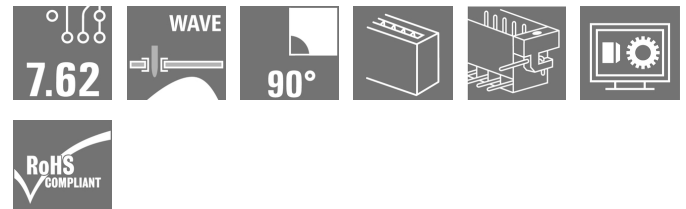


OMNIMATE Power - series BL/SL 7.62HP SL 7.62HP/05/270LF 3.2SN BK BX

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

Product image



Similar to illustration

Power on board - 100% safety, 100% integration, 100% cost-effectiveness:

The compact, efficient solution for UL-600V applications in the lower performance range up to 12 kVA

- 29 A at 400 V (IEC)
- 20 A at 300 V (UL)
- Single compartment mating profile
- Clamping range: 0.08 - 4 mm² / AWG 28 - 12

Assisting in device approval:

- Meets the requirements for 600 V according to UL 508 / UL840.
- Meets the increased requirements on touch safety as per IEC68100-5-1

The slimming diet for multiple-stage device series:
Reduce the size and cut costs in the high-volume lower performance range without compromising device approval!

Male header, 270° outlet angle with solder flanges

General ordering data

| | |
|--------------|--|
| Type | SL 7.62HP/05/270LF 3.2SN BK BX |
| Order No. | 1472390000 |
| Version | PCB plug-in connector, male header, Solder flange, THT solder connection, 7.62 mm, Number of poles: 5, 270°, Solder pin length (l): 3.2 mm, black, Box |
| GTIN (EAN) | 4050118317541 |
| Qty. | 50 pc(s). |
| Product data | IEC: 630 V / 27.5 A UL: 300 V / 20 A |
| Packaging | Box |

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Technical data**Dimensions and weights**

| | | | |
|--------------------------|------------|-----------------|------------|
| Height | 11.6 mm | Height (inches) | 0.457 inch |
| Height of lowest version | 8.4 mm | Depth | 11.75 mm |
| Depth (inches) | 0.463 inch | Net weight | 3.25 g |

System specifications

| | | | |
|--|--------------------------------------|--|---------------------------------|
| Product family | OMNIMATE Power - series BL/SL 7.62HP | Type of connection | Board connection |
| Mounting onto the PCB | THT solder connection | Pitch in mm (P) | 7.62 mm |
| Pitch in inches (P) | 0.3 inch | Outgoing elbow | 270° |
| Number of poles | 5 | Number of solder pins per pole | 1 |
| Solder pin length (l) | 3.2 mm | Solder pin dimensions | 1.0 x 1.0 mm |
| Solder eyelet hole diameter (D) | 1.3 mm | Solder eyelet hole diameter tolerance (D) | + 0,1 mm |
| L1 in mm | 30.48 mm | L1 in inches | 1.2 inch |
| Pin series quantity | 1 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch, plugged |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged | Can be coded | Yes |
| Tightening torque for screw flange, min. | 0.15 Nm | Tightening torque for screw flange, max. | 0.25 Nm |
| Plugging cycles | 25 | | |

Material data

| | | | |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material | PA GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | II |
| Comparative Tracking Index (CTI) | ≥ 500 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | GWFI | 960 °C |
| Contact material | Copper alloy | Layer structure of solder connection | 2-3 µm Ni / 2-4 µm Sn matt |
| Layer structure of plug contact | 2-3 µm Ni / 2-4 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. | 100 °C |
| Temperature range, installation, min. | -25 °C | Temperature range, installation, max. | 100 °C |

Rated data acc. to IEC

| | | | |
|---|------------------------|---|-------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 27.5 A |
| Rated current, max. number of poles (Tu=20°C) | 27.5 A | Rated current, min. number of poles (Tu=40°C) | 25 A |
| Rated current, max. number of poles (Tu=40°C) | 22 A | Rated voltage for surge voltage class / pollution degree II/2 | 630 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 500 V | Rated voltage for surge voltage class / pollution degree III/3 | 400 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 | 4 kV | Short-time withstand current resistance | 3 x 1s with 180 A |
| Clearance, min. | 6.5 mm | Creepage distance, min. | 8.1 mm |

Rated data acc. to CSA

| | | | |
|-----------------------------------|-------|-----------------------------------|-------|
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group C / CSA) | 300 V |
| Rated voltage (Use group D / CSA) | 600 V | Rated current (Use group B / CSA) | 20 A |
| Rated current (Use group C / CSA) | 20 A | Rated current (Use group D / CSA) | 5 A |

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Technical data

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | | | |
|---------------------------------------|--|---------------------------------------|---------|
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group C / UL 1059) | 300 V |
| Rated voltage (Use group D / UL 1059) | 600 V | Rated current (Use group B / UL 1059) | 20 A |
| Rated current (Use group C / UL 1059) | 20 A | Rated current (Use group D / UL 1059) | 5 A |
| Clearance distance, min. | 6.5 mm | Creepage distance, min. | 11.2 mm |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 50 mm |
| VPE width | 125 mm | VPE height | 165 mm |

Classifications

| | | | |
|-------------|-------------|------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |
| eClass 10.0 | 27-44-04-02 | | |

Notes

- Notes
- Additional colours on request
 - Gold-plated contact surfaces on request
 - Rated current related to rated cross-section & min. No. of poles.
 - 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.

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

Data sheet

OMNIMATE Power - series BL/SL 7.62HP SL 7.62HP/05/270LF 3.2SN BK BX

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Technical data

Downloads

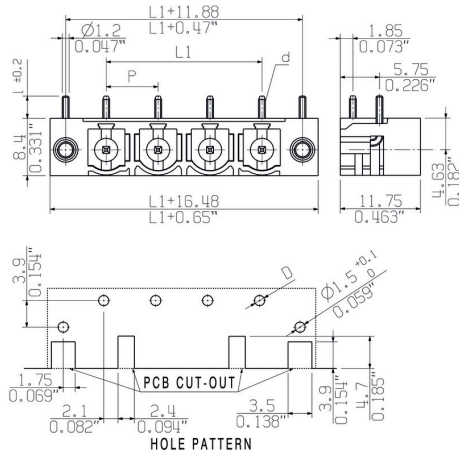
| | |
|---|--|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | EPLAN_WSCAD |
| Engineering Data | STEP |
| White paper power electronics connected correctly | Download Whitepaper |
| White paper UL 600 V | Download Whitepaper |

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Drawings

Dimensional drawing



**OMNIMATE Power - series BL/SL 7.62HP
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Mating connector (fully pluggable)
BLZ 7.62HP/180F

Power on board - 100% safety, 100% integration, 100% cost-effectiveness:

The compact, efficient solution for UL-600V applications in the lower performance range up to 12kVA.

- 29 A at 630 V (IEC)
- 20 A at 600 V (UL)
- Single compartment mating profile
- Clamping range: 0.08 - 4 mm² / AWG 28 - 12

Assistance with device approval:

- meets the requirements for 600 V in accordance with UL508/UL840
- meets the more stringent touch-safety requirements of IEC68100-5-1

The slimming cure for multiple-stage device series: reduced size and cut costs in the high-volume lower performance range without compromising device approval!

General ordering data

| Type | BLZ 7.62HP/05/180F SN B ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 1095710000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 630 V / 29 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248868780 | Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 600 V / 20 A / AWG 28 - AWG 12 | |
| Qty. | 30 pc(s). | | | |
| Type | BLZ 7.62HP/05/180F SN O ... | Version | Product data | Packaging |
| Order No. | 1095820000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 630 V / 29 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248868988 | Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 600 V / 20 A / AWG 28 - AWG 12 | |
| Qty. | 30 pc(s). | | | |

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Mating connector (fully pluggable)
BLZ 7.62HP/180LR

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The compact, efficient solution for UL-600V applications in the lower performance range up to 12kVA.

- 29 A at 630 V (IEC)
- 20 A at 600 V (UL)
- Single compartment mating profile
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Assistance with device approval:

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General ordering data

| Type | BLZ 7.62HP/05/180LR SN ... | Version | Product data | Packaging |
|------------|----------------------------|--|---|-----------|
| Order No. | 1093500000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 630 V / 29 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248864256 | Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 30 pc(s). | | | |
| Type | BLZ 7.62HP/05/180LR SN ... | Version | Product data | Packaging |
| Order No. | 1093460000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 630 V / 29 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4032248864362 | Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 30 pc(s). | | | |
| Type | BLZ 7.62HP/05/180LR SN ... | Version | Product data | Packaging |
| Order No. | 2591930000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 630 V / 29 A / 0.2 - 4 mm ² | Box |
| GTIN (EAN) | 4050118600070 | Clamping yoke connection, Clamping range, max. : 4 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 30 pc(s). | | | |

BLF 7.62HP/180F


180° female header with PUSH-IN connection technology for field wiring in 2.5 mm² with a 7.62 pitch.

Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1

Variants: without flange, external flange, release latch.

General ordering data

| Type | BLF 7.62HP/05/180F SN B ... | Version | Product data | Packaging |
|------------|-----------------------------|--|--|-----------|
| Order No. | 1043940000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 1000 V / 24 A / 0.5 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248775484 | PUSH IN, Clamping range, max. : 2.5 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 36 pc(s). | | | |

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Mating connector (fully pluggable)

| Type | BLF 7.62HP/05/180F SN O ... | Version | Product data | Packaging |
|------------|-----------------------------|--|--|-----------|
| Order No. | 1043900000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 1000 V / 24 A / 0.5 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248775446 | PUSH IN, Clamping range, max. : 2.5 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 36 pc(s). | | | |

BLF 7.62HP/180LR


180° female header with PUSH-IN connection technology for field wiring in 2.5 mm² with a 7.62 pitch. Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1
Variants: without flange, external flange, release latch.

General ordering data

| Type | BLF 7.62HP/05/180LR SN ... | Version | Product data | Packaging |
|------------|----------------------------|--|--|-----------|
| Order No. | 1044020000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 1000 V / 24 A / 0.5 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248775569 | PUSH IN, Clamping range, max. : 2.5 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 36 pc(s). | | | |
| Type | BLF 7.62HP/05/180LR SN ... | Version | Product data | Packaging |
| Order No. | 1043980000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, | IEC: 1000 V / 24 A / 0.5 - 2.5 mm ² | Box |
| GTIN (EAN) | 4032248775521 | PUSH IN, Clamping range, max. : 2.5 mm ² , Box | UL: 600 V / 20 A / AWG 20 - AWG 12 | |
| Qty. | 36 pc(s). | | | |

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Accessories

Coding elements



**Only connects what is supposed to be connected:
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

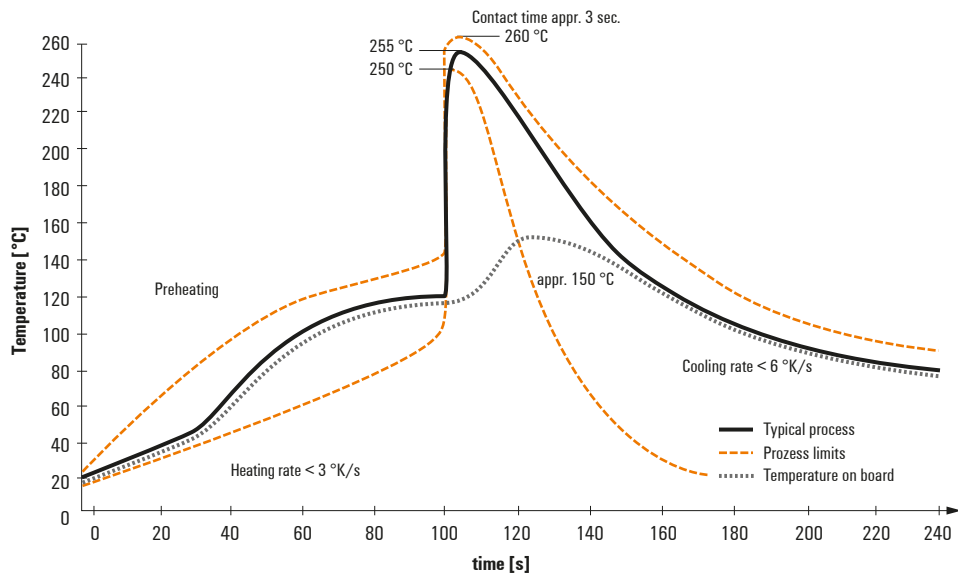
| Type | BLZ/SL KO BK BX | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1545710000 | PCB plug-in connector, Accessories, Coding element, black, Number | | Box |
| GTIN (EAN) | 4008190087142 | of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | BLZ/SL KO OR BX | Version | Product data | Packaging |
| Order No. | 1573010000 | PCB plug-in connector, Accessories, Coding element, orange, Number | | Box |
| GTIN (EAN) | 4008190048396 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

Customer drawing

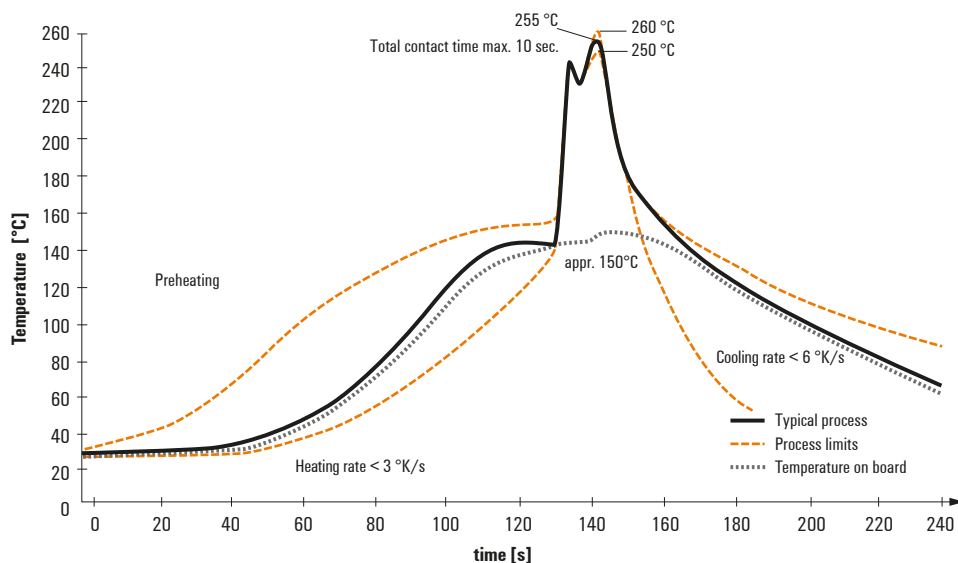
Recommended wave soldering profiles

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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.