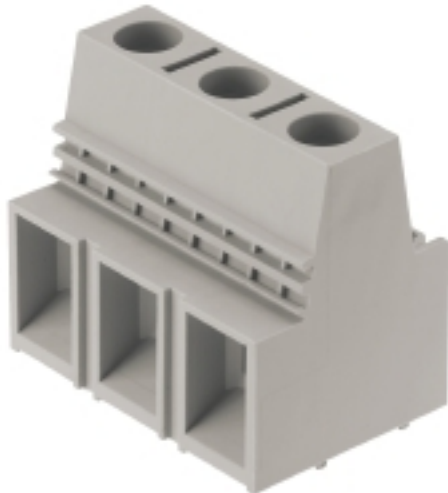


OMNIMATE Power - series LX LX 15.00/01/90 4.5SN GY BX

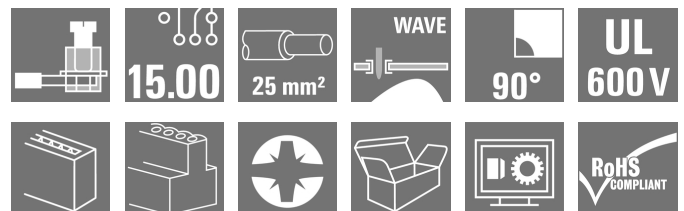
Weidmüller Interface GmbH & Co. KG
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www.weidmueller.com

Product image



Similar to illustration

High-performance PCB terminal with proven clamping yoke connection at 15.00 mm pitch, conductor outlet direction in 90° design. Version and test point.



General ordering data

| | |
|--------------|---|
| Type | LX 15.00/01/90 4.5SN GY BX |
| Order No. | 1783660000 |
| Version | Printed circuit board terminals, 15.00 mm, Number of poles: 1, 90°, Solder pin length (l): 4.5 mm, tinned, Pebble grey, Clamping yoke connection, Clamping range, max.: 25 mm², Box |
| GTIN (EAN) | 4032248184910 |
| Qty. | 20 pc(s). |
| Product data | IEC: 1000 V / 101 A / 1.5 - 25 mm² UL: 600 V / 85 A / AWG 16 - AWG 4 |
| Packaging | Box |

Creation date May 3, 2020 2:00:33 PM CEST

**OMNIMATE Power - series LX
LX 15.00/01/90 4.5SN GY BX**

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Technical data**Dimensions and weights**

| | | | |
|--------------------------|------------|-----------------|------------|
| Width | 13 mm | Width (inches) | 0.512 inch |
| Height | 41.5 mm | Height (inches) | 1.634 inch |
| Height of lowest version | 37 mm | Depth | 29.1 mm |
| Depth (inches) | 1.146 inch | Net weight | 17.5 g |

System parameters

| | | | |
|--|----------------------------|--|--------------------------|
| Product family | OMNIMATE Power - series LX | 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 | 1 | Fitted by customer | No |
| Max. adjacent poles per row | 10 | 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 | 2 |
| Screwdriver blade | 1.0 x 5.5 | Screwdriver blade standard | DIN 5264 |
| Tightening torque, min. | 2.4 Nm | Tightening torque, max. | 4 Nm |
| Clamping screw | M 5 | Stripping length | 16 mm |
| L1 in mm | 0 mm | L1 in inches | 0 inch |
| Touch-safe protection acc. to DIN VDE 0470 | IP 10 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Volume resistance | 0.50 mΩ | | |

Material data

| | | | |
|---------------------------------------|------------|---------------------------------------|------------------------------|
| Insulating material | Wemid (PA) | Colour | Pebble grey |
| Colour chart (similar) | RAL 7032 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | Contact material | E-Cu |
| Contact surface | tinned | Layer structure of solder connection | 1.5-3 μm Ni / 4-6 μm Sn matt |
| Storage temperature, min. | -25 °C | Storage temperature, max. | 50 °C |
| Max. relative humidity during storage | 70 % | 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. | 1.31 mm ² |
| Clamping range, max. | 25 mm ² |
| Wire connection cross section AWG, min. | AWG 16 |
| Wire connection cross section AWG, max. | AWG 4 |
| Solid, min. H05(07) V-U | 1.5 mm ² |
| Solid, max. H05(07) V-U | 16 mm ² |
| Stranded, min. H07V-R | 6 mm ² |
| Stranded, max. H07V-R | 25 mm ² |
| Flexible, min. H05(07) V-K | 1.5 mm ² |
| Flexible, max. H05(07) V-K | 25 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 1.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 16 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 1.5 mm ² |

Creation date May 3, 2020 2:00:33 PM CEST

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Technical data

| | | | | |
|---|--|--|--|------------|
| w. wire end ferrule, DIN 46228 pt 1, max. | 16 mm ² | | | |
| Plug gauge in accordance with EN 60999 a x b; ø | 6.9 mm x 6.9 mm | | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 4 mm ² | |
| | wire end ferrule | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H4.0/15 | |
| | | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 6 mm ² | |
| | wire end ferrule | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H6.0/15 | |
| | | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 10 mm ² | |
| | wire end ferrule | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H10.0/15 | |
| | | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 16 mm ² | |
| | wire end ferrule | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H16.0/15 | |
| | | 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) | |
| | Max. clamping range | 25 mm ² | | |

Rated data acc. to IEC

| | | | |
|---|------------------------|---|-------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 101 A |
| Rated current, max. number of poles (Tu=20°C) | 101 A | Rated current, min. number of poles (Tu=40°C) | 101 A |
| Rated current, max. number of poles (Tu=40°C) | 101 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 | 6 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 | Short-time withstand current resistance | 3 x 1s mit 1000 A |

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) | 85 A |
| Rated current (Use group C / CSA) | 85 A | Rated current (Use group D / CSA) | 5 A |
| Wire cross-section, AWG, min. | AWG 16 | Wire cross-section, AWG, max. | AWG 4 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |


Data sheet

**OMNIMATE Power - series LX
LX 15.00/01/90 4.5SN GY BX**

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Technical data

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 voltage (Use group D / UL 1059) | 600 V | Rated current (Use group B / UL 1059) | 85 A |
| Rated current (Use group C / UL 1059) | 85 A | Rated current (Use group D / UL 1059) | 5 A |
| Wire cross-section, AWG, min. | AWG 16 | Wire cross-section, AWG, max. | AWG 4 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|-------|------------|--------|
| Packaging | Box | VPE length | 39 mm |
| VPE width | 91 mm | VPE height | 128 mm |

Classifications

| | | | |
|-------------|-------------|------------|-------------|
| ETIM 6.0 | EC002643 | ETIM 7.0 | EC002643 |
| eClass 9.0 | 27-44-04-01 | eClass 9.1 | 27-44-04-01 |
| eClass 10.0 | 27-44-04-01 | UNSPSC | 30-21-18-01 |

Notes

- Notes
- Additional colours 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.

IPC conformity
Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

Approvals

| | |
|-----------|---|
| Approvals |  |
| ROHS | Conform |

OMNIMATE Power - series LX LX 15.00/01/90 4.5SN GY BX

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Technical data

Downloads

| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL APPL_INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | EPLAN_WSCAD |
| Engineering Data | LX.zip STEP |
| White paper power electronics connected correctly | Download Whitepaper |
| User Documentation | QR-Code product handling video |
| White paper UL 600 V | Download Whitepaper |

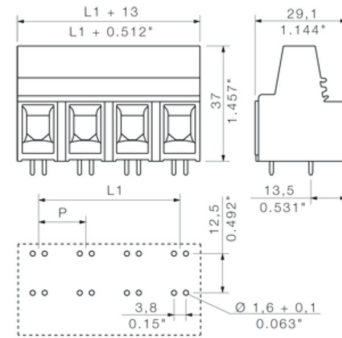
Data sheet

**OMNIMATE Power - series LX
LX 15.00/01/90 4.5SN GY BX**

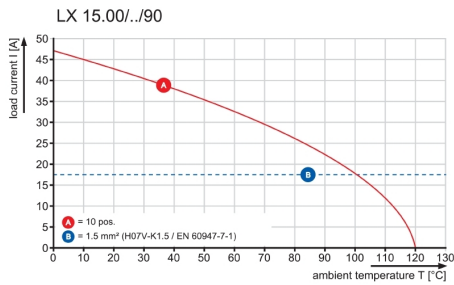
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Drawings

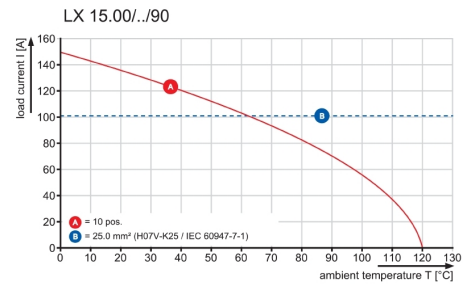
Dimensional drawing



Graph



Graph



**OMNIMATE Power - series LX
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Accessories

Additional accessories



No task is too small when creating the perfect solution.

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but essential details:

- Test plugs ensure reliable pick-up from diagnostic sockets

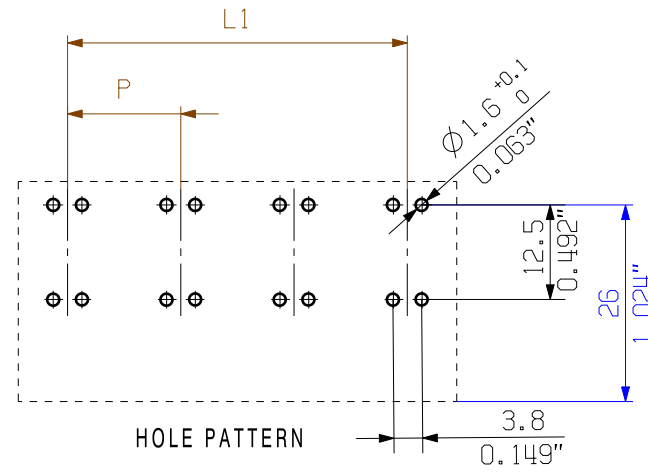
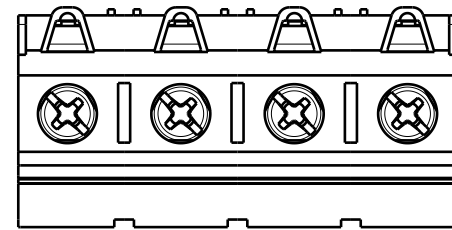
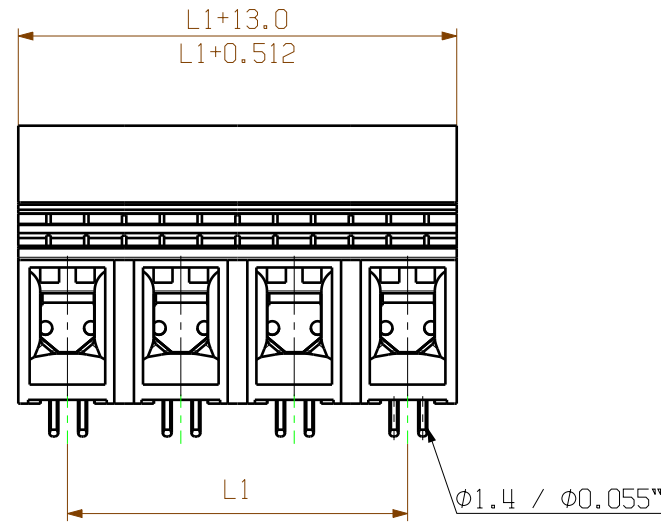
In tandem with the manufacturing process and application.

General ordering data

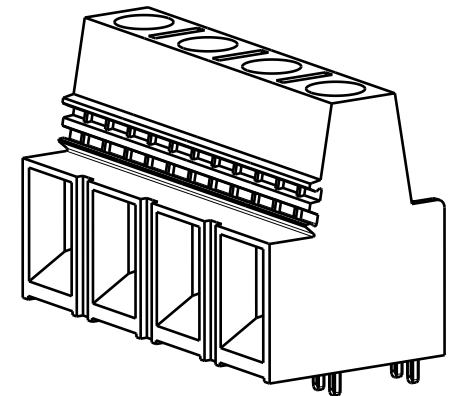
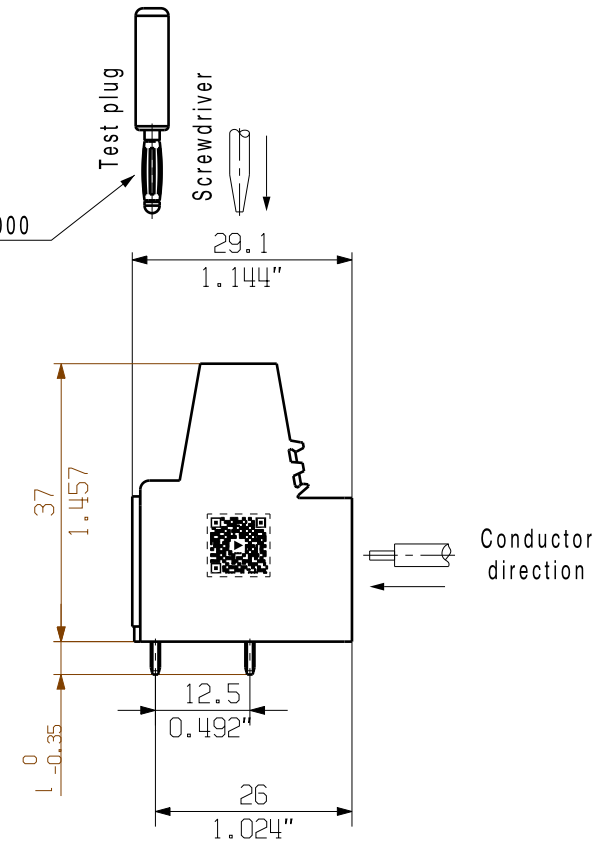
| Type | PS 2.0 MC | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 0310000000 | PCB plug-in connector, Accessories, Test plug, red, Number of poles: 1 | | Box |
| GTIN (EAN) | 4008190000059 | | | |
| Qty. | 20 pc(s). | | | |

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PS 2.0
Order NO. 031000 0000



P = Pitch
n = No. of Poles
l = Pin length
Shown: LX15.00/04/90/...

| PIN LENGTH l | TOLERANCE | n | L1 [mm] | L1 [Inch] |
|--------------|-----------|----|---------|-----------|
| 6,5 | 0/-0,35 | 10 | 135,00 | 5,315 |
| 4,5 | 0/-0,35 | 9 | 120,00 | 4,724 |
| | | 8 | 105,00 | 4,134 |
| | | 7 | 90,00 | 3,543 |
| | | 6 | 75,00 | 2,953 |
| | | 5 | 60,00 | 2,362 |
| | | 4 | 45,00 | 1,772 |
| | | 3 | 30,00 | 1,181 |
| | | 2 | 15,00 | 0,591 |
| | | n | L1 [mm] | L1 [Inch] |

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 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 occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE:
DIN ISO 2768-m

| | | | | | | |
|--------------------------|------------------|------------|--|--------------|--|--|
| | EC00000683 | 00 | Prim PLM Part No.: 009292 | | Prim ERP Part No.: 1226480000 | |
| | First Issue Date | 14.05.2018 | Max. nos. | | | |
| Modification | | | Date | Name | 29942 29 Drawing no. Issue no. Sheet 01 of 04 sheets | |
| | | | Drawn | 03.12.2018 | Xiang, Keqin | |
| Scale: 1/1 Size: A3 | | | Responsible | Xiang, Keqin | | |
| Drawings Assembly | | | Approved | 04.12.2018 | Xu, Shary | |
| | | | LX.. 15.00/./90... LEITERPLATTENKLEMME PCB TERMINAL | | | |
| | | | Product file: 7234 LX 15.00 | | | |

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.