

## SVZ 7.62HP/07/180G SN BK BX

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com

### Product image



High-performance male header with the proven, 100% maintenance-free Weidmüller steel clamping yoke. 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, unique coding diversity, incorrect wiring protection. Suitable for labelling.

### General ordering data

Version	PCB plug-in connector, male plug, 7.62 mm, Number of poles: 7, 180°, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box
Order No.	<a href="#">1931680000</a>
Type	SVZ 7.62HP/07/180G SN BK BX
GTIN (EAN)	4032248581672
Qty.	25 items
Product data	IEC: 1000 V / 57 A / 0.2 - 10 mm <sup>2</sup> UL: 600 V / 42 A / AWG 24 - AWG 8
Packaging	Box

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## Technical data

## Approvals

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate No. (cURus)	E60693

## Dimensions and weights

Depth	41.45 mm	Depth (inches)	1.6319 inch
Height	23.1 mm	Height (inches)	0.9094 inch
Width	53.34 mm	Width (inches)	2.1 inch
Net weight	32.56 g		

## Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

## System Parameters

Product family	OMNIMATE Power - series BV/SV 7.62HP	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.300 "	Conductor outlet direction	180°
Number of poles	7	L1 in mm	45.72 mm
L1 in inches	1.800 "	Number of rows	1
Pin series quantity	1	Rated cross-section	6 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	IP20 plugged
Protection degree	IP20	Volume resistance	4.50 mΩ
Can be coded	Yes	Stripping length	12 mm
Tightening torque, min.	0.5 Nm	Tightening torque, max.	0.6 Nm
Clamping screw	M 3	Screwdriver blade	0.6 x 3.5
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	Moisture Level (MSL)	
UL 94 flammability rating	V-0	Contact base material	Cu-alloy
Contact material	Cu-alloy	Contact surface	tinned
Layer structure of plug contact	4...6 μm Sn glossy	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	125 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	125 °C		

## Conductors suitable for connection

Clamping range, min.	0.2 mm <sup>2</sup>
Clamping range, max.	6 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 22

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Wire connection cross section AWG, max.	AWG 8
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	6 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	10 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, max.	6 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	6 mm <sup>2</sup>
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.0 mm; 2.4 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H0,5/18 OR</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire-end ferrule	<a href="#">H1,0/18 GE</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 15 mm
		Recommended wire-end ferrule	<a href="#">H1,5/18D SW</a>
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H1,5/12</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.75 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H0,75/18 W</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	2.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H2,5/19D BL</a>
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H2,5/12</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	4 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H4,0/12</a>
		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H4,0/20D GR</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	6 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H6,0/20 SW</a>

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**Technical data**

		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H6,0/12</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.		

**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	57 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	1000 V
Rated voltage for surge voltage class / pollution degree III/2	1000 V	Rated voltage for surge voltage class / pollution degree III/3	800 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	8 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV	Short-time withstand current resistance	3 x 1s with 420 A
Creepage distance, min.	13.8 mm	Clearance, min.	13.56 mm

**Rated data acc. to CSA**

Institute (CSA)	CSA	Certificate No. (CSA)	200039-1534443
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)	35 A
Rated current (Use group C / CSA)	35 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 10
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Rated data acc. to UL 1059**

Institute (cURus)	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)	42 A
Rated current (Use group C / UL 1059)	42 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 8
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Packing**

Packaging	Box	VPE length	338.00 mm
VPE width	130.00 mm	VPE height	44.00 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
	Evaluation	passed
Test: Misengagement (Non-interchangeability)	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.08

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	Test	180° turned with coding elements
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02
	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 7 and 9.1 / 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 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 10/1
		Type of conductor and conductor cross-section AWG 10/19
	Evaluation	passed
Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00

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**Technical data**

Requirement	≥10 N	
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	≥20 N	
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	≥80 N	
Conductor type	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 10/1
	Type of conductor and conductor cross-section	AWG 10/19
Evaluation	passed	

**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.
  - 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.
  - In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load
  - Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

**Classifications**

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

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Drawings

Product image



Dimensional drawing



Graph

BVL 7.62HP/./180 - SVZ 7.62HP/./180



Graph

BVZ 7.62HP/./180 - SVZ 7.62HP/./180



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## Accessories

## Coding elements



The pluggable connections for power electronics - optimised for modern drive technologies, e.g. motor starters, frequency converters and servo-controllers. OMNIMATE Power sets the new standard – with increased safety and innovative solutions such as the pluggable shield, integrated signal contacts and one-handed operation.

The three product lines offer you further advantages:

- Application-oriented scalability: from the compact 4 mm<sup>2</sup> connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm<sup>2</sup> connector for 76 A (IEC) or 54 A (UL)
- Unlimited usage up to 1,000 V (IEC) or 600 V (UL)
- A variety of application optimised mounting options

Our service:

Design your individual connectors simply by using the product configurator.

## General ordering data

Type	BV/SV 7.62HP KO	Version	
Order No.	<a href="#">1937590000</a>	PCB plug-in connector, Accessories, Coding element, black, Number	
GTIN (EAN)	4032248608881	of poles: 1	
Qty.	50 ST		

## Strain reliefs



For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

## General ordering data

Type	BV/SV 7.62HP/02 ZE GR	Version	
Order No.	<a href="#">1937550000</a>	PCB plug-in connector, Accessories, Strain relief, Light Grey, Number	
GTIN (EAN)	4032248608836	of poles: 2	
Qty.	50 ST		
Type	BV/SV 7.62HP/04 ZE GR	Version	
Order No.	<a href="#">1937560000</a>	PCB plug-in connector, Accessories, Strain relief, Light Grey, Number	
GTIN (EAN)	4032248608843	of poles: 4	
Qty.	50 ST		