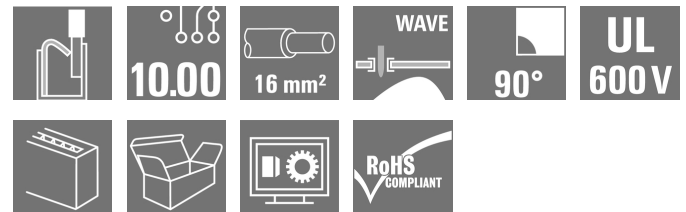


OMNIMATE Power - series LU
LUF 10.00/07/90V 5.0SN BK BX

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



High-performance PCB terminal with a PUSH IN connection system for conductor cross-sections up to 16 mm².

- Fast connection without tools thanks to pushers to open the contact point, or direct plug-in method
- Securely closed contact point, with the "Connection Safety Concept" the conductor is always clamped securely
- Integrated test point for PS 2.0 test plug
- Central tip test point for test probes on the upper side of the terminal
- Increased derating reserves because WEMID insulating material is used.
- Conductor outlet direction of 180°

General ordering data

| | |
|--------------|---|
| Type | LUF 10.00/07/90V 5.0SN BK BX |
| Order No. | 2453740000 |
| Version | PCB terminal, 10.00 mm, No. of poles: 7, 90°, Solder pin length (l): 5 mm, Black, PUSH IN with actuator, Clamping range, max.: 16 mm ² , Box |
| GTIN (EAN) | 4050118493641 |
| Qty. | 20 pc(s). |
| Product data | IEC: 1000 V / 76 A / 0.5 - 16 mm ² UL: 600 V / 58 A / AWG 18 - AWG 6 |
| Packaging | Box |

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Technical data**Dimensions and weights**

| | |
|------------|--------|
| Net weight | 70.7 g |
|------------|--------|

System parameters

| | | | |
|--|---|--|------------------------------|
| Product family | OMNIMATE Power - series LU | Wire connection method | PUSH IN with actuator |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 10 mm | Pitch in inches (P) | 0.394 inch |
| No. of poles | 7 | Fitted by customer | No |
| Solder pin length (l) | 5 mm | Solder pin dimensions | d = 1.2 mm, Octagonal |
| Solder eyelet hole diameter (D) | 1.6 mm | Solder eyelet hole diameter tolerance (D)+ | 0,1 mm |
| Number of solder pins per pole | 3 | Screwdriver blade | 0.8 x 4.0 |
| Stripping length | 18 mm | L1 in mm | 60 mm |
| L1 in inches | 2.362 inch | Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |
| Touch-safe protection acc. to DIN VDE 57 106 | touch-safe with connected connectors from 6 mm ² | | |

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 base material | E-Cu |
| Storage temperature, min. | -25 °C | Storage temperature, max. | 55 °C |
| Max. relative humidity during storage | 80 % | Operating temperature, min. | -40 °C |
| Operating temperature, max. | 120 °C | | |

Conductors suitable for connection

| | | | |
|---|---------------------|---|--------------------|
| Clamping range, min. | 0.5 mm ² | Clamping range, max. | 16 mm ² |
| 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 | 16 mm ² |
| Flexible, min. H05(07) V-K | 0.5 mm ² | Flexible, max. H05(07) V-K | 16 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm ² | w. plastic collar ferrule, DIN 46228 pt 4, max. | 16 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, min | 0.5 mm ² | w. wire end ferrule, DIN 46228 pt 1, max. | 16 mm ² |
| Plug gauge acc. to EN 60999 a x b; Ø | 5.3mm (B6) | | |

Rated data acc. to IEC

| | | | |
|---|---------------|---|---------|
| tested acc. to standard | IEC 60947-7-4 | Rated current, min. no. of poles (Tu=20°C) | 76 A |
| Rated current, max. no. of poles (Tu=20°C) | 76 A | Rated current, min. no. of poles (Tu=40°C) | 76 A |
| Rated current, max. no. of poles (Tu=40°C) | 76 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 | | |


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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) | 58 A |
| Rated current (use group C) | 58 A | Rated current (use group D) | 5 A |
| Wire cross-section, AWG, min. | AWG 18 | Wire cross-section, AWG, max. | AWG 6 |

Rated data acc. to UL 1059

| | | | |
|-------------------------------|---|-------------------------------|--------|
| Institute (cURus) |  | Certificate No. (cURus) | 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) | 58 A |
| Rated current (use group C) | 58 A | Rated current (use group D) | 5 A |
| Wire cross-section, AWG, min. | AWG 18 | Wire cross-section, AWG, max. | AWG 6 |
| 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 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. • The test point can only be used as potential-pickup point. |
| IPC conformity | The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request. |

Approvals

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

Data sheet**OMNIMATE Power - series LU
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Technical data**Downloads**

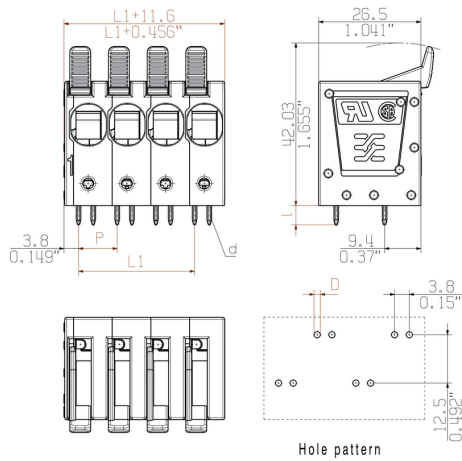
| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL APPL_INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | EPLAN_WSCAD |
| Engineering Data | STEP |
| Motion controllers white paper | Download Whitepaper |
| White Paper UL 600 V | Download Whitepaper |

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LUF 10.00/07/90V 5.0SN BK BX

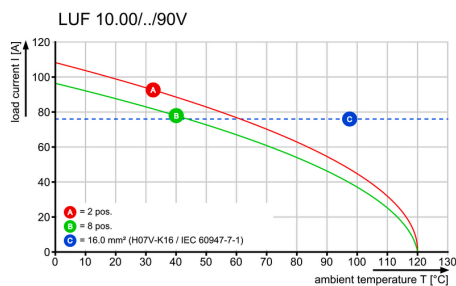
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Drawings

Dimensional drawing



Graph



Recommended wave soldering profiles

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 Germany
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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.

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