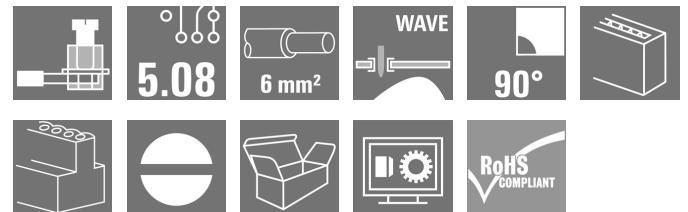


## LPP 5.08/02/90 3.2SN OR BX

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

www.weidmueller.com

### Product image



Similar to illustration

This PCB terminal provides connections for 32 A and 6 mm<sup>2</sup> conductor cross-section with proven clamping yoke connection at 5.00 and 5.08 mm pitch, conductor outlet direction in 90°, 135° and 180° design, with extensive auxiliary functions.

### General ordering data

|              |  |
|--------------|--|
| Version      | Printed circuit board terminals, 5.08 mm, Number of poles: 2, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1594400000</a>   |
| Type         | LPP 5.08/02/90 3.2SN OR BX   |
| GTIN (EAN)   | 4008 190123789   |
| Qty.         | 100 Stück  |
| Product data | IEC: 500 V / 32 A / 0.5 - 6 mm <sup>2</sup><br>UL: 300 V / 20 A / AWG 26 - AWG 12  |
| Packaging    | Box  |

Erstellungs-Datum May 30, 2023 2:14:27 PM CEST

## LPP 5.08/02/90 3.2SN OR BX

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## Technische Daten

### Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 13.4 mm    | Depth (inches)  | 0.528 inch |
| Height                   | 20.2 mm    | Height (inches) | 0.795 inch |
| Height of lowest version | 17 mm      | Width           | 10.76 mm   |
| Width (inches)           | 0.424 inch | Net weight      | 3.34 g     |

### Temperatures

|                             |        |                             |        |
|-----------------------------|--------|-----------------------------|--------|
| Operating temperature, min. | -50 °C | Operating temperature, max. | 100 °C |
|-----------------------------|--------|-----------------------------|--------|

### System parameters

|  |                             |  |                          |
|--|-----------------------------|--|--------------------------|
| Product family                             | OMNIMATE Signal - series LP | 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                 |
| Number of poles                            | 2                           | Pin series quantity                          | 1                        |
| Fitted by customer                         | Yes                         | Number of rows                               | 1                        |
| Max. adjacent poles per row                | 24                          | Solder pin length (l)                        | 3.2 mm                   |
| Solder pin dimensions                      | 0.75 x 0.9 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.                    | 0.5 Nm                      | Tightening torque, max.                      | 0.6 Nm                   |
| Clamping screw                             | M 3                         | Stripping length                             | 6 mm                     |
| L1 in mm                                   | 5.08 mm                     | L1 in inches                                 | 0.2 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                   | PA                        | Colour                                | orange |
| Colour chart (similar)                | RAL 2000                  | Insulating material group             | I      |
| Comparative Tracking Index (CTI)      | ≥ 600                     | UL 94 flammability rating             | V-2    |
| Contact material                      | Copper alloy              | Contact surface                       | tinned |
| Coating                               | 1-3 µm Ni, 4-6 µm SN      | Tinning type                          | matt   |
| Layer structure of solder connection  | 4...6 µm Ni / 4...6 µm Sn | Storage temperature, min.             | -40 °C |
| Storage temperature, max.             | 70 °C                     | Operating temperature, min.           | -50 °C |
| Operating temperature, max.           | 100 °C                    | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 100 °C                    |                                       |        |

### Conductors suitable for connection

|   |                      |
|---|----------------------|
| Clamping range, min.                            | 0.13 mm <sup>2</sup> |
| Clamping range, max.                            | 6 mm <sup>2</sup>    |
| Wire connection cross section AWG, min.         | AWG 26               |
| Wire connection cross section AWG, max.         | AWG 12               |
| Solid, min. H05(07) V-U                         | 0.5 mm <sup>2</sup>  |
| Solid, max. H05(07) V-U                         | 6 mm <sup>2</sup>    |
| Flexible, min. H05(07) V-K                      | 0.5 mm <sup>2</sup>  |
| Flexible, max. H05(07) V-K                      | 4 mm <sup>2</sup>    |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm <sup>2</sup>  |

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## Technische Daten


|   |  |                              |                            |      |
|---|--|------------------------------|----------------------------|------|
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.5 mm <sup>2</sup>                    |                              |                            |      |
| w. wire end ferrule, DIN 46228 pt 1, max.       | 2.5 mm <sup>2</sup>                    |                              |                            |      |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.8 mm x 2.4 mm; 3.0 mm                |                              |                            |      |
| 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>       |                            |      |

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)                         | 32 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 30.5 A                 | Rated current, min. number of poles (Tu=40°C)                         | 32 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 25 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 500 V             |
| Rated voltage for surge voltage class / pollution degree III/2            | 250 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)             | 200039-1202191 |
| Rated voltage (Use group B / CSA) | 300 V   | Rated voltage (Use group D / CSA) | 300 V          |
| Rated current (Use group B / CSA) | 20 A  | Rated current (Use group D / CSA) | 10 A           |
| Wire cross-section, AWG, min.     | AWG 26  | Wire cross-section, AWG, max.     | AWG 12         |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate.              |                                   |                |

Erstellungs-Datum May 30, 2023 2:14:27 PM CEST

## LPP 5.08/02/90 3.2SN OR BX

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

www.weidmueller.com

## Technische Daten

### Rated data acc. to UL 1059

|                                       |   |                                       |        |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (UR)                        |  | Certificate No. (UR)                  | 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) | 20 A  | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 26  | Wire cross-section, AWG, max.         | AWG 12 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.            |                                       |        |

### Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 116 mm |
| VPE width | 102 mm | VPE height | 64 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 |

### 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
  - 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.
  - The test point can only be used as potential-pickup point.
  - It is necessary to hold the insulating body of the one or two pole terminal when tightening the screw
  - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

## LPP 5.08/02/90 3.2SN OR BX

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Germany

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## Technische Daten

### Approvals

Approvals



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

### Downloads

|                  |   |
|------------------|---|
| Engineering Data | <a href="#">WSCAD</a>   |
| Catalogues       | <a href="#">Catalogues in PDF-format</a>  |
| Brochures        | <a href="#">FL DRIVES EN</a><br><a href="#">FL ANALO.SIGN.CONV. EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FLIndustr.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> |

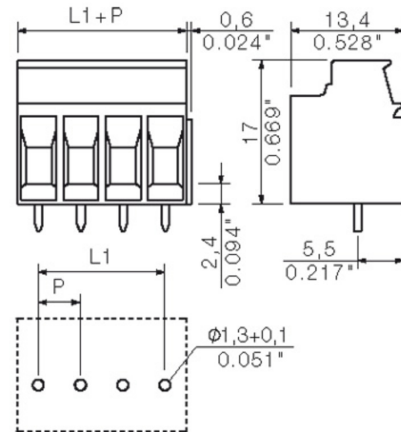
## LPP 5.08/02/90 3.2SN OR BX

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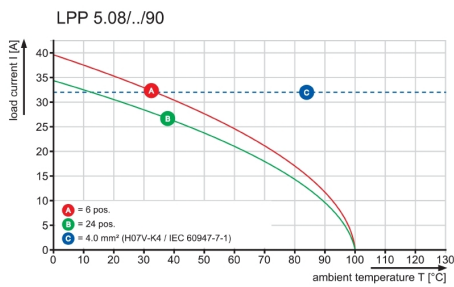
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# Zeichnungen

## Dimensional drawing



## Graph



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

DIE DEUTSCHE VERSION IST VERBINDLICH  
 THE GERMAN VERSION IS BINDING

**Technical Data**

Rev.

**Material data**

|  |                 |
|--|-----------------|
| Insulation material type               | PA 66           |
| Insulation material colours            | orange          |
| Insulation material flammability class | V - 2           |
| Insulation resistance                  | UL94            |
| Conatct base material                  | 10 <sup>3</sup> |
| Contact plating                        | Cu - alloy      |
|  | tin - plated    |

**System characteristic values**

|  |         |                     |
|--|---------|---------------------|
| Pitch P  | mm/inch | 5.08/0.2            |
| Number of rows                                       |         | 1                   |
| Dielectric strength (r.m.s withstand voltage)        | kV      | 2.5                 |
| Through resistance (typical)                         | mOhm    | 0.7                 |
| Operating temperature range                          | °C      | -55 ... +100        |
| Degree of protection acc. to VDE 0106                |         | 1)                  |
| Degree of protection acc. to DIN EN 60529            |         | finger safe         |
| Conductor connection method                          |         | IP20                |
| Screw size   |         | clamping yoke       |
| Screw torque max. acc. to EN 60999                   | Nm      | M3                  |
| Screw driver type                                    |         | 0.5                 |
| Solder pin length L                                  | mm/inch | SD 0.6x3.5          |
| PCB hole diameter D (wave soldering)                 | mm/inch | 3.2/0.126           |
| PCB hole diameter D (reflow soldering)               | mm/inch | 1.3+0.1/0.051+0.004 |
| Resistance to soldering heat acc. to DIN IEC 60512-6 | °C/sec  | 2)                  |
| Resistance to soldering heat acc. to EN 61760-1      | °C/sec  | n.a.                |
| Solderability classification acc. to EN 61760-1      |         | 3)                  |
| Solder connection type                               |         | 4)                  |
| Solder pin diameter d (max.)                         | mm/inch | n.a.                |
|  |         | 5)                  |
|  |         | wave soldering      |
|  |         | 1.27/0.05           |

**Application notes**

|                                |        |     |
|--------------------------------|--------|-----|
| Coding possibility             | yes/no | no  |
| Joinable without loss of pitch | yes/no | no  |
| Manual assembly of modules     | yes/no | yes |
| Max. number of poles           | n      | 24  |

**Conductor**

|   |                 |            |
|---|-----------------|------------|
| Clamping range                              | mm <sup>2</sup> | 0.12...6.0 |
| "e" solid H05(07) V-U                       | mm <sup>2</sup> | 0.12...6.0 |
| "f" flexible H05(07) V-K                    | mm <sup>2</sup> | 0.12...4.0 |
| "fi" with ferrule acc. to DIN 46228/1       | mm <sup>2</sup> | 0.5...2.5  |
| ... with plastic collar acc. to DIN 46228/4 | mm <sup>2</sup> | 0.5...2.5  |
| Conductor insulation stripping length       | mm/inch         | 6/0.236    |
| Conductor insulation diameter max.          | mm/inch         | n.a.       |
| Two wire clamping range                     | mm <sup>2</sup> | 0.5...1.5  |
| Gauge to EN 60999 (a x b ; Ø)               | mm              | 2.8x2.4; 3 |

**IEC 664-1 / VDE0110 (4.97) rated data**

|  |                         |             |
|--|-------------------------|-------------|
| Rated cross section acc. to EN 60999           | mm <sup>2</sup>         | 4.0         |
| Rated current @ 20°C ambient                   | A                       | 32          |
| Rated current @ 40°C ambient                   | A                       | 30.5        |
| <b>Overvoltage category / Pollution degree</b> | <b>III/3 III/2 II/2</b> | <b>6)</b>   |
| Rated voltage                                  | V                       | 250 250 500 |
| Rated impulse voltage                          | kV                      | 4 4 4       |

**UL 1059 rated data**



File No.: E60693

|  |         |     |   |
|--|---------|-----|---|
| Rated voltage                                  | B       | C   | D |
| Rated current                                  | 300     | 300 |   |
| AWG wire range (field wiring / factory wiring) | 20      | 10  |   |
|  | 26...12 |     |   |

**CSA C22.2 rated data**



File No.: 154685

|  |         |     |   |
|--|---------|-----|---|
| Rated voltage                                  | B       | C   | D |
| Rated current                                  | 300     | 300 |   |
| AWG wire range (field wiring / factory wiring) | 20      | 10  |   |
|  | 26...12 |     |   |

**Packaging**

carton

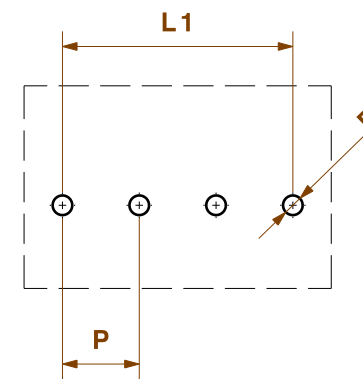
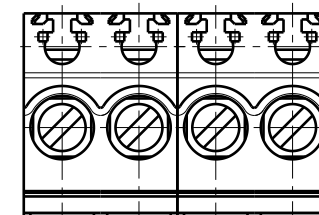
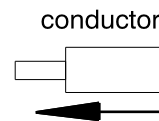
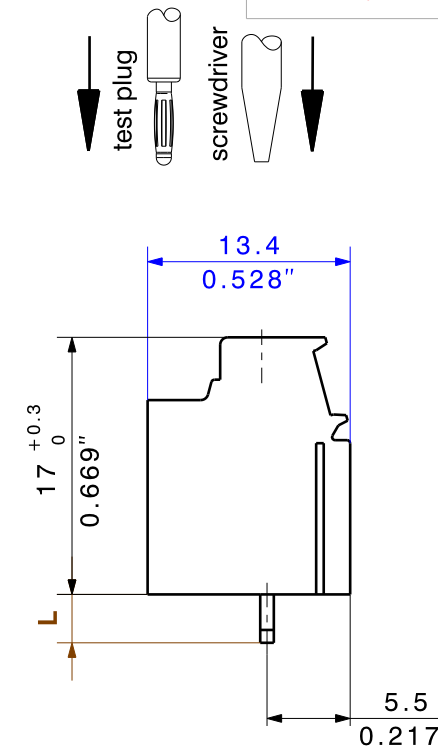
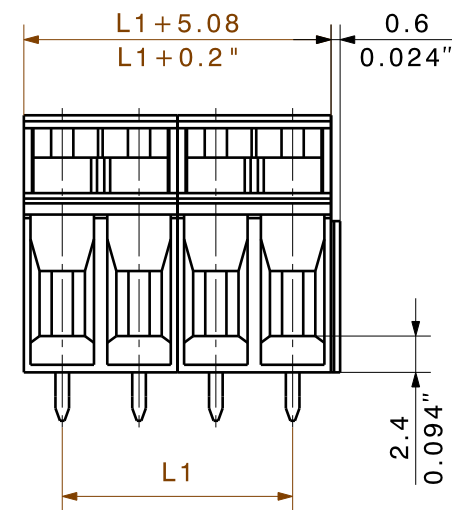
**Downloads**

www.weidmueller.de

- 1) Sum of ambient temperature and temperature rise
- 2) Recommendation for manual assembly
- 3) Recommendation for automatic assembly
- 4) Recommendation for wave soldering
- 5) Recommendation for reflow soldering
- 6) Referred to rated cross section and minimum pole number

n.a. = not applicable

Subject to technical changes



Layout finished holes

shown: LPP5.08/4/90

|    |         |           |
|----|---------|-----------|
| 24 | 116,84  | 4,600     |
| 23 | 111,76  | 4,400     |
| 22 | 106,68  | 4,200     |
| 21 | 101,60  | 4,000     |
| 20 | 96,52   | 3,800     |
| 19 | 91,44   | 3,600     |
| 18 | 86,36   | 3,400     |
| 17 | 81,28   | 3,200     |
| 16 | 76,20   | 3,000     |
| 15 | 71,12   | 2,800     |
| 14 | 66,04   | 2,600     |
| 13 | 60,96   | 2,400     |
| 12 | 55,88   | 2,200     |
| 11 | 50,80   | 2,000     |
| 10 | 45,72   | 1,800     |
| 9  | 40,64   | 1,600     |
| 8  | 35,56   | 1,400     |
| 7  | 30,48   | 1,200     |
| 6  | 25,40   | 1,000     |
| 5  | 20,32   | 0,800     |
| 4  | 15,24   | 0,600     |
| 3  | 10,16   | 0,400     |
| 2  | 5,08    | 0,200     |
| n  | L1 [mm] | L1 [Inch] |

For the mounting of PCBs, it should be noted that the rated data stated here 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.

|   |                    |                               |                                   |  |  |
|---|--------------------|-------------------------------|-----------------------------------|--|--|
| <b>METRIC TOLERANCES</b><br>X. = ±0.3<br>X.X = ±0.1<br>X.XX = ±0.05 |                    | 38373/0<br>30.08.07 KRUG_M 00 |                                   | CAT.NO.:<br><b>4 22736 07</b>                |  |
| <b>MODIFICATION</b>   |                    | <b>Weidmüller</b>             |                                   | DRAWING NO. SHEET 3 OF 4 SHEETS<br>ISSUE NO. |  |
| DRAWN 13.11.2002  | DATE               | NAME                          | <b>LPP5.08/90</b><br>None<br>None |  |  |
| RESPONSIBLE KRUG_M  | CHECKED 30.08.2007 | HEKTEL_S                      | PRODUCT FILE: LP../90             |  |  |
| SUPERSEDES:   | APPROVED           | HECKERT_M                     | 7360                              |  |  |

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESER DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINER INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATET.  
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENSERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTERREINTRAGUNG VORBEHALTEN.  
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## Recommended wave soldering 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.