

## OMNIMATE Power - series BL/SL 7.62HP BLZ 7.62HP/10/180 SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
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Germany  
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Fax: +49 5231 14-292083  
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.

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

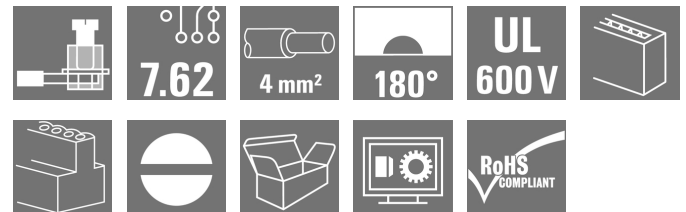
- 29 A with 400 V (IEC)
- 20 A at 600 V (UL)
- 0.08 - 4 mm<sup>2</sup> / AWG 28 - 12

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 68100-5-1

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

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

Height	18.3 mm	Height (inches)	0.72 inch
Depth	23.3 mm	Depth (inches)	0.917 inch
Net weight	20.84 g		

**System Parameters**

Product family	OMNIMATE Power - series BL/SL 7.62HP	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.3 inch	Number of poles	10
L1 in mm	68.58 mm	L1 in inches	2.7 inch
Number of rows	1	Pin series quantity	1
Rated cross-section	2.5 mm <sup>2</sup>	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Volume resistance	5.00 mΩ
Can be coded	Yes	Stripping length	7 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.5 Nm
Clamping screw	M 2.5	Screwdriver blade	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Plugging force/pole, max.	9.5 N
Pulling force/pole, max.	8.5 N		

**Material data**

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	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 plug contact	4-8 μm Sn hot-dip tinned	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

**Conductors suitable for connection**

Clamping range, min.	0.08 mm <sup>2</sup>
Clamping range, max.	4 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 12
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	4 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>
Flexible, max. H05(07) V-K	4 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.4 mm

Creation date May 3, 2020 3:06:21 AM CEST

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**Technical data**

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.25 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	<a href="#">H0,25/12 HBL</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	0.34 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	<a href="#">H0,34/12 TK</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0,5/6</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0,75/6</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H1,0/6</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	<a href="#">H1,5/7</a>
Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	<a href="#">H2,5/7</a>
Reference text	The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage.		
Max. clamping range	4 mm <sup>2</sup>		

**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)	26.5 A	Rated current, min. number of poles (Tu=40°C)	25 A
Rated current, max. number of poles (Tu=40°C)	23 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	4 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.	9.8 mm	Creepage distance, min.	11.3 mm

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## Technical data

### Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	
		200039-1121690	
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)	20 A
Rated current (Use group C / CSA)	20 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

### Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	
		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)	20 A
Rated current (Use group C / UL 1059)	20 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

### Packing

Packaging	Box	VPE length	350 mm
VPE width	135 mm	VPE height	30 mm

### Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
eClass 9.0	27-44-03-09	eClass 9.1	27-44-03-09
eClass 10.0	27-44-03-09	UNSPSC	30-21-18-10

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**Technical data****Notes**

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• P on drawing = pitch</li> <li>• 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.</li> </ul>
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

**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="#">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>
User Documentation	<a href="#">QR-Code product handling video</a>
White paper UL 600 V	<a href="#">Download Whitepaper</a>

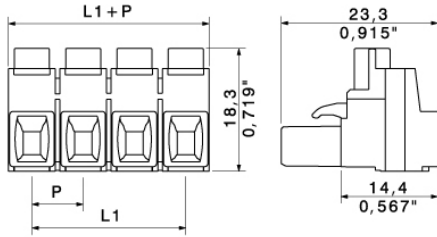
**Data sheet**

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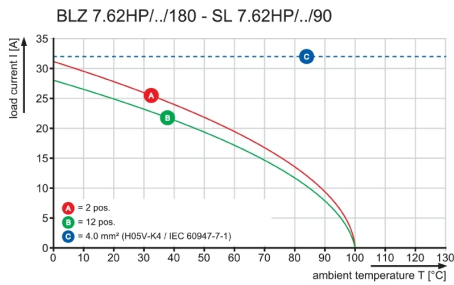
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**Drawings**

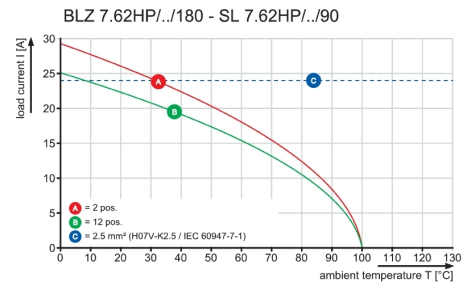
**Dimensional drawing**



**Graph**



**Graph**



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**Mating connector (fully pluggable)**
**SL 7.62HP/270G**

**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 mm<sup>2</sup> / 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

**General ordering data**

Type	SL 7.62HP/10/270G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1472570000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 630 V / 27.5 A	Box
GTIN (EAN)	4050118317701	connection, 7.62 mm, Number of poles: 10, 270°, Solder pin length	UL: 300 V / 20 A	
Qty.	50 pc(s).	(I): 3.2 mm, orange, Box		
Type	SL 7.62HP/10/270G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1472330000</a>	PCB plug-in connector, male header, closed side, THT solder	IEC: 630 V / 27.5 A	Box
GTIN (EAN)	4050118317480	connection, 7.62 mm, Number of poles: 10, 270°, Solder pin length	UL: 300 V / 20 A	
Qty.	50 pc(s).	(I): 3.2 mm, black, Box		

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### Mating connector (fully pluggable)

#### SL 7.62HP/90G



#### 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 mm<sup>2</sup> / 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, 90° outlet angle

#### General ordering data

Type	SL 7.62HP/10/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1059530000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 7.62 mm, Number of poles: 10, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box	IEC: 630 V / 29 A	Box
GTIN (EAN)	4032248807352		UL: 300 V / 20 A	
Qty.	50 pc(s).			
Type	SL 7.62HP/10/90G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1980450000</a>	PCB plug-in connector, male header, closed side, THT solder connection, 7.62 mm, Number of poles: 10, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 630 V / 29 A	Box
GTIN (EAN)	4032248675500		UL: 300 V / 20 A	
Qty.	50 pc(s).			



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**Mating connector (fully pluggable)****SL 7.62HP/180G****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 ...	Version	Product data	Packaging
Order No.	<a href="#">1048950000</a>	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, orange, Box	IEC: 630 V / 29 A UL: 300 V / 20 A	Box
GTIN (EAN)	4032248786923			
Qty.	50 pc(s).			
Type	SL 7.62HP/10/180G 3.2SN ...	Version	Product data	Packaging
Order No.	<a href="#">1122610000</a>	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	IEC: 630 V / 29 A UL: 300 V / 20 A	Box
GTIN (EAN)	4032248904563			
Qty.	50 pc(s).			

## OMNIMATE Power - series BL/SL 7.62HP BLZ 7.62HP/10/180 SN OR 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.

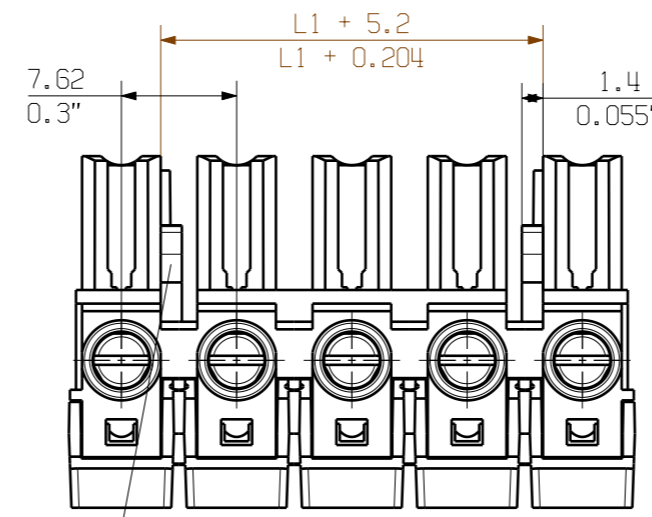
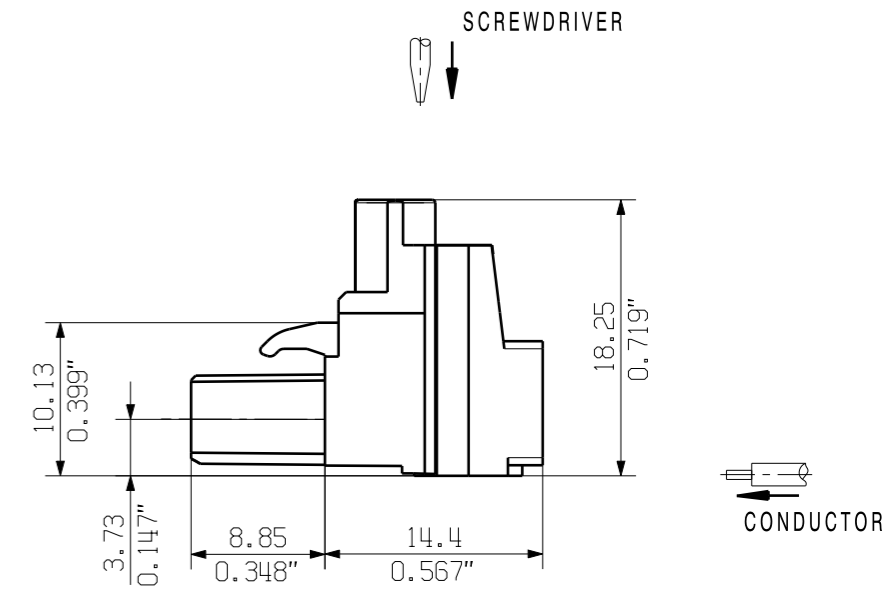
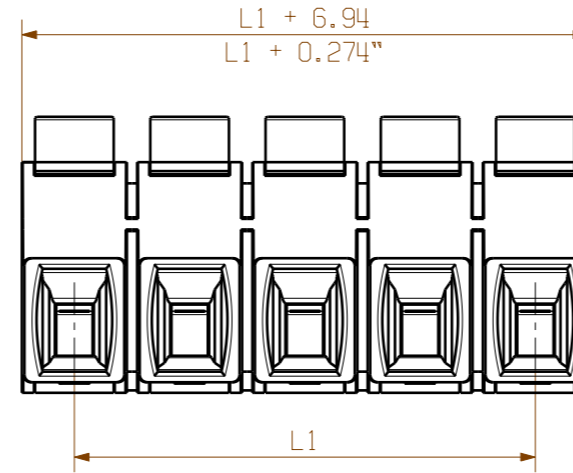
Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

## General ordering data

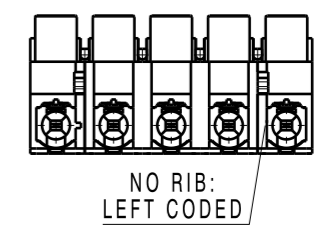
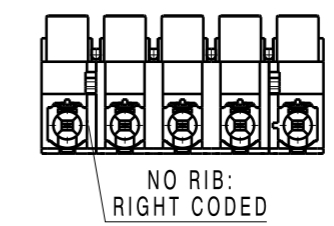
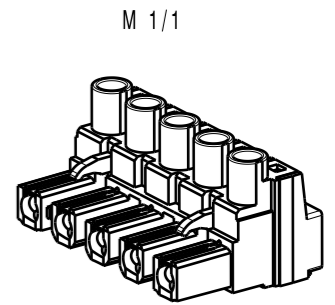
Type	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<a href="#">1545710000</a>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 pc(s).			
Type	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	<a href="#">1573010000</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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BEDRUCKUNGSVORLAGE SIEHE ZNG: 43764  
PRINT DRAWING NO.:43764  
ORDER NUMBERS SEE SHEET: S 43761  
CODING SCHEME SEE SHEET: K 43761  
REPRESENTED: BLZ7.62HP/5/180

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.

Weidmueller 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.

General tolerance: DIN ISO 2768-mK		94081/5 02.05.17 HELIS_MA 00		Cat.no.: .	
		Modification			
		Drawn	Date	Name	<b>3 43761 06</b> Drawing no. Issue no. Sheet 01 of 02 sheets
Responsible	24.04.2017	HELIS_MA	<b>BLZ 7.62HP/./180</b> BUCHSENLEISTE SOCKET BLOCK		
Scale: 2:1	Checked	11.05.2017		HELIS_MA	
Supersedes: .	Approved		LANG_T	7375	