, min. number of poles (Tu=40°C) | 17.5 A |
| Rated current, max. number of poles (Tu=40°C) | 14.2 A | Rated voltage for surge voltage class / pollution degree II/2 | 630 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 |

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## Technical data

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | | Certificate No. (CSA) | 200039-1815154 |
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group B / CSA) | 18 A | Rated current (Use group D / CSA) | 10 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 14 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### 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 D / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 15 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 14 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 45 mm |
| VPE width | 135 mm | VPE height | 330 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 | ECLASS 12.0 | 27-46-01-01 |

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## Technical data

### 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.<br>• Wire end ferrule without plastic collar to DIN 46228/1<br>• Wire end ferrule with plastic collar to DIN 46228/4<br>• The data given under CSA relates to a cUL approval - E60693<br>• P on drawing = pitch<br>• 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.<br>• It is necessary to hold the insulating body of the one or two pole terminal when tightening the screw<br>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months |

### Approvals

| | |
|---|---|
| Approvals | |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E60693 |

### Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| Engineering Data | WSCAD |
| Product Change Notification | 20211116 Änderung der Verpackung LL 5.0x and LM 5.0x<br>20211116 Change of packaging to LL 5.0x and LM 5.0x |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN<br>FL ANALO.SIGN.CONV. EN<br>MB DEVICE MANUF. EN<br>FL DRIVES DE<br>FL BUILDING SAFETY EN<br>FL APPL LED LIGHTING EN<br>FL INDUSTR.CONTROLS EN<br>FL MACHINE SAFETY EN<br>FL HEATING ELECTR EN<br>FL APPL_INVERTER EN<br>FL_BASE_STATION_EN<br>FL ELEVATOR EN<br>FL POWER SUPPLY EN<br>FL 72H SAMPLE SER EN<br>PO OMNIMATE EN |

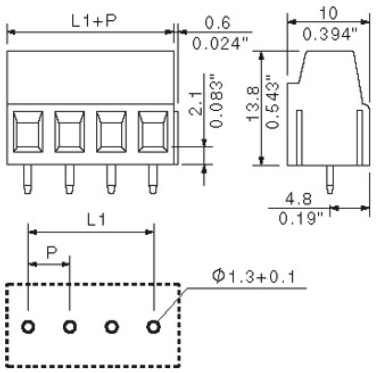
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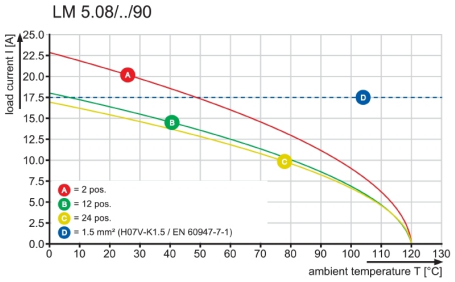
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## Drawings

### Dimensional drawing




### Graph

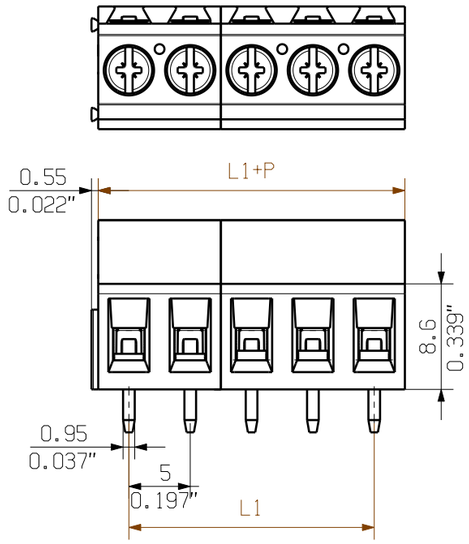


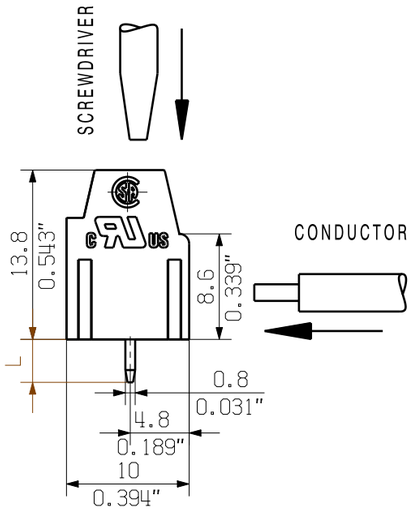

Derating curve valid for 5.00 & 5.08 pitch

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

WEITERGABE SOWIE VERVIELFAELTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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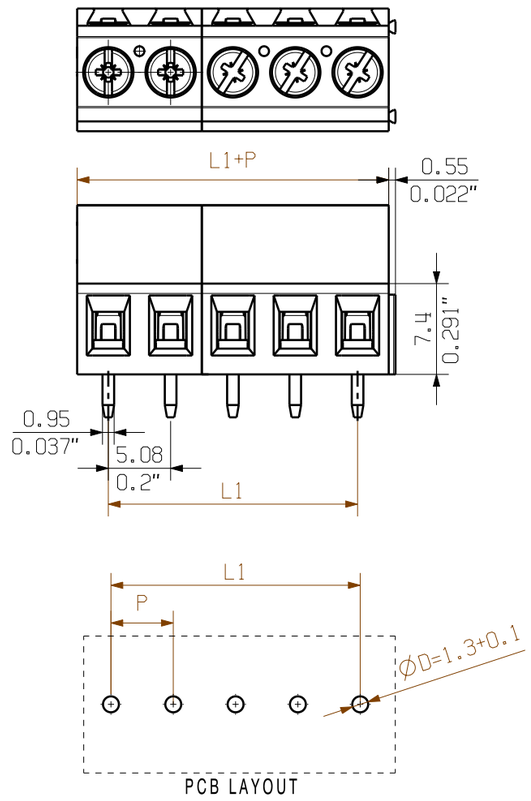
LM5.00/.../90...

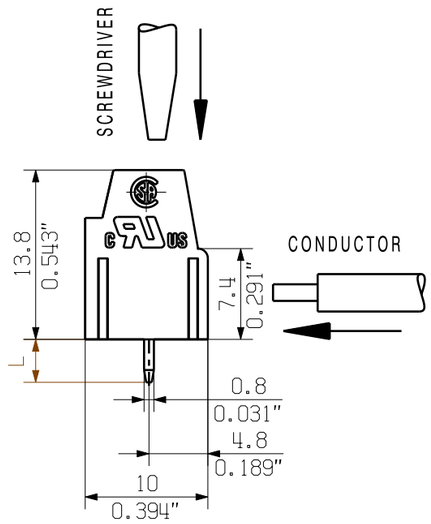



| STIFTLÄNGE L<br>PIN LENGTH L | TOLERANZ<br>TOLERANCE |
|---|---|
| 3.5 | 0.2<br>-0.2 |

LM5.08/.../90...




| N | L1 [mm] | L1 [inch] | L1 [mm] | L1 [inch] |
|---|---|---|---|---|
| | P=5.00 mm, 0.197inch | | P=5.08mm, 0.200 inch | |
| 24 | 115.00 | 4.528 | 116.84 | 4.600 |
| 23 | 110.00 | 4.331 | 111.76 | 4.400 |
| 22 | 105.00 | 4.134 | 106.68 | 4.200 |
| 21 | 100.00 | 3.937 | 101.60 | 4.000 |
| 20 | 95.00 | 3.740 | 96.52 | 3.800 |
| 19 | 90.00 | 3.543 | 91.44 | 3.600 |
| 18 | 85.00 | 3.346 | 86.36 | 3.400 |
| 17 | 80.00 | 3.150 | 81.28 | 3.200 |
| 16 | 75.00 | 2.953 | 76.20 | 3.000 |
| 15 | 70.00 | 2.756 | 71.12 | 2.800 |
| 14 | 65.00 | 2.559 | 66.04 | 2.600 |
| 13 | 60.00 | 2.362 | 60.96 | 2.400 |
| 12 | 55.00 | 2.165 | 55.88 | 2.200 |
| 11 | 50.00 | 1.969 | 50.80 | 2.000 |
| 10 | 45.00 | 1.772 | 45.72 | 1.800 |
| 9 | 40.00 | 1.575 | 40.64 | 1.600 |
| 8 | 35.00 | 1.378 | 35.56 | 1.400 |
| 7 | 30.00 | 1.181 | 30.48 | 1.200 |
| 6 | 25.00 | 0.984 | 25.40 | 1.000 |
| 5 | 20.00 | 0.787 | 20.32 | 0.800 |
| 4 | 15.00 | 0.591 | 15.24 | 0.600 |
| 3 | 10.00 | 0.394 | 10.16 | 0.400 |
| 2 | 5.00 | 0.197 | 5.08 | 0.200 |

KUNDENZEICHNUNG
CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.
The neccessary 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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE:
DIN ISO 2768-m

RoHS COMPLIANT

MAX. NRN./NOS.

76680/5
17.07.14 MA_J
00
MODIFICATION

CAT.NO.: .

Weidmüller

C 41708 10
DRAWING NO. ISSUE NO.

SHEET 01 OF 01 SHEETS

| | DATE | NAME |
|---|---|---|
| DRAWN | 30.03.2005 | XU_S |
| RESPONSIBLE | | WU_M |
| CHECKED | | ZHOU_N |
| APPROVED | | XU_S |

SCALE: 2/1

SUPERSEDES: .

# LM 5.../.../90 ...

LEITERPLATTENKLEMME
PCB TERMINAL

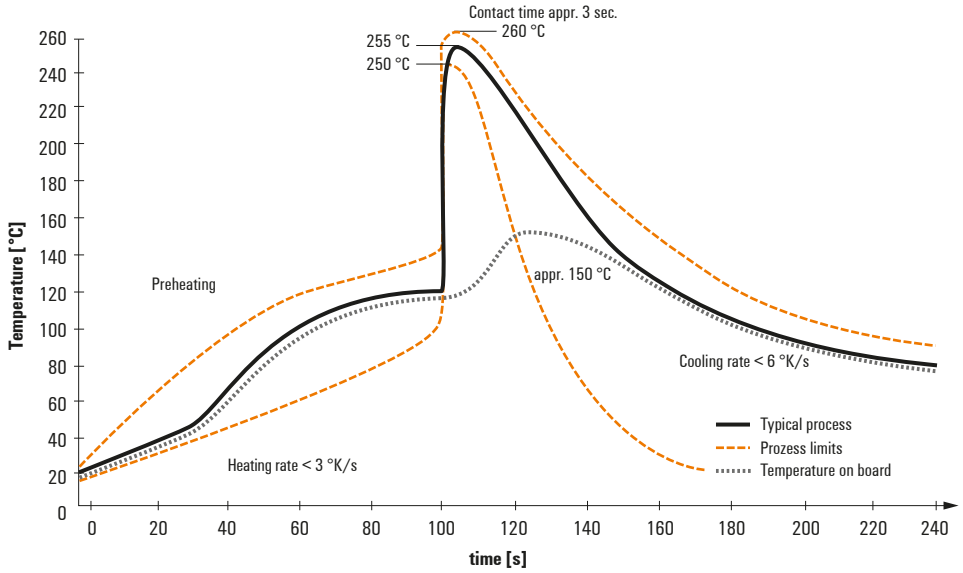
PRODUCT FILE: LM 7065

# Wave Solder Profile

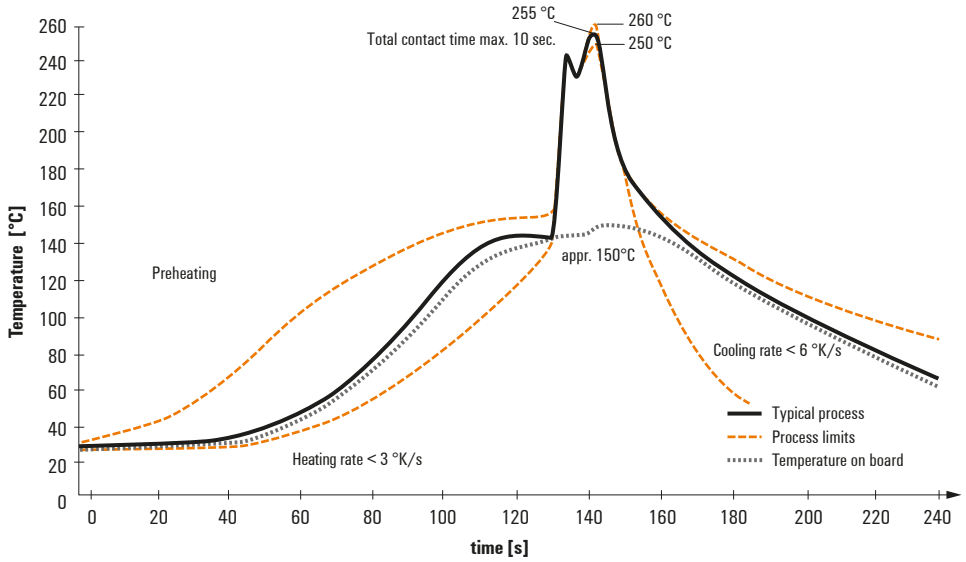
## Recommended wave solderding profiles

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Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
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°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.