

**LP 7.50/03/90 4.5SN OR BX****Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

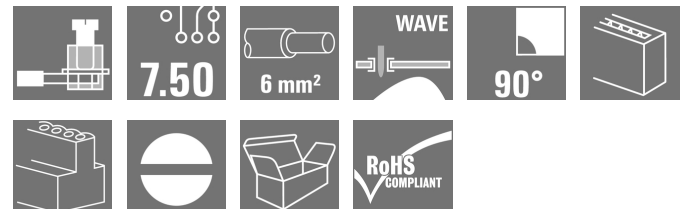
32760 Detmold

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**Product image**

Similar to illustration

This PCB terminal provides connections for 1000 V, 6 mm<sup>2</sup> conductor cross-section and 32 A with proven clamping yoke connection at 7.50 mm and 7.62 mm pitch, conductor outlet direction in 90° and 180° design.

**General ordering data**

|              |                                                                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | Printed circuit board terminals, 7.50 mm, Number of poles: 3, 90°, Solder pin length (l): 4.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1594630000</a>                                                                                                                                                                 |
| Type         | LP 7.50/03/90 4.5SN OR BX                                                                                                                                                                  |
| GTIN (EAN)   | 4008190159443                                                                                                                                                                              |
| Qty.         | 100 pc(s).                                                                                                                                                                                 |
| Product data | IEC: 1000 V / 32 A / 0.5 - 6 mm <sup>2</sup><br>UL: 300 V / 20 A / AWG 26 - AWG 12                                                                                                         |
| Packaging    | Box                                                                                                                                                                                        |

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## Technical data

### Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 19 mm      | Depth (inches)  | 0.748 inch |
| Height                   | 15.5 mm    | Height (inches) | 0.61 inch  |
| Height of lowest version | 11 mm      | Width           | 23.1 mm    |
| Width (inches)           | 0.909 inch | Net weight      | 5.28 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)                            | 7.5 mm                      | Pitch in inches (P)                          | 0.295 inch               |
| Number of poles                            | 3                           | Pin series quantity                          | 1                        |
| Fitted by customer                         | Yes                         | Number of rows                               | 1                        |
| Max. adjacent poles per row                | 16                          | Solder pin length (l)                        | 4.5 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                                   | 15 mm                       | L1 in inches                                 | 0.591 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>    |
| Stranded, max. H07V-R                                               | 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, 0.5 mm <sup>2</sup> min. |                      |

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w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm<sup>2</sup> max.w. wire end ferrule, DIN 46228 pt 1, 0.5 mm<sup>2</sup> min.w. wire end ferrule, DIN 46228 pt 1, 2.5 mm<sup>2</sup> max.

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, max. number of poles (Tu=20°C)                             | 32 A   | Rated current, min. number of poles (Tu=20°C)                         | 32 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 30.5 A | Rated current, min. number of poles (Tu=40°C)                         | 32 A              |
| Rated voltage for surge voltage class / pollution degree III/2            | 500 V  | Rated voltage for surge voltage class / pollution degree II/2         | 1,000 V           |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 6 kV   | Rated voltage for surge voltage class / pollution degree III/3        | 500 V             |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 6 kV   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 6 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)

200039-1202191

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.

## 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 60 mm

VPE width 110 mm

VPE height 140 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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[info@weidmueller.com](mailto:info@weidmueller.com)[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Approvals**

Approvals



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

**Downloads**

|                             |                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Data            | <a href="#">CAD data – STEP</a>                                                                                                               |
| Product Change Notification | <a href="#">PCN_2016_273_PL32_Loss_of_nickel_LL_LP_Family_EN</a><br><a href="#">PCN_2016_273_PL32_Wegfall_Unternickelung_LL_LP_Familie_DE</a> |
| Catalogues                  | <a href="#">Catalogues in PDF-format</a>                                                                                                      |
| Brochures                   | <a href="#">FL DRIVES EN</a><br><a href="#">FL DRIVES DE</a>                                                                                  |

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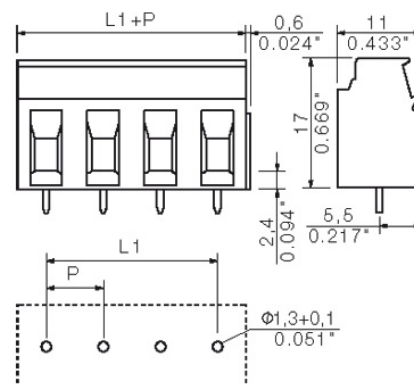
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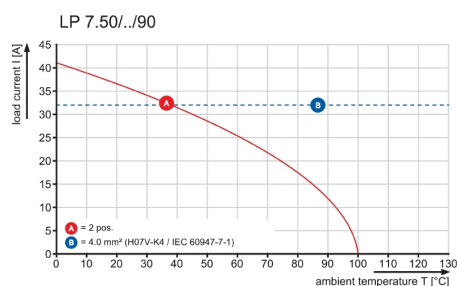
Fax. +49 5231 14-2083

# Drawings

## Dimensional drawing [info@weidmueller.com](mailto:info@weidmueller.com)



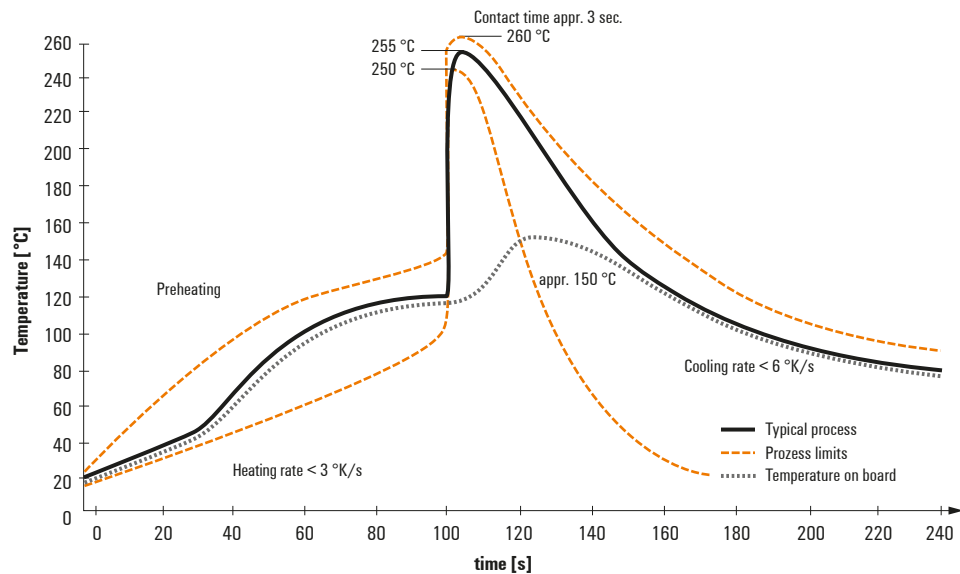
## Graph



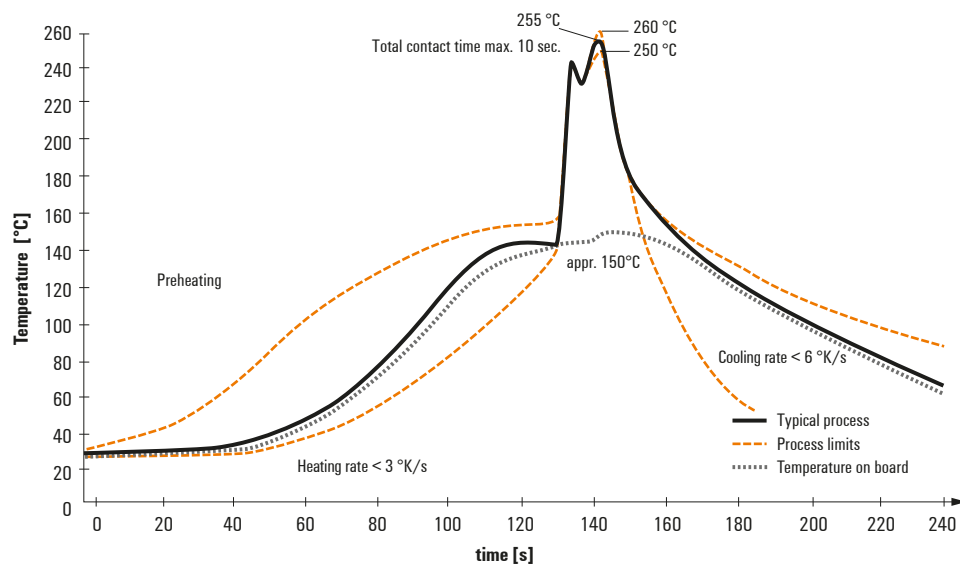
## Recommended wave soldering profiles

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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.