

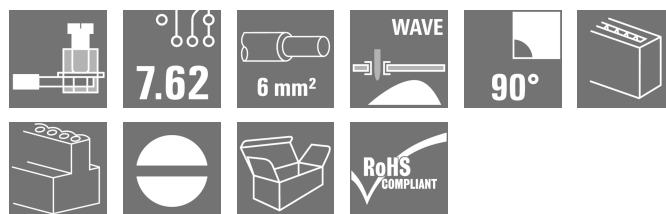
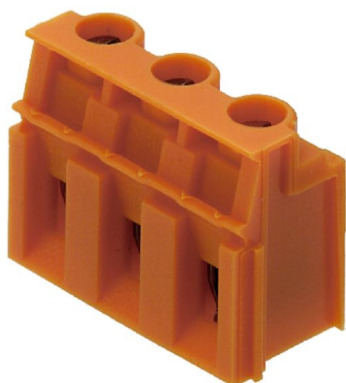
**LP 7.62/03/90 4.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

This PCB terminal provides connections for 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, 7.62 mm, Number of poles: 3, 90°, Solder pin length (l): 4.5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1697210000</a>                                                                                                                                                                |
| Type         | LP 7.62/03/90 4.5SN BK BX                                                                                                                                                                 |
| GTIN (EAN)   | 4008190880392                                                                                                                                                                             |
| Qty.         | 100 items                                                                                                                                                                                 |
| 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

## Approvals

Approvals



|                       |                            |
|-----------------------|----------------------------|
| ROHS                  | Conform                    |
| UL File Number Search | <a href="#">UL Website</a> |
| Certificate No. (UR)  | E60693                     |

## Dimensions and weights

|                          |             |                 |             |
|--------------------------|-------------|-----------------|-------------|
| Depth                    | 11 mm       | Depth (inches)  | 0.4331 inch |
| Height                   | 21.5 mm     | Height (inches) | 0.8465 inch |
| Height of lowest version | 17 mm       | Width           | 23.46 mm    |
| Width (inches)           | 0.9236 inch | Net weight      | 4.6 g       |

## Environmental Product Compliance

|                        |                             |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC             | No SVHC above 0.1 wt%       |

## 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)                                   | 7.62 mm                     | Pitch in inches (P)                          | 0.300 "                  |
| 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                                          | 15.24 mm                    | L1 in inches                                 | 0.600 "                  |
| 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                                | black                     |
| Colour chart (similar)                | RAL 9011 | Insulating material group             | I                         |
| Comparative Tracking Index (CTI)      | ≥ 600    | Moisture Level (MSL)                  |                           |
| UL 94 flammability rating             | V-2      | Contact material                      | Cu-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>    |

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## Technical data

|                                                         |                                                                                                                                                                        |                              |                            |      |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------|------|
| Wire connection cross section AWG, min.                 | AWG 26                                                                                                                                                                 |                              |                            |      |
| Wire connection cross section AWG, max.                 | AWG 12                                                                                                                                                                 |                              |                            |      |
| Solid, min. H05(07) V-U                                 | 0.5 mm²                                                                                                                                                                |                              |                            |      |
| Solid, max. H05(07) V-U                                 | 6 mm²                                                                                                                                                                  |                              |                            |      |
| Stranded, max. H07V-R                                   | 6 mm²                                                                                                                                                                  |                              |                            |      |
| Flexible, min. H05(07) V-K                              | 0.5 mm²                                                                                                                                                                |                              |                            |      |
| Flexible, max. H05(07) V-K                              | 4 mm²                                                                                                                                                                  |                              |                            |      |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm² min. |                                                                                                                                                                        |                              |                            |      |
| w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm² max. |                                                                                                                                                                        |                              |                            |      |
| w. wire end ferrule, DIN 46228 pt 1, min.               | 0.5 mm²                                                                                                                                                                |                              |                            |      |
| w. wire end ferrule, DIN 46228 pt 1, max.               | 2.5 mm²                                                                                                                                                                |                              |                            |      |
| 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 mm²                    |      |
|                                                         | 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 mm²                   |      |
|                                                         | 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 mm²                      |      |
|                                                         | 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)                             | 32 A                   | Rated current, min. number of poles (Tu=40°C)                         | 32 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 30.5 A                 | Rated voltage for surge voltage class / pollution degree II/2         | 1000 V            |
| Rated voltage for surge voltage class / pollution degree III/2            | 500 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 500 V             |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 6 kV                   | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 6 kV              |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 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)                   | 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)                        | 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 | 147.00 mm |
| VPE width | 115.00 mm | VPE height | 65.00 mm  |

## Type tests

|                                                           |                |                                                                                                                  |                               |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Test: Durability of markings                              | Standard       | draft DIN VDE 0627 section 6.2.2 / 09.91                                                                         |                               |
|                                                           | Test           | mark of origin, type identification, rated voltage, rated cross-section, pitch, approval marking SEV, durability |                               |
|                                                           | Evaluation     | available                                                                                                        |                               |
| Test: Clampable cross section                             | Standard       | DIN EN 60999 section 6 and 8.1 / 04.94, DIN EN 60947-1 section 8.2.4.5.1 / 07.98                                 |                               |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                                                    | solid 0,12 mm <sup>2</sup>    |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | flexible 0,12 mm <sup>2</sup> |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | flexible 4 mm <sup>2</sup>    |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | solid 6 mm <sup>2</sup>       |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | AWG 26/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | AWG 26/19                     |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | AWG 12/1                      |
|                                                           |                | Type of conductor and conductor cross-section                                                                    | AWG 12/19                     |
| Test for damage to and accidental loosening of conductors | Evaluation     | passed                                                                                                           |                               |
|                                                           | Standard       | DIN EN 60999 section 8.4 / 04.94                                                                                 |                               |
|                                                           | Requirement    | 0.2 kg                                                                                                           |                               |

## Technical data

|               |                |                                               |                              |
|---------------|----------------|-----------------------------------------------|------------------------------|
| Pull-out test | Conductor type | Type of conductor and conductor cross-section | AWG 26/1                     |
|               |                | Type of conductor and conductor cross-section | AWG 26/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | 0.3 kg                                        |                              |
|               | Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm <sup>2</sup>    |
|               |                | Type of conductor and conductor cross-section | stranded 0.5 mm <sup>2</sup> |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | 0.9 kg                                        |                              |
|               | Conductor type | Type of conductor and conductor cross-section | flexible 4 mm <sup>2</sup>   |
|               |                | Type of conductor and conductor cross-section | AWG 12/1                     |
|               |                | Type of conductor and conductor cross-section | AWG 12/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | 1.4 kg                                        |                              |
|               | Conductor type | Type of conductor and conductor cross-section | solid 6 mm <sup>2</sup>      |
|               |                | Type of conductor and conductor cross-section |                              |
|               | Evaluation     | passed                                        |                              |
|               | Standard       | DIN EN 60999 section 8.5 / 04.94              |                              |
|               | Requirement    | ≥10 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 26/1                     |
|               |                | Type of conductor and conductor cross-section | AWG 26/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥30 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5                    |
|               |                | Type of conductor and conductor cross-section | H05V-K0.5                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥60 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-K4                      |
|               |                | Type of conductor and conductor cross-section | AWG 12/1                     |
|               |                | Type of conductor and conductor cross-section | AWG 12/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥80 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-U6                      |

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## Technical data

Evaluation

passed

## 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.

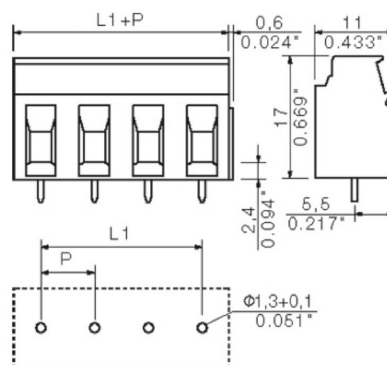
## Notes

- 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 maximum humidity 70%, 36 months

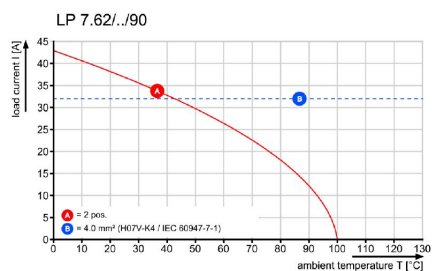
## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | EC002643    | ETIM 9.0    | EC002643    |
| ETIM 10.0   | 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 |
| ECLASS 13.0 | 27-46-01-01 | ECLASS 14.0 | 27-46-01-01 |
| ECLASS 15.0 | 27-46-01-01 |             |             |

## Dimensional drawing



## Graph



## LP 7.62/03/90 4.5SN BK BX

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## Accessories

### Intermediate plates



The maximum voltage is based on the minimum distance. Intermediate plates increase the creepage and clearance distances between different potentials and permit higher rated voltages or a clear separation, e.g. between mains and low voltages or different protection zones.

The dovetail joint enables easy installation and guarantees a secure fit. Other characteristics include:

- Pitch extended by 1.27 or 2.54mm - all other combinations possible
- Colour coding ensures visual differentiation
- Different geometries for standard designs.

Incomplete individual assemblies avoided because separate terminal blocks combine to form a single holistic unit. Ready-assembled on request.

The advantages: efficient processing, increased stability, improved reliability.

### General ordering data

|            |                            |                                                                          |
|------------|----------------------------|--------------------------------------------------------------------------|
| Type       | LPZP 2.54/90 OR            | Version                                                                  |
| Order No.  | <a href="#">1747480000</a> | Printed circuit board terminals, Accessories, Intermediate plate,        |
| GTIN (EAN) | 4008190992163              | orange, Number of poles: 1                                               |
| Qty.       | 100 ST                     |                                                                          |
| Type       | LPZP 1.27/90 OR            | Version                                                                  |
| Order No.  | <a href="#">1747490000</a> | Printed circuit board terminals, Accessories, Intermediate plate,        |
| GTIN (EAN) | 4008190992170              | orange, Number of poles: 1                                               |
| Qty.       | 100 ST                     |                                                                          |
| Type       | LPZP 2.54/90 SW            | Version                                                                  |
| Order No.  | <a href="#">1747500000</a> | Printed circuit board terminals, Accessories, Intermediate plate, black, |
| GTIN (EAN) | 4008190992187              | Number of poles: 1                                                       |
| Qty.       | 100 ST                     |                                                                          |
| Type       | LPZP 1.27/90 SW            | Version                                                                  |
| Order No.  | <a href="#">1747510000</a> | Printed circuit board terminals, Accessories, Intermediate plate, black, |
| GTIN (EAN) | 4008190992194              | Number of poles: 1                                                       |
| Qty.       | 100 ST                     |                                                                          |

### Mounting blocks



Minor component, major effect:

Clip-on attachment elements increase the mechanical resilience of the circuit board terminals.

Clip-on or pre-assembled - always the right solution:

- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- Suitable for all outlet directions

Maximum stability, minimum effort:

- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

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## Accessories

### General ordering data

|            |                            |                                                                       |
|------------|----------------------------|-----------------------------------------------------------------------|
| Type       | LPBB MU OR                 | Version                                                               |
| Order No.  | <a href="#">1747530000</a> | Printed circuit board terminals, Accessories, Mounting block, orange, |
| GTIN (EAN) | 4008190992217              | Number of poles: 1                                                    |
| Qty.       | 100 ST                     |                                                                       |
| Type       | LPBB OR                    | Version                                                               |
| Order No.  | <a href="#">1747540000</a> | Printed circuit board terminals, Accessories, Mounting block, orange, |
| GTIN (EAN) | 4008190992224              | Number of poles: 1                                                    |
| Qty.       | 100 ST                     |                                                                       |

### Isolating elements



#### Efficient isolation - safe inspections:

The isolating element isolates the current circuits directly at the clamping point and is easy to retrofit - one of the most versatile and efficient terminal printing systems with 5mm pitch: the LP-series by Weidmüller.

Suitable for direct installation on the back of terminals.

- Enclosed safe from finger touch
- 2 in 1 - marking holder for labelling circuit numbers and fuses
- Attachment profile for Dekafix markers

Clear assignment of isolating elements to the correct conductor outlet enables thorough maintenance and inspections.

Safety in compact form - for the service technician and application components.

### General ordering data

|            |                            |                                                                      |
|------------|----------------------------|----------------------------------------------------------------------|
| Type       | LPA TR STI3.2 OR           | Version                                                              |
| Order No.  | <a href="#">1495460000</a> | Printed circuit board terminals, Accessories, Spacer, orange, Number |
| GTIN (EAN) | 4008190044688              | of poles: 1                                                          |
| Qty.       | 100 ST                     |                                                                      |
| Type       | LPA TR STI4.5 OR           | Version                                                              |
| Order No.  | <a href="#">1495560000</a> | Printed circuit board terminals, Accessories, Spacer, orange, Number |
| GTIN (EAN) | 4008190156732              | of poles: 1                                                          |
| Qty.       | 100 ST                     |                                                                      |