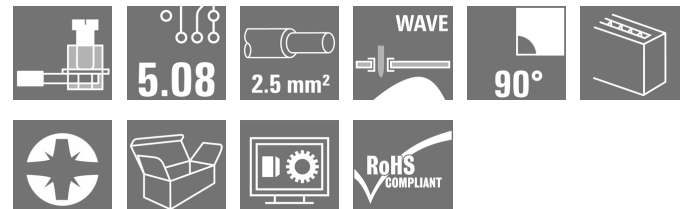


**OMNIMATE Signal - series LM**  
**LM 5.08/06/90 3.5SN OR BX**

**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)

**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**

|              |                                                                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type         | LM 5.08/06/90 3.5SN OR BX                                                                                                                                                    |
| Order No.    | <a href="#">9994150000</a>                                                                                                                                                   |
| Version      | Printed circuit board terminals, 5.08 mm, No. of poles: 6, 90°, Solder pin length (l): 3.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.5 mm², Box |
| GTIN (EAN)   | 4032248362134                                                                                                                                                                |
| Qty.         | 50 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                                                                                                                                                                          |

## OMNIMATE Signal - series LM

### LM 5.08/06/90 3.5SN OR BX

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## Technical data

### Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Width                    | 31.03 mm   | Width (inches)  | 1.222 inch |
| Height                   | 17.7 mm    | Height (inches) | 0.697 inch |
| Height of lowest version | 14.2 mm    | Depth           | 10 mm      |
| Depth (inches)           | 0.394 inch | Net weight      | 7.42 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)                            | 5.08 mm                     | Pitch in inches (P)                          | 0.2 inch                 |
| No. of poles                               | 6                           | 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                                   | 25.4 mm                     | L1 in inches                                 | 1 inch                   |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20                       | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch   |
| Volume resistance                          | 1.20 mΩ                     |                                              |                          |

### Material data

|                                       |            |                                       |                            |
|---------------------------------------|------------|---------------------------------------|----------------------------|
| Insulating material                   | Wemid (PA) | Colour                                | orange                     |
| Colour chart (similar)                | RAL 2000   | Insulating material group             | I                          |
| CTI                                   | ≥ 600      | Insulation strength                   | ≥ 10 <sup>8</sup> Ω        |
| UL 94 flammability rating             | V-0        | GWIT                                  | 960 °C                     |
| GWFI                                  | 960 °C     | 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.             | -25 °C     | Storage temperature, max.             | 55 °C                      |
| Max. relative humidity during storage | 80 %       | 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 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                                           | 2.5 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>        |                     |

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**Technical data**

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; 1.9mm

|                     |                                        |                  |                      |      |
|---------------------|----------------------------------------|------------------|----------------------|------|
| Clampable conductor | Cross-section for conductor connection | Type             | fine-wired           |      |
|                     |                                        | nominal          | 0.5 mm <sup>2</sup>  |      |
|                     | AEH                                    | Stripping length | nominal              | 8 mm |
|                     |                                        | Stripping length | nominal              | 6 mm |
|                     | Cross-section for conductor connection | Type             | fine-wired           |      |
|                     |                                        | nominal          | 0.75 mm <sup>2</sup> |      |
|                     | AEH                                    | Stripping length | nominal              | 8 mm |
|                     |                                        | Stripping length | nominal              | 6 mm |
|                     | Cross-section for conductor connection | Type             | fine-wired           |      |
|                     |                                        | nominal          | 1 mm <sup>2</sup>    |      |
|                     | AEH                                    | Stripping length | nominal              | 8 mm |
|                     |                                        | Stripping length | nominal              | 6 mm |
|                     | Cross-section for conductor connection | Type             | fine-wired           |      |
|                     |                                        | nominal          | 0.25 mm <sup>2</sup> |      |
|                     | AEH                                    | Stripping length | nominal              | 8 mm |
|                     |                                        | Stripping length | nominal              | 5 mm |
|                     | Cross-section for conductor connection | Type             | fine-wired           |      |
|                     |                                        | nominal          | 0.34 mm <sup>2</sup> |      |
|                     | AEH                                    | Stripping length | nominal              | 8 mm |

Max. clamping range 2.5 mm<sup>2</sup>

**Rated data acc. to IEC**

|                                                                           |                        |                                                                       |                   |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C)                            | 17.5 A            |
| Rated current, max. no. of poles (Tu=20°C)                                | 16 A                   | Rated current, min. no. of poles (Tu=40°C)                            | 17.5 A            |
| Rated current, max. no. 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 |

**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.              |                                   |                |

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**Technical data**
**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059) 300 V

Rated current (Use group B / UL 1059) 15 A

Wire cross-section, AWG, min. AWG 24

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

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, max. AWG 14

**Packing**

Packaging Box

VPE width 70 mm

VPE length 55 mm

VPE height 105 mm

**Classifications**

ETIM 3.0 EC001284

ETIM 5.0 EC002643

UNSPSC 30-21-18-01

eClass 7.1 27-44-04-01

eClass 9.0 27-44-04-01

ETIM 4.0 EC002643

ETIM 6.0 EC002643

eClass 6.2 27-26-11-01

eClass 8.1 27-44-04-01

eClass 9.1 27-44-04-01

**Notes**

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.

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.

**Approvals**

Approvals



ROHS

Conform

## OMNIMATE Signal - series LM LM 5.08/06/90 3.5SN OR BX

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## Technical data

### Downloads

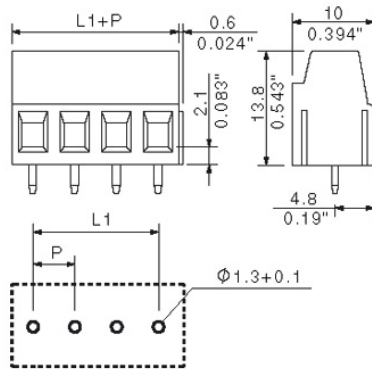
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Brochure/Catalogue                          | <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="#">CAT 2 PORTFOLIOGUIDE EN</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> |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Engineering Data                            | <a href="#">LM.zip</a><br><a href="#">STEP</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## OMNIMATE Signal - series LM LM 5.08/06/90 3.5SN OR BX

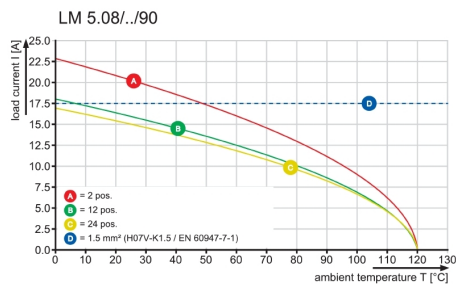
**Weidmüller Interface GmbH & Co. KG**  
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# Drawings

## Dimensional drawing



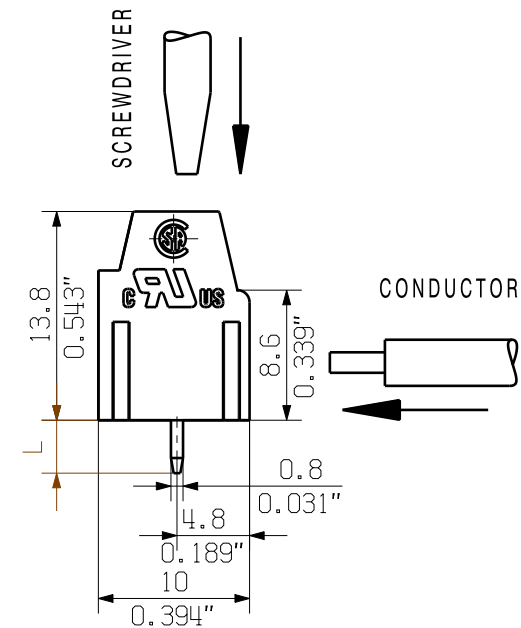
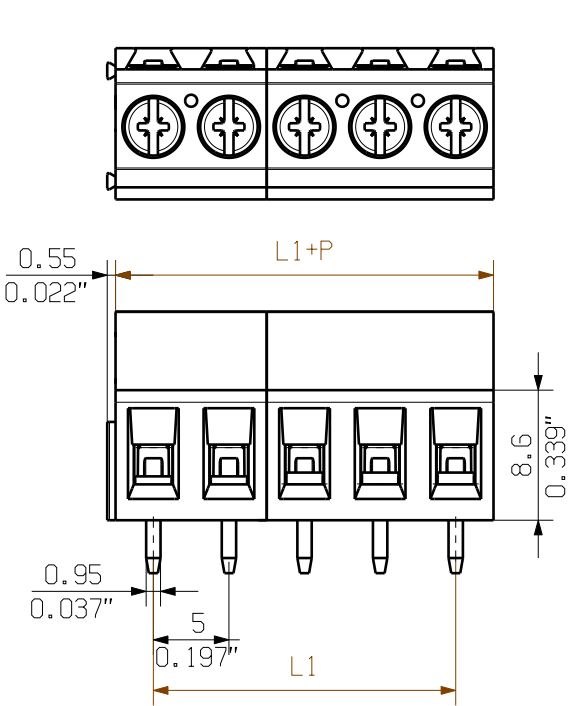
## Graph



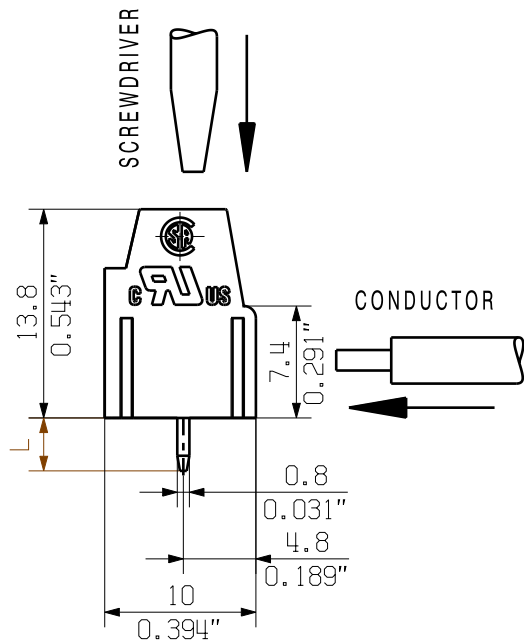
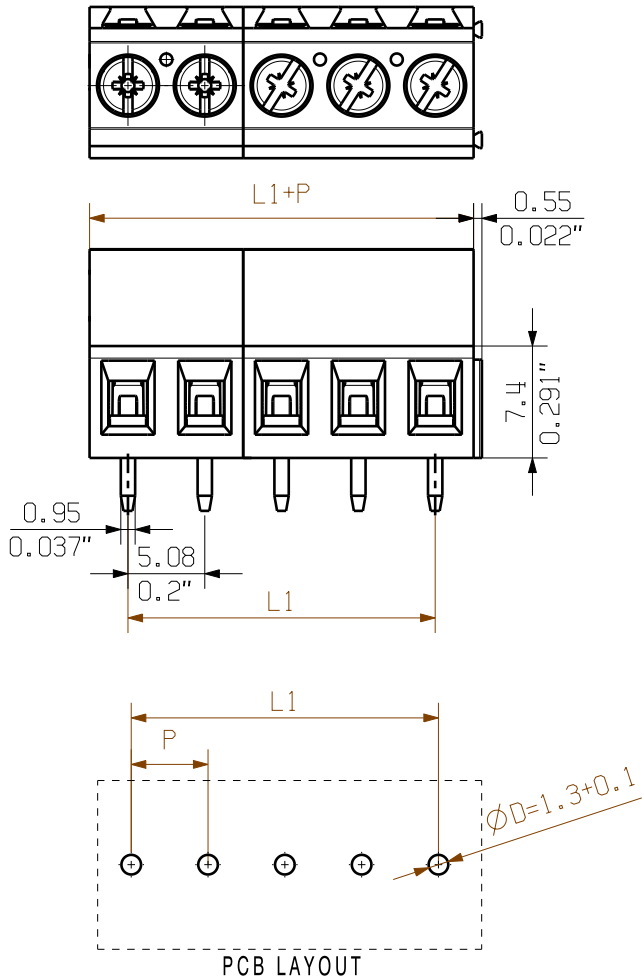
WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.  
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.  
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WEIDMUELLER INTERFACE GmbH & Co.KG

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



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



KUNDENZEICHNUNG  
CUSTOMER DRAWING

|    |                         |           |                         |           |
|----|-------------------------|-----------|-------------------------|-----------|
| 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     |
| N  | L1 [mm]                 | L1 [inch] | L1 [mm]                 | L1 [inch] |
|    | P=5.00 mm,<br>0.197inch |           | P=5.08mm,<br>0.200 inch |           |

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.

GENERAL TOLERANCE:  
DIN ISO 2768-m



MAX. NRN./NOS.

76680/5  
17.07.14 MA\_J  
00  
MODIFICATION



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

SCALE: 2/1  
SUPERSEDES: .

**Weidmüller**

DRAWING NO.

**C 41708** **10**

SHEET 01 OF 01 SHEETS

**LM 5.../.../90 ...**

LEITERPLATTENKLEMME  
PCB TERMINAL

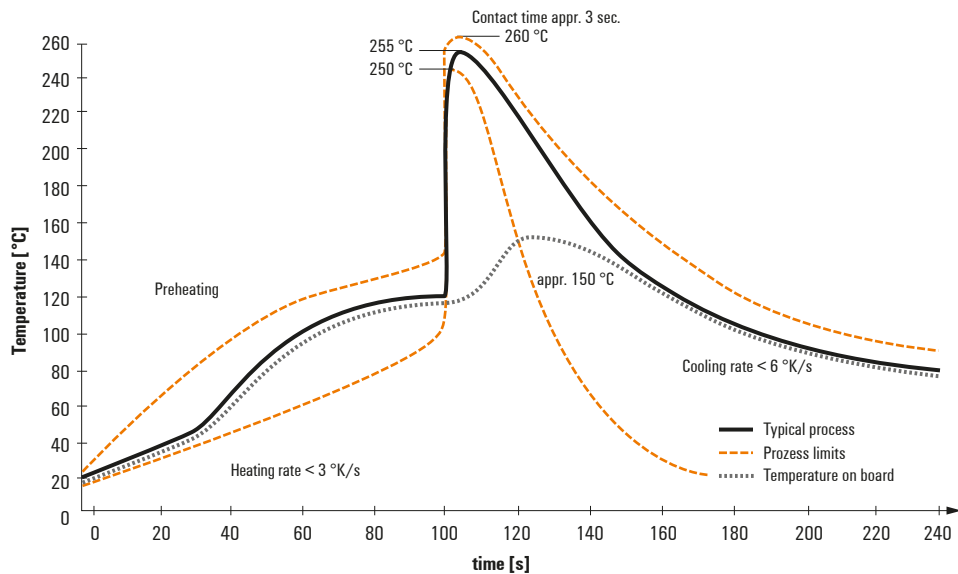
PRODUCT FILE: LM

7065

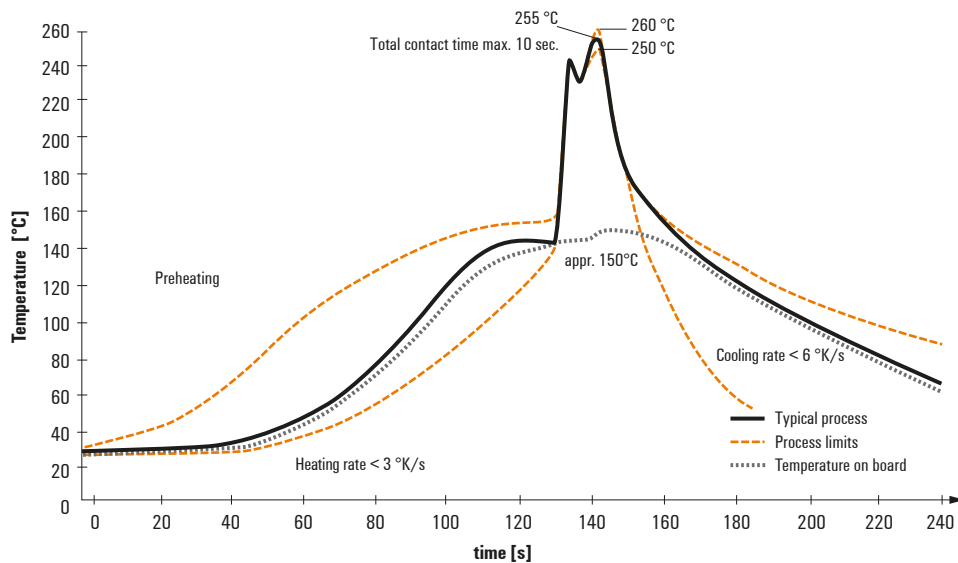
## Recommended wave soldering profiles

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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.