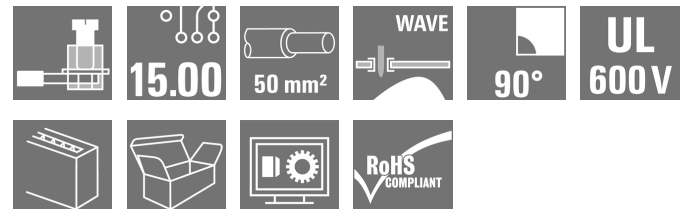


OMNIMATE Power - series LXXX LXXX 15.00/05/90F 4.5SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com



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

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

The function and form of the application's connection method plays a key role. It influences the application's design, reliability, usability and costs. With the Substitution of

For example, with the replacement of complex constructions involving bolts or bus bars, the PCB can be transformed into a system platform that is both consistent and sustainable into the future – even for high-current applications.

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

General ordering data

| | |
|--------------|--|
| Type | LXXX 15.00/05/90F 4.5SN BK BX |
| Order No. | 1386290000 |
| Version | PCB terminal, 15.00 mm, No. of poles: 5, 90°, Solder pin length (l): 4.5 mm, tinned, Black, Clamping yoke connection, Clamping range, max.: 50 mm ² , Box |
| GTIN (EAN) | 4050118186178 |
| Qty. | 12 pc(s). |
| Product data | IEC: 1000 V / 150 A / 0.5 - 50 mm ² UL: 600 V / 127 A / AWG 20 - AWG 1 |
| Packaging | Box |

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Technical data**Dimensions and weights**

| | |
|------------|----------|
| Net weight | 149.88 g |
|------------|----------|

System parameters

| | | | |
|---------------------------------|------------------------------|--|--------------------------|
| Product family | OMNIMATE Power - series LXXX | Wire connection method | Clamping yoke connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 15 mm | Pitch in inches (P) | 0.591 inch |
| No. of poles | 5 | Fitted by customer | No |
| Solder pin length (l) | 4.5 mm | Solder pin dimensions | 1.2 x 1.2 mm |
| Solder eyelet hole diameter (D) | 1.6 mm | Solder eyelet hole diameter tolerance (D)+ | 0,1 mm |
| Number of solder pins per pole | 4 | Screwdriver blade | 1.2 x 6.5 |
| Screwdriver blade standard | DIN 5264 | Tightening torque, min. | 2.5 Nm |
| Tightening torque, max. | 4 Nm | Clamping screw | M 6 |
| Stripping length | 18 mm | L1 in mm | 60 mm |
| L1 in inches | 2.363 inch | | |

Material data

| | | | |
|---------------------------------------|------------|---------------------------------------|------------------------------|
| Insulating material | Wemid (PA) | Colour | Black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| CTI | ≥ 600 | Insulation resistance | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | Contact material | Copper alloy |
| Contact surface | tinned | Layer structure of solder connection | 1.5-3 μm Ni / 4-6 μm Sn matt |
| Storage temperature, min. | -25 °C | Storage temperature, max. | 55 °C |
| Max. relative humidity during storage | 80 % | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 120 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 120 °C | | |

Conductors suitable for connection

| | | | |
|---|---------------------|---|--------------------|
| Clamping range, min. | 0.5 mm ² | Clamping range, max. | 50 mm ² |
| Wire connection cross section AWG, min. | AWG 20 | Wire connection cross section AWG, max. | AWG 1 |
| Solid, min. H05(07) V-U | 0.5 mm ² | Solid, max. H05(07) V-U | 16 mm ² |
| Stranded, min. H07V-R | 6 mm ² | Stranded, max. H07V-R | 50 mm ² |
| Flexible, min. H05(07) V-K | 0.5 mm ² | Flexible, max. H05(07) V-K | 35 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm ² | w. plastic collar ferrule, DIN 46228 pt 4, max. | 35 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, min | 0.5 mm ² | w. wire end ferrule, DIN 46228 pt 1, max. | 35 mm ² |

Rated data acc. to IEC

| | | | |
|---|------------------------|---|---------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C) | 150 A |
| Rated current, min. no. of poles (Tu=40°C) | 150 A | Rated voltage for surge voltage class / pollution degree II/2 | 1,000 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 1,000 V | Rated voltage for surge voltage class / pollution degree III/3 | 1,000 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 8 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 8 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 8 kV | | |

Creation date July 2, 2018 10:45:47 AM CEST

Catalogue status 29.06.2018 / We reserve the right to make technical changes.

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**OMNIMATE Power - series LXXX
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Technical data
Rated data acc. to CSA

| | | | |
|-------------------------------|--------|-------------------------------|-------|
| Rated voltage (Use group B) | 600 V | Rated voltage (Use group C) | 600 V |
| Rated voltage (use group D) | 600 V | Rated current (use group B) | 127 A |
| Rated current (use group C) | 127 A | Rated current (use group D) | 5 A |
| Wire cross-section, AWG, min. | AWG 20 | Wire cross-section, AWG, max. | AWG 1 |

Rated data acc. to UL 1059

| | | | |
|-------------------------------|---|-------------------------------|--------|
| Institute (UR) |  | Certificate No. (UR) | E60693 |
| Rated voltage (use group B) | 600 V | Rated voltage (use group C) | 600 V |
| Rated voltage (use group D) | 600 V | Rated current (use group B) | 127 A |
| Rated current (use group C) | 127 A | Rated current (use group D) | 5 A |
| Wire cross-section, AWG, min. | AWG 20 | Wire cross-section, AWG, max. | AWG 1 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 3.0 | EC001284 | ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002643 | ETIM 6.0 | EC002643 |
| eClass 6.2 | 27-26-11-01 | eClass 7.1 | 27-44-04-01 |
| eClass 8.1 | 27-44-04-01 | eClass 9.0 | 27-44-04-01 |
| eClass 9.1 | 27-44-04-01 | | |

Notes

| | |
|-------|--|
| Notes | <ul style="list-style-type: none"> • 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. • IP 20 from 16 mm² to 50 mm² • The test point can only be used as potential-pickup point. • Wire-end ferrules are mandatory for stranded wires with more than 19 strands. |
|-------|--|

| | |
|----------------|--|
| 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. |
|----------------|--|

Data sheet**OMNIMATE Power - series LXXX
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Approvals



ROHS

Conform

DownloadsApproval/Certificate/Document of
Conformity[Declaration of the Manufacturer](#)

Brochure/Catalogue

[FL DRIVES EN](#)
[MB DEVICE MANUF. EN](#)
[FL DRIVES DE](#)
[CAT 2 PORTFOLIOGUIDE EN](#)
[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](#)

Motion controllers white paper

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White Paper UL 600 V

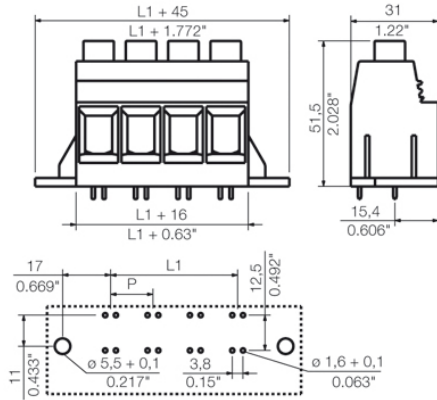
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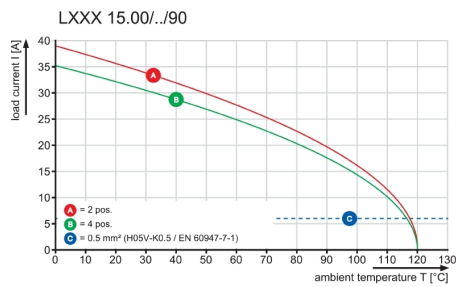
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Drawings

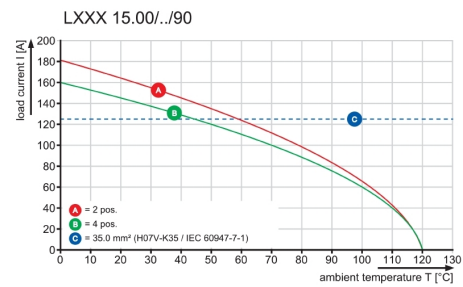
Dimensional drawing



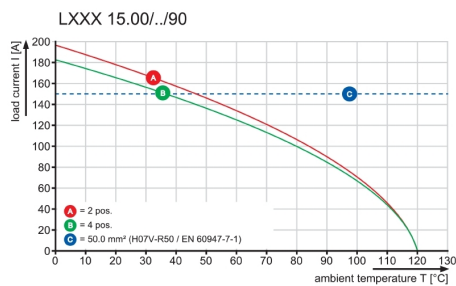
Graph



Graph



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.