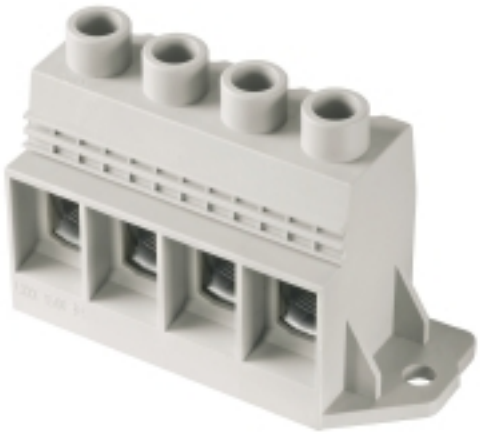
# LXXX 15.00/02/90FR 4.5SN GY BX

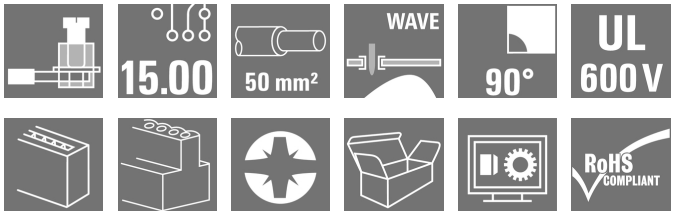
**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image



Similar to illustration




The high-current PCB connection for more power on board: 150 A /1000 V with wires up to 50 mm², transmitted right to the PCB!

The LXXX 15.0 – with its proven steel clamping-yoke technology in a compact standard housing – integrates the latest market requirements for security, power density and miniaturization in power electronics. It connects these requirements into an efficient solution for the entire value-creation chain – including development, production, installation and maintenance.

The function and form of the application's connection method plays a key role. It influences the application's design, reliability, usability and costs. With the Substitution of
For example, with the replacement of complex constructions involving bolts or bus bars, the PCB can be transformed into a system platform that is both consistent and sustainable into the future – even for high-current applications.

The LXXX 15.0 reduces size and complexity while at the same time improving application integration. In so doing, it fulfils the requirements of power electronics better than the established mechanisms and connection elements.

## General ordering data

| | |
|---|---|
| Version | Printed circuit board terminals, 15.00 mm, Number of poles: 2, 90°, Solder pin length (l): 4.5 mm, tinned, Pebble grey, Clamping yoke connection, Clamping range, max. : 50 mm², Box |
| Order No. | 1047690000 |
| Type | LXXX 15.00/02/90FR 4.5SN GY BX |
| GTIN (EAN) | 4032248783465 |
| Qty. | 20 pc(s). |
| Product data | IEC: 1000 V / 150 A / 0.5 - 50 mm²<br>UL: 600 V / 126 A / AWG 20 - AWG 1 |
| Packaging | Box |

# LXXX 15.00/02/90FR 4.5SN GY BX

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## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 31 mm | Depth (inches) | 1.22 inch |
| Height | 56 mm | Height (inches) | 2.205 inch |
| Height of lowest version | 51.5 mm | Width | 45.5 mm |
| Width (inches) | 1.791 inch | Net weight | 63 g |

### System parameters

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Power - series LXXX | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 15 mm | Pitch in inches (P) | 0.591 inch |
| Number of poles | 2 | Pin series quantity | 1 |
| Fitted by customer | No | Solder pin length (l) | 4.5 mm |
| Solder pin dimensions | 1.2 x 1.2 mm | Solder eyelet hole diameter (D) | 1.6 mm |
| Solder eyelet hole diameter tolerance (D) | + 0,1 mm | Number of solder pins per pole | 4 |
| Screwdriver blade | 1.2 x 6.5 | Screwdriver blade standard | DIN 5264 |
| Tightening torque, min. | 2.5 Nm | Tightening torque, max. | 4 Nm |
| Clamping screw | M 6 | Stripping length | 18 mm |
| L1 in mm | 15 mm | L1 in inches | 0.591 inch |
| Protection degree | IP20 | | |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | Wemid (PA) | Colour | Pebble grey |
| Colour chart (similar) | RAL 7032 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | UL 94 flammability rating | V-0 |
| Contact material | Copper alloy | Contact surface | tinned |
| Layer structure of solder connection | 1.5...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. | 0.5 mm² |
| Clamping range, max. | 50 mm² |
| Wire connection cross section AWG, min. | AWG 20 |
| Wire connection cross section AWG, max. | AWG 1 |
| Solid, min. H05(07) V-U | 0.5 mm² |
| Solid, max. H05(07) V-U | 16 mm² |
| Stranded, min. H07V-R | 6 mm² |
| Stranded, max. H07V-R | 50 mm² |
| Flexible, min. H05(07) V-K | 0.5 mm² |
| Flexible, max. H05(07) V-K | 35 mm² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm² |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 35 mm² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.5 mm² |
| w. wire end ferrule, DIN 46228 pt 1, max. | 35 mm² |

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## Technical data

| | | | | |
|---|---|---|---|---|
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 2.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 20 mm |
| | | Recommended wire-end ferrule | H2,5/25D BL | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H2,5/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 4 mm² | |
| | wire end ferrule | Stripping length | nominal | 20 mm |
| | | Recommended wire-end ferrule | H4,0/26D GR | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H4,0/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 6 mm² | |
| | wire end ferrule | Stripping length | nominal | 20 mm |
| | | Recommended wire-end ferrule | H6,0/26 SW | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H6,0/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 10 mm² | |
| | wire end ferrule | Stripping length | nominal | 21 mm |
| | | Recommended wire-end ferrule | H10,0/28 EB | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H10,0/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 16 mm² | |
| | wire end ferrule | Stripping length | nominal | 21 mm |
| | | Recommended wire-end ferrule | H16,0/28 GN | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H16,0/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 20 mm |
| | | Recommended wire-end ferrule | H1,5/24 R | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H1,5/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 35 mm² | |
| | wire end ferrule | Stripping length | nominal | 19 mm |
| | | Recommended wire-end ferrule | H35,0/32D R | |
| | | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H35,0/18 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 50 mm² | |
| | wire end ferrule | Stripping length | nominal | 18 mm |
| | | Recommended wire-end ferrule | H50,0/18 | |

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## Technical data

| | |
|---|---|
| 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) | 150 A |
| Rated current, min. number of poles (Tu=40°C) | 150 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 | 1,000 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 8 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 8 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 8 kV | | |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | | Certificate No. (CSA) | 200039-1198743 |
| Rated voltage (Use group B / CSA) | 600 V | Rated voltage (Use group C / CSA) | 600 V |
| Rated voltage (Use group D / CSA) | 600 V | Rated current (Use group B / CSA) | 127 A |
| Rated current (Use group C / CSA) | 127 A | Rated current (Use group D / CSA) | 5 A |
| Wire cross-section, AWG, min. | AWG 20 | Wire cross-section, AWG, max. | AWG 1 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Institute (UR) | | Certificate No. (UR) | E60693 |
| Rated voltage (Use group B / UL 1059) | 600 V | Rated voltage (Use group C / UL 1059) | 600 V |
| Rated current (Use group B / UL 1059) | 126 A | Rated current (Use group C / UL 1059) | 126 A |
| Wire cross-section, AWG, min. | AWG 20 | Wire cross-section, AWG, max. | AWG 1 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 186 mm |
| VPE width | 122 mm | VPE height | 68 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 | • Additional variants on request<br>• 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>• 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>• IP 20 from 16 mm² to 50 mm²<br>• The test point can only be used as potential-pickup point.<br>• Wire-end ferrules are mandatory for stranded wires with more than 19 strands.<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. (UR) | E60693 |

### Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Engineering Data | CAD data – STEP |
| Engineering Data | EPLAN, WSCAD |
| User Documentation | QR-Code product handling video |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN<br>MB DEVICE MANUF. EN<br>FL DRIVES DE<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 |

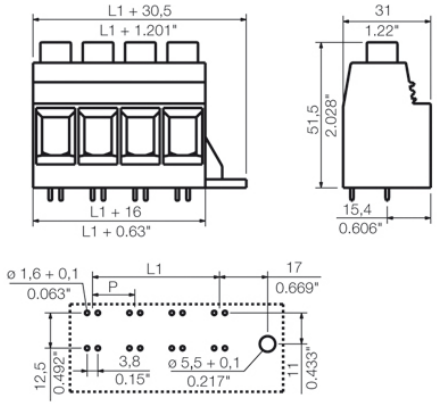
# LXXX 15.00/02/90FR 4.5SN GY BX

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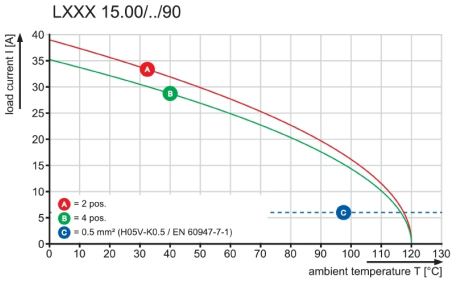
www.weidmueller.com

## Drawings

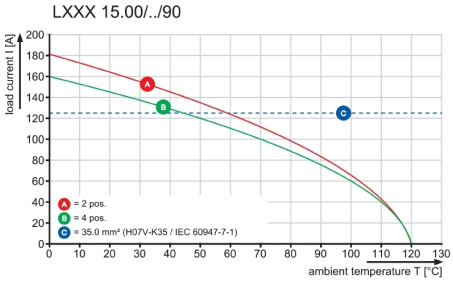
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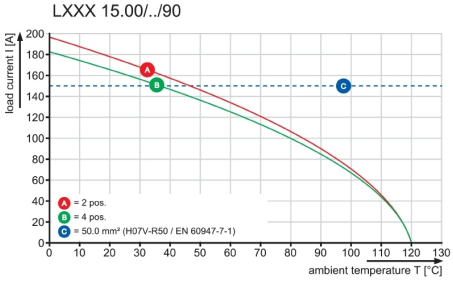

### Graph



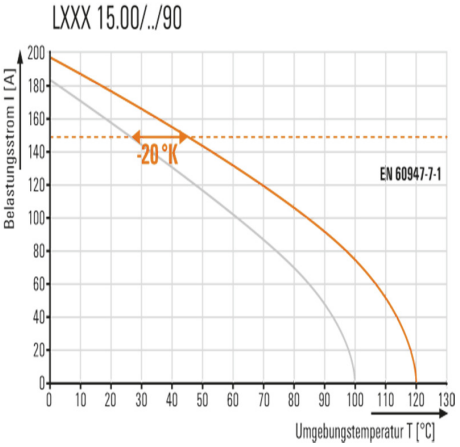

### Graph




### Graph




### Product benefits




Increased power reserves
Optimised application safety

## LXXX 15.00/02/90FR 4.5SN GY BX

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## Drawings



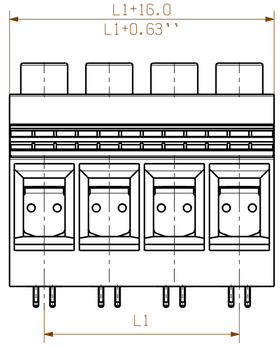

Standard-compliant integration

Dimensions without tolerances are no check dimensions

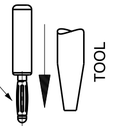
The English version is binding

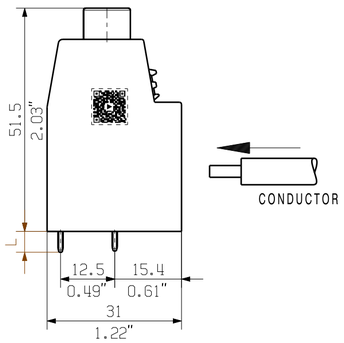
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LXXX 15.00/04/90...



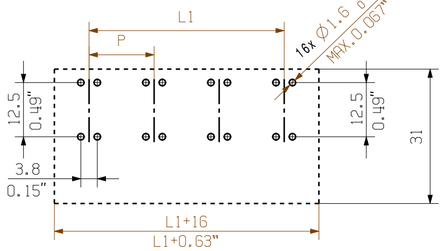

TEST PLUG PS 2.0
ORDER NO. 031000 0000



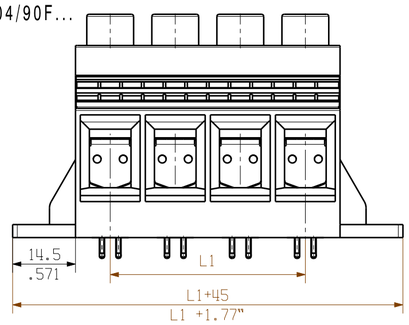



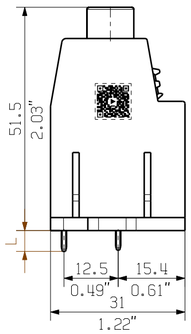

CONDUCTOR

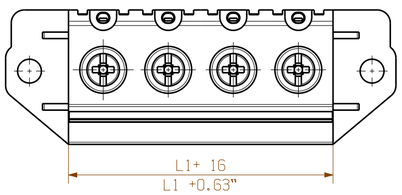
HOLE PATTERN



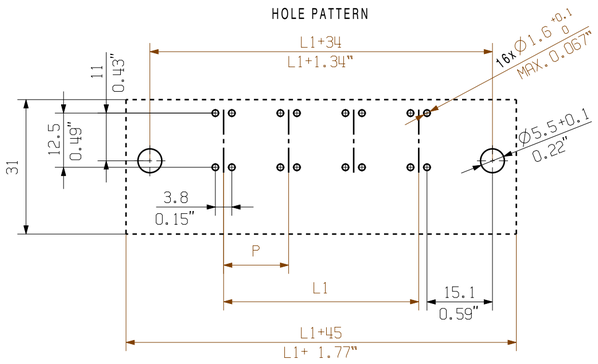

LXXX 15.00/04/90F...



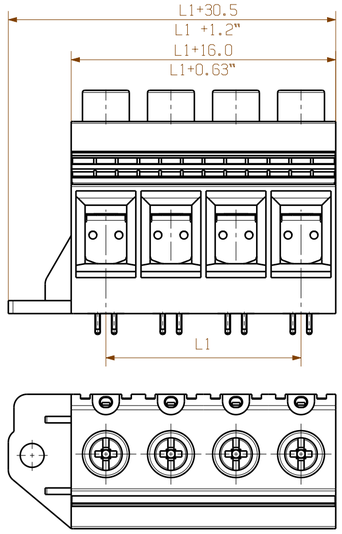



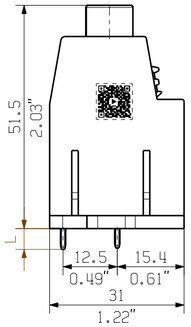




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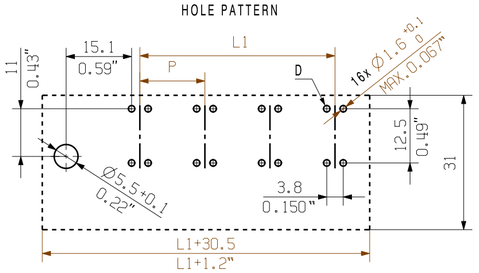



LXXX 15.00/04/90FL...

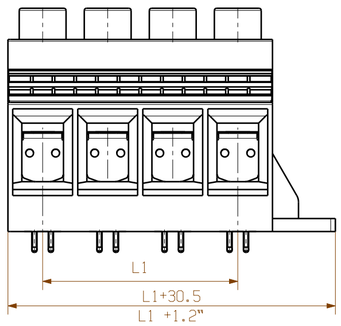


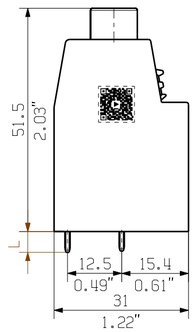



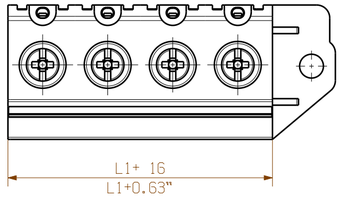

HOLE PATTERN



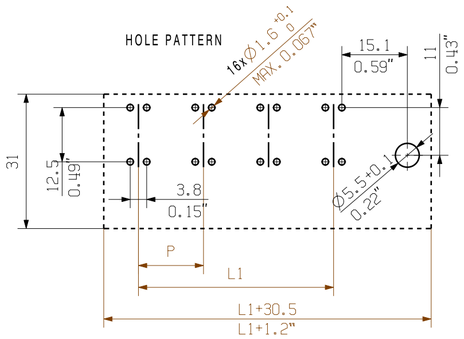

LXXX 15.00/04/90FR...



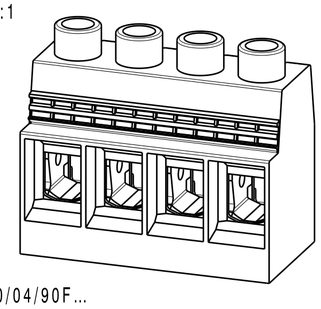




HOLE PATTERN

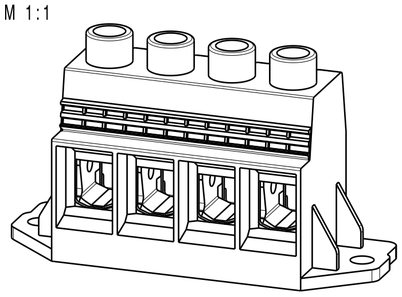



Customer drawing

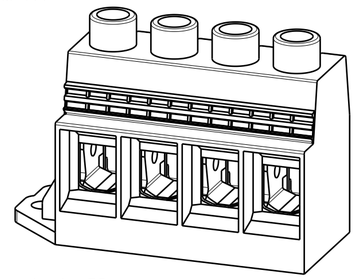
LXXX 15.00/04/90...
M 1:1



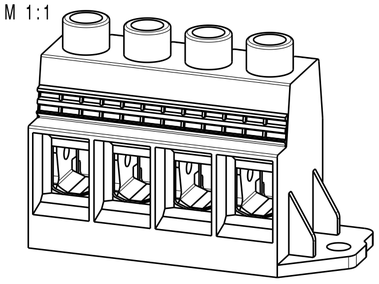
LXXX 15.00/04/90F...
M 1:1



LXXX 15.00/04/90FL...
M 1:1



LXXX 15.00/04/90FR...
M 1:1



n= No. of poles
L= 4.8 $^{0}_{-0.35}$
P= Pitch

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 60664-1 (VDE 0110).
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 60326-3 very fine.

Weidmüller PCB components are tested to the IEC 60947-7-4 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.

| n | L1[mm] | L1[inch] |
|---|---|---|
| 9 | 120 | 1.372 |
| 8 | 105 | 1.313 |
| 7 | 90 | 1.254 |
| 6 | 75 | 1.195 |
| 5 | 60 | 1.136 |
| 4 | 45 | 1.77 |
| 3 | 30 | 1.18 |
| 2 | 15 | 0.59 |

GENERAL TOLERANCE:
DIN ISO 2768-m

RoHS COMPLIANT

EC00000683 00
.
First Issue Date
14.05.2018

Max. nos.
Modification

Prim PLM Part No.: 004587
Prim ERP Part No.: 1047150000

Weidmüller

46279 Drawing no. 5 Issue no.
Sheet 01 of 01 sheets

| | Date | Name |
|---|---|---|
| Drawn | 03.12.2018 | Xiang, Keqin |
| Responsible | | Xiang, Keqin |
| Approved | 04.12.2018 | Xu, Shary |

Scale: 1/1 Size: A2
Drawings Assembly

LXXX 15.00/.../90...
LEITERPLATTENKLEMME
PCB TERMINAL

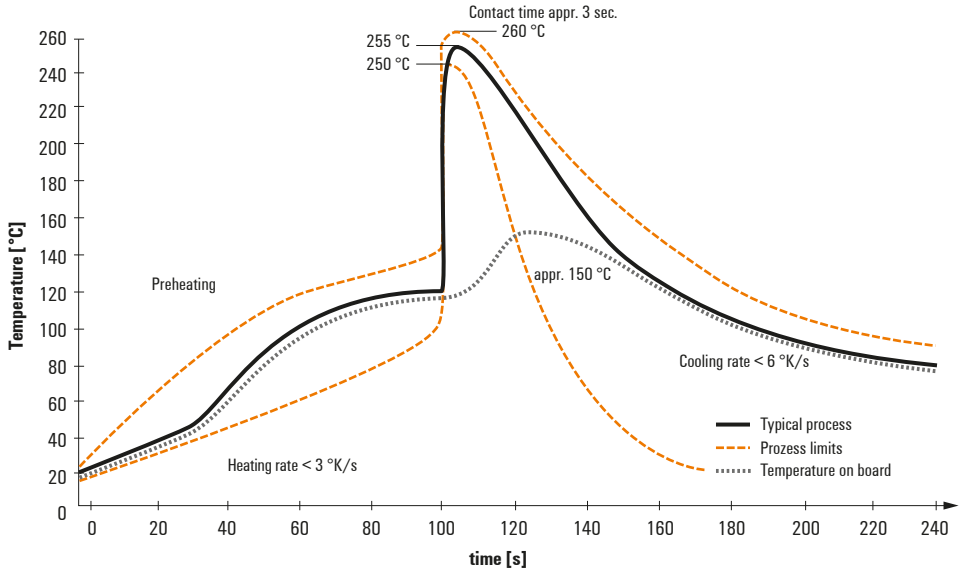
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# Wave Solder Profile

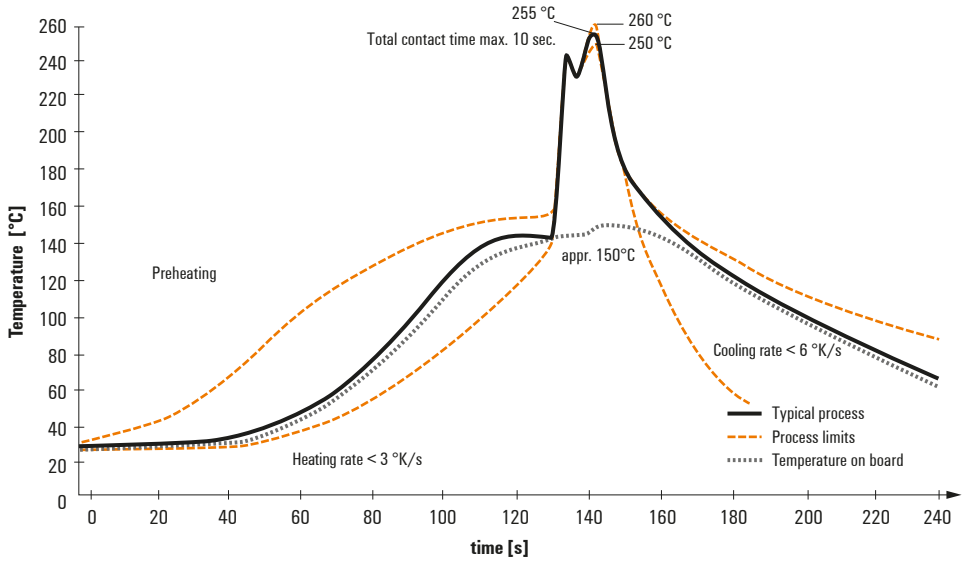
## Recommended wave solderding profiles

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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.