

## BVL 7.62HP/06/180FI 3.5SN BK BX

Weidmüller Interfaces GmbH & Co. KG

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### Product image



Similar to illustration

High-performance female header with solder connection. Side-by-side mounting without sacrificing any poles or with patented multifunction flange for secure, fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, with unique coding diversity, protection against faulty wiring and 4-point contact.



### General ordering data

Version	PCB plug-in connector, female header, Clip-on flange, inverted, THT solder connection, 7.62 mm, Number of poles: 6, 180°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	<a href="#">1928770000</a>
Type	BVL 7.62HP/06/180FI 3.5SN BK BX
GTIN (EAN)	4032248578122
Qty.	50 pc(s).
Product data	IEC: 1000 V / 56.8 A UL: 300 V / 42 A
Packaging	Box

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

Depth	11.4 mm	Depth (inches)	0.449 inch
Height	31.4 mm	Height (inches)	1.236 inch
Width	60.96 mm	Width (inches)	2.4 inch
Net weight	18.28 g		

**Temperatures**

Operating temperature, min.	-50 °C	Operating temperature, max.	130 °C
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**System Parameters**

Product family	OMNIMATE Power - series BV/SV 7.62HP	Type of connection	Board connection
Pitch in mm (P)	7.62 mm	Pitch in inches (P)	0.3 inch
Number of poles	6	L1 in mm	38.1 mm
L1 in inches	1.5 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	IP 20	Protection degree	IP20
Volume resistance	2.00 mΩ	Can be coded	Yes
Plugging cycles	25	Plugging force/pole, max.	7 N
Pulling force/pole, max.	4 N		

**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 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	Copper alloy
Contact surface	tinned	Layer structure of solder connection	4...6 μm Sn matt
Layer structure of plug contact	4...6 μm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	130 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	130 °C		

**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	56.8 A
Rated current, max. number of poles (Tu=20°C)	41 A	Rated current, min. number of poles (Tu=40°C)	41 A
Rated current, max. number of poles (Tu=40°C)	41 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	630 V	Rated voltage for surge voltage class / pollution degree III/3	630 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 420 A
Clearance, min.	6.9 mm	Creepage distance, min.	9.66 mm

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**Technical data**

**Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	www.weidmueller.com
			200039-1534443
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)	35 A
Rated current (Use group C / CSA)	35 A	Rated current (Use group D / CSA)	5 A
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)	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)	42 A
Rated current (Use group C / UL 1059)	42 A	Rated current (Use group D / UL 1059)	5 A
Clearance distance, min.	6.9 mm	Creepage distance, min.	9.66 mm
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Packing**

Packaging	Box	VPE length	260 mm
VPE width	157 mm	VPE height	77 mm

**Type tests**

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96
	Test	mark of origin, type identification, pitch, type of material
	Evaluation	available
	Test	durability
Test: Misengagement (Non-interchangeability)	Evaluation	passed
	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN IEC 512 part 7 section 5 / 05.94
	Test	180° turned with coding elements
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed

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Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-2 section 2.4.5	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 0.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	solid 6 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 6 mm <sup>2</sup>
		Type of conductor and conductor cross-section	AWG 24/1
		Type of conductor and conductor cross-section	AWG 24/19
		Type of conductor and conductor cross-section	AWG 10/1
		Type of conductor and conductor cross-section	AWG 10/19
Evaluation	passed		
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 24/1
		Type of conductor and conductor cross-section	AWG 24/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 0.5 mm <sup>2</sup>
	Evaluation	passed	
	Requirement	1.4 kg	
Conductor type	Type of conductor and conductor cross-section	AWG 10/1	
	Type of conductor and conductor cross-section	AWG 10/19	
Evaluation	passed		

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Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥10 N info@weidmueller.com	
Conductor type	Type of conductor and conductor cross-section	AWG 24/1	and conductor cross-section
	Type of conductor and conductor cross-section	AWG 24/19	
Evaluation	passed		
Requirement	≥20 N		
Conductor type	Type of conductor and conductor cross-section	H05V-U0.5	
	Type of conductor and conductor cross-section	H05V-K0.5	
Evaluation	passed		
Requirement	≥80 N		
Conductor type	Type of conductor and conductor cross-section	H07V-U6	
	Type of conductor and conductor cross-section	H07V-K6	
	Type of conductor and conductor cross-section	AWG 10/1	
	Type of conductor and conductor cross-section	AWG 10/19	
Evaluation	passed		

**Classifications**

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ECLASS 9.0	27-44-04-02
ECLASS 9.1	27-44-04-02	ECLASS 10.0	27-44-04-02
ECLASS 11.0	27-46-02-01	ECLASS 12.0	27-46-02-01

**Important note**

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.

- Notes
- Additional variants 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.
  - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

**Data sheet**

**BVL 7.62HP/06/180FI 3.5SN BK BX**

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**Technical data**

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

**Downloads**

Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">WSCAD, EPLAN</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<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>	
<a href="#">PO OMNIMATE EN</a>	

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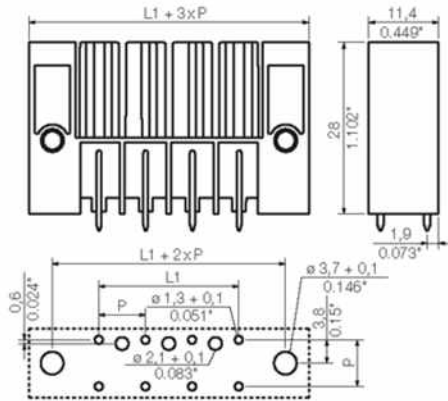
Fax. +49 5231 14-2083

info@weidmueller.com

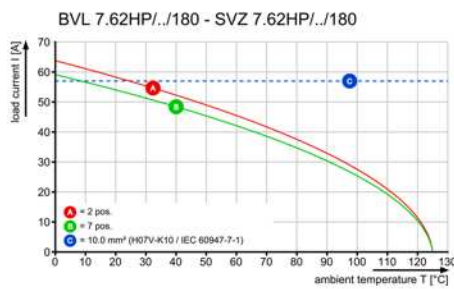
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**Drawings**

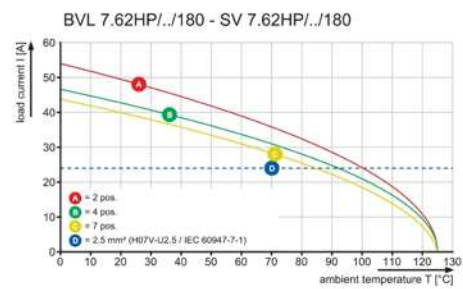
**Dimensional drawing**



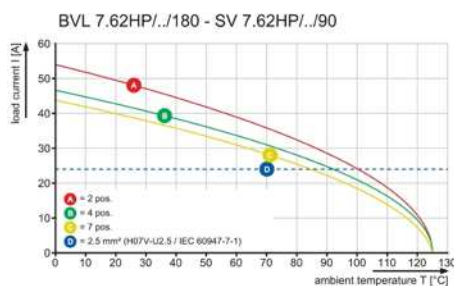
**Graph**



**Graph**

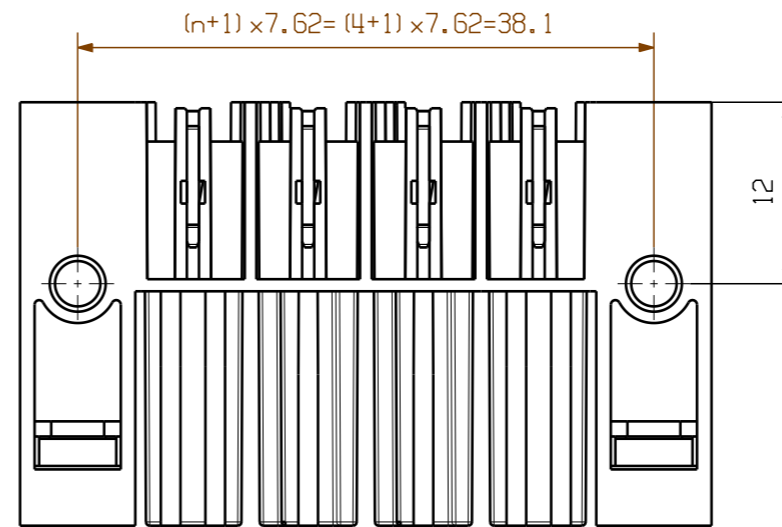
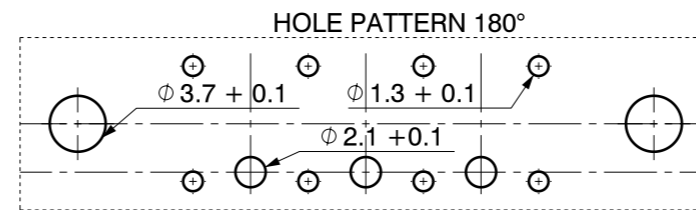
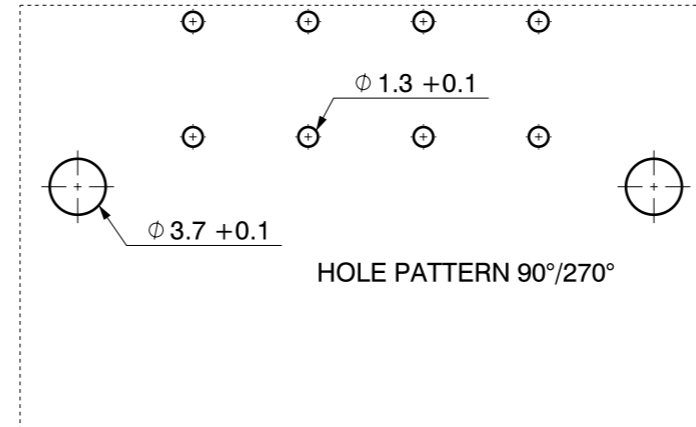
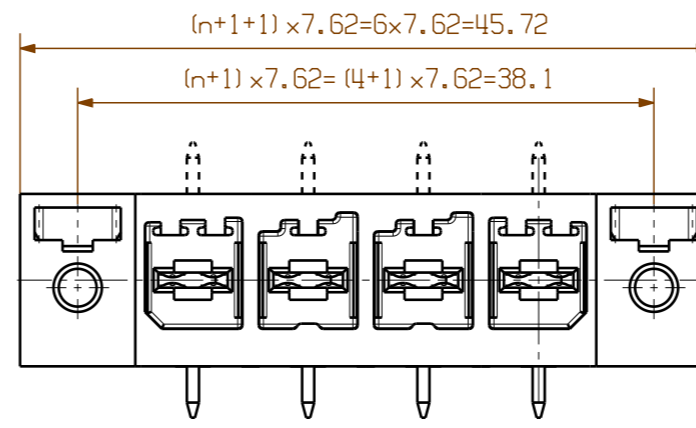


**Graph**

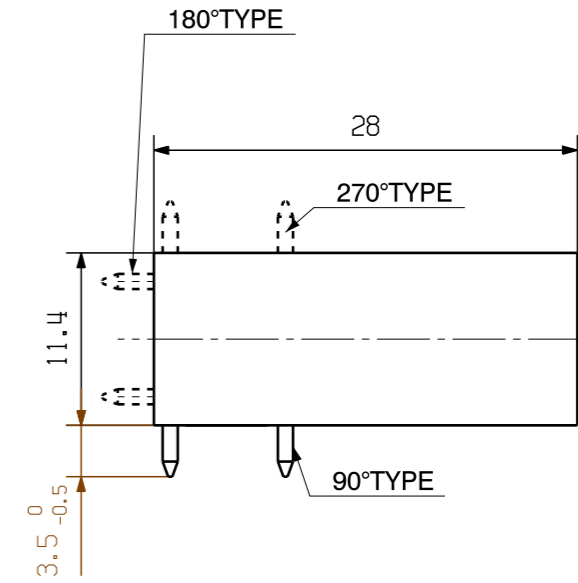


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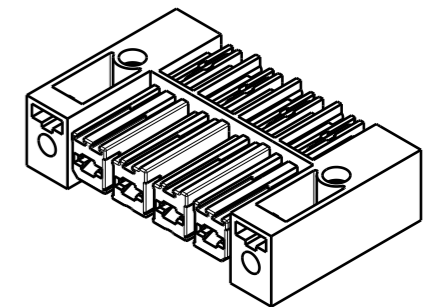
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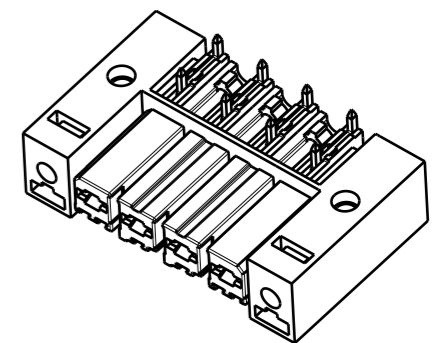
shown: BVL7.62HP/04/90/(270/180) FI



Topview 90° type



SCALE: 1:1



Bottomview 90° type

P = 7.62 Raster Pitch  
 D = Ø1.3+0.01 / 0.051+0.004  
 d = 1.28 / 0.05"

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 with VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to IEC 60326 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.

<b>General tolerance:</b> DIN ISO 2768-mK 	103219/5	01		Cat.no.: .
	29.03.18 HELIS_MA			<b>4 39739</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">03</span> Drawing no. Issue no. Sheet 01 of 02 sheets
	Modification	Date	Name	<b>BVL7.62HP/02..07/...FI</b> BUCHSENLEISTE-LOETANSCHLUSS SOCKET CONNECTOR WITH SOLDER CONNECTION Product file: BVL 7.62 <span style="float: right;">7167</span>
Scale: 2:1	Supersedes: .	Drawn	08.12.2006 HECKERT_M	
		Responsible	23.04.2018 KRUG_M	
		Checked	23.04.2018 HELIS_MA	
		Approved	LANG_T	

## 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.