

## OMNIMATE Power - series BL/SL 7.62HP SL 7.62HP/10/180G 3.2SN BK BX

**Weidmüller Interface GmbH & Co. KG**  
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### 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.

High-performance male header for applications up to 12 kVA:

- 29 A at 400 V (IEC)
- 20 A at 600 V (UL)
- Single compartment mating profile

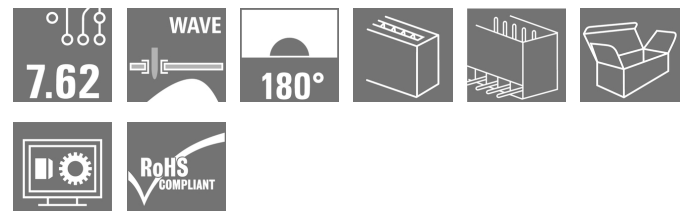
Assisting in device approval:

- Meets the requirements for 600 V according to UL 508 / UL840.
- Meets the increased requirements on touch safety as per IEC68100-5-1 when combined with female header BLZ 7.62 HP

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, 180° outlet direction, without flange



#### General ordering data

Type	SL 7.62HP/10/180G 3.2SN BK BX
Order No.	<a href="#">1122610000</a>
Version	PCB plug-in connector, male header, closed side, THT solder connection, 7.62 mm, Number of poles: 10, 180°, Solder pin length (l): 3.2 mm, tinned, black, Box
GTIN (EAN)	4032248904563
Qty.	50 pc(s).
Product data	IEC: 630 V / 29 A UL: 300 V / 20 A
Packaging	Box

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**Technical data****Dimensions and weights**

Height	15 mm	Height (inches)	0.591 inch
Height of lowest version	11.8 mm	Depth	8.4 mm
Depth (inches)	0.331 inch	Net weight	5.12 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	180°
Number of poles	10	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Tolerance of solder pin position	± 0.15 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	68.58 mm
L1 in inches	2.7 inch	Number of rows	1
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
Plugging cycles	25		

**Material data**

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Contact surface	tinned
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)	29 A
Rated current, max. number of poles (Tu=20°C)	26 A	Rated current, min. number of poles (Tu=40°C)	25 A
Rated current, max. number of poles (Tu=40°C)	21 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	6 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	45 mm
VPE width	110 mm	VPE height	225 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

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## Technical data

### Downloads

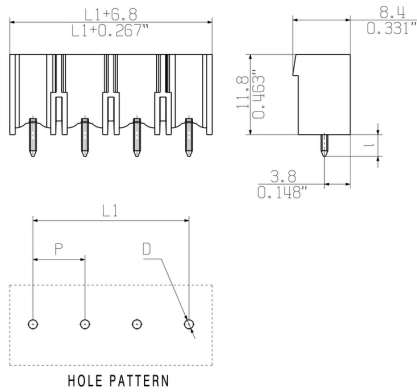
Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">CAT 2 PORTFOLIOGUIDE EN</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL. INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
White paper power electronics connected correctly	<a href="#">Download Whitepaper</a>
Product Change Notification	<a href="#">DE - Change of packaging</a> <a href="#">EN - Change of packaging</a> <a href="#">DE - Change of packaging Step 2</a> <a href="#">EN - Change of packaging Step 2</a>
White paper UL 600 V	<a href="#">Download Whitepaper</a>

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**Drawings**

**Dimensional drawing**



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**Mating connector (fully pluggable)**
**BLF 7.62HP/180**


180° female header with PUSH-IN connection technology for field wiring in 2.5 mm<sup>2</sup> 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/10/180 SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1230230000</a>	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 10,	IEC: 1000 V / 24 A / 0.5 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4050118014013	PUSH IN, Clamping range, max.: 2.5 mm <sup>2</sup> , Box	UL: 600 V / 20 A / AWG 20 - AWG 12	
Qty.	24 pc(s).			
Type	BLF 7.62HP/10/180 SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1227380000</a>	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 10,	IEC: 1000 V / 24 A / 0.5 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4050118011630	PUSH IN, Clamping range, max.: 2.5 mm <sup>2</sup> , Box	UL: 600 V / 20 A / AWG 20 - AWG 12	
Qty.	24 pc(s).			

**BLZ 7.62HP/180**

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

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

High-performance female header for applications up to 12 kVA:

- 29 A with 400 V (IEC)
- 20 A at 600 V (UL)
- 0.08 - 4 mm<sup>2</sup> / AWG 28 - 12

Assisting in device approval:

- Meets the requirements of 600 V according to UL 508 / UL 840.
- When plugged, meets the increased requirements on touch safety as per IEC 61800-5-1

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!

**General ordering data**

Type	BLZ 7.62HP/10/180 SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1059630000</a>	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 10,	IEC: 630 V / 29 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248807598	Clamping yoke connection, Clamping range, max.: 4 mm <sup>2</sup> , Box	UL: 600 V / 20 A / AWG 20 - AWG 12	
Qty.	50 pc(s).			

## Data sheet

### OMNIMATE Power - series BL/SL 7.62HP SL 7.62HP/10/180G 3.2SN BK BX

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## Mating connector (fully pluggable)

Type	BLZ 7.62HP/10/180 SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1980560000</a>	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 10,	IEC: 630 V / 29 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248675616	Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 600 V / 20 A / AWG 20 - AWG 12	
Qty.	20 pc(s).			

## Data sheet

### OMNIMATE Power - series BL/SL 7.62HP SL 7.62HP/10/180G 3.2SN BK BX

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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.

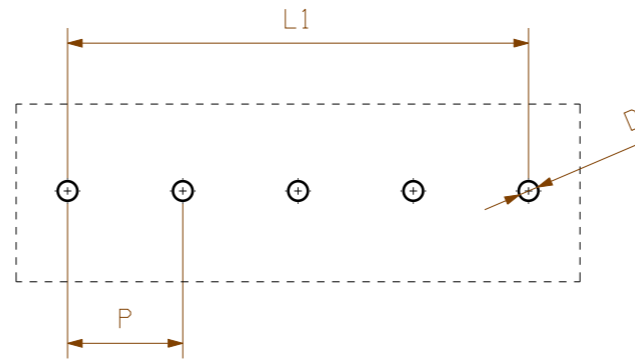
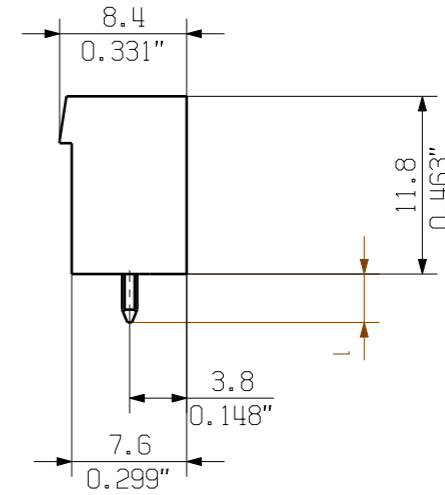
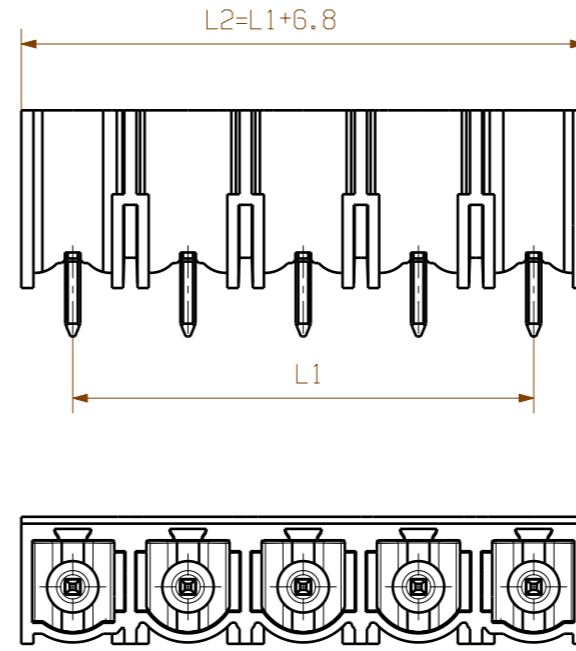
### General ordering data

Type	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<a href="#">1545710000</a>	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.	<a href="#">1573010000</a>	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			

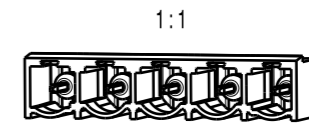


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hole pattern



P = 7.62 Raster Pitch  
 D = Ø1.3  
 0.51"  
 d = 1.2  
 0.047"  
 n = Polzahl/ number of poles

shown: SL 7.62HP/05/180G

4,5	+0.1 -0.3
3,2	+0.1 -0.3
MASS I / DIM I	TOLERANZ / TOLERANCES

12	83,82	3,300
11	76,20	3,000
10	68,58	2,700
9	60,96	2,400
8	53,34	2,100
7	45,72	1,800
6	38,10	1,500
5	30,48	1,200
4	22,86	0,900
3	15,24	0,600
2	7,62	0,300
n	L1 [mm]	L1 [inch]

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

Fehl. Masse und Angaben siehe Datenblatt  
 Further dim. & info. see data sheet

General tolerance: DIN ISO 2768-mK		103327/5 03.04.18 HELIS_MA 00		Cat.no.: .	
		Modification			
		Drawn	Date	Name	<b>3 47881 06</b> Drawing no. Issue no. Sheet 01 of 03 sheets
Responsible	28.06.2017	HELIS_MA	<b>SL 7.62HP/./180...</b> STIFTLAISTE MALE HEADER		
Checked	23.04.2018	HELIS_MA			
Supersedes: .	Approved	LANG_T			

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
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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.