Data sheet

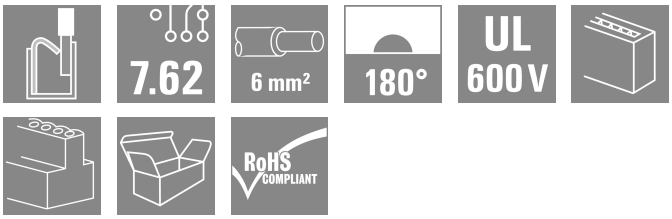
BVF 7.62HP/02/180 SN BK BX LRP

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

www.weidmueller.com

Product image





180° female header with PUSH IN connection technology for field wiring in 6 mm² with 7.62 pitch.
Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1. Ideal touch-safe solution for the power output.
The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.
Variants: without flange, external flange, middle flange with detent fastening and optionally additional screw mount.

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 2, 180°, PUSH IN without actuator, Tension-clamp connection, Clamping range, max. : 10 mm², Box
Order No.	1549820000
Type	BVF 7.62HP/02/180 SN BK BX LRP
GTIN (EAN)	4050118356427
Qty.	95 items
Product data	IEC: 1000 V / 57 A / 0.5 - 10 mm² UL: 600 V / 39 A / AWG 24 - AWG 8
Packaging	Box

Data sheet

BVF 7.62HP/02/180 SN BK BX LRP

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

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Technical data

Approvals

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

Dimensions and weights

Depth	44.7 mm	Depth (inches)	1.7598 inch
Height	20 mm	Height (inches)	0.7874 inch
Net weight	9.93 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	PUSH IN without actuator, Tension-clamp connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.300 "	Conductor outlet direction	180°
Number of poles	2	L1 in mm	7.62 mm
L1 in inches	0.300 "	Pin series quantity	1
Rated cross-section	6 mm²	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Protection degree	IP20
Volume resistance	4.50 mΩ	Can be coded	Yes
Stripping length	12 mm	Screwdriver blade	0.6 x 3.5
Plugging cycles	25	Plugging force/pole, max.	17 N
Pulling force/pole, max.	15 N		

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 material	Cu-alloy
Contact surface	tinned	Layer structure of plug contact	6...8 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.	0.5 mm²
Clamping range, max.	10 mm²
Solid, min. H05(07) V-U	0.5 mm²
Solid, max. H05(07) V-U	10 mm²
Stranded, max. H07V-R	10 mm²
Flexible, min. H05(07) V-K	0.5 mm²
Flexible, max. H05(07) V-K	10 mm²

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Technical data

w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	6 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, max.	10 mm²			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H0,5/12 OR	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm²	
	wire end ferrule	Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H0,75/18 W	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	15 mm
		Recommended wire-end ferrule	H1,0/18 GE	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1,5/12	
		Stripping length	nominal	15 mm
		Recommended wire-end ferrule	H1,5/18D SW	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H2,5/12	
		Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H2,5/19D BL	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	4 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H4,0/12	
		Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H4,0/20D GR	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	6 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H6,0/12	
		Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H6,0/20 SW	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	10 mm²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H10,0/12	

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Technical data

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)	51 A	Rated current, min. number of poles (Tu=40°C)	57 A
Rated current, max. number of poles (Tu=40°C)	45 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.	12.7 mm	Clearance, min.	10.4 mm

Rated data acc. to CSA

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)	33 A
Rated current (Use group C / CSA)	33 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 8

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)	39 A
Rated current (Use group C / UL 1059)	39 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	352.00 mm
VPE width	137.00 mm	VPE height	51.00 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
	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
	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 / 04.08

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Technical data

	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
		Type of conductor and conductor cross-section	solid 6 mm²
		Type of conductor and conductor cross-section	stranded 6 mm²
		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 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	Evaluation	passed	
	Requirement	1.4 kg	
	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	
Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	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

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Technical data

		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	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	

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 • Wire end ferrule with plastic collar to DIN 46228/4 • Wire end ferrule without plastic collar to DIN 46228/1 • 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		

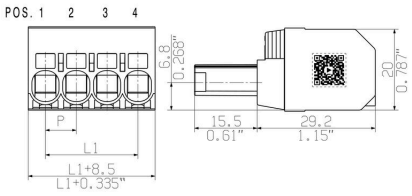
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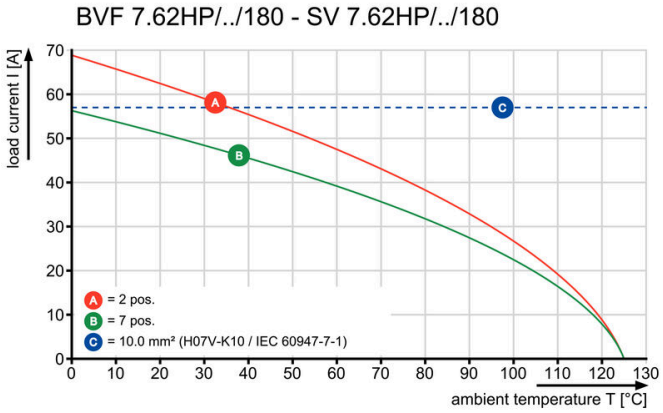
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Drawings

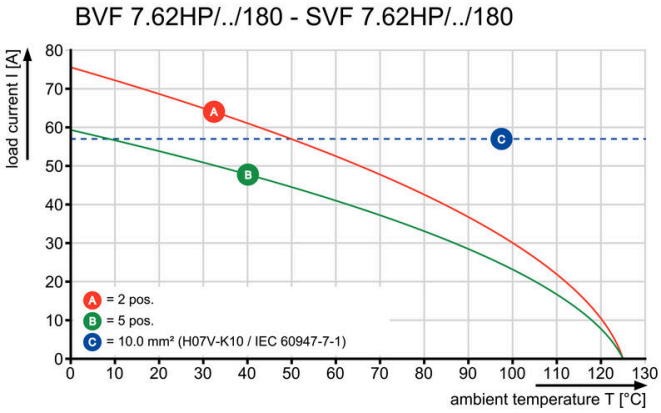
Dimensional drawing



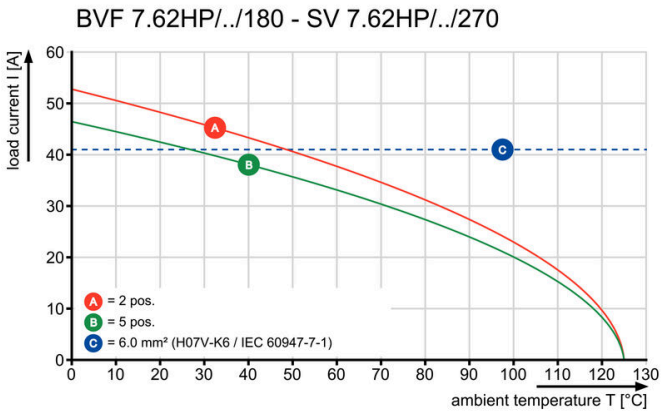
Graph



Graph



Graph



Product benefits



Installation without toolsOutlet direction: 90° und 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 mm² connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm² 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.	1937590000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4032248608881	of poles: 1
Qty.	50 ST	

Slotted screwdriver



Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.8X4.5X125	Version
Order No.	9009020000	Screwdriver, Screwdriver
GTIN (EAN)	4032248266883	
Qty.	1 ST	

Crimping tools



Crimping tools for wire end ferrules, with and without plastic collars
- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

BVF 7.62HP/02/180 SN BK BX LRP

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Accessories

General ordering data

Type	PZ 6/5	Version
Order No.	9011460000	Pressing tool, Crimping tool for wire-end ferrules, 0.25mm², 6mm²,
GTIN (EAN)	4008190165352	Trapezoidal indentation crimp
Qty.	1 ST	

BVF 7.62HP/02/180 SN BK BX LRP

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Counterpart

SV 7.62HP 180G SN

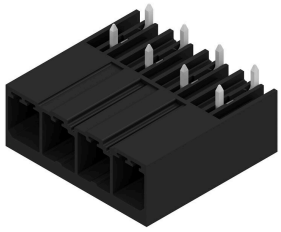


Single-row, high-performance male header for side-by-side mounting without sacrificing any poles or with patented flange for fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, with unique coding diversity and additional fastening in the flange. 3.5 mm pin length is optimised for lead-free wave soldering.

General ordering data

Type	SV 7.62HP/02/180G 3.5SN...	Version
Order No.	1930600000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248580576	connection, 7.62 mm, Number of poles: 2, 180°, Solder pin length (I):
Qty.	120 ST	3.5 mm, tinned, black, Box

SV 7.62HP 270G SN



Single-row, high-current and high-performance male headers for side-by-side mounting without sacrificing any poles or with flange for fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, unique coding diversity and additional fastening in the flange.

General ordering data

Type	SV 7.62HP/02/270G 3.5SN...	Version
Order No.	1931260000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248581283	connection, 7.62 mm, Number of poles: 2, 270°, Solder pin length (I):
Qty.	120 ST	3.5 mm, tinned, black, Box

SV 7.62HP 90G SN



Single-row, high-current and high-performance male headers for side-by-side mounting without sacrificing any poles or with flange for fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, unique coding diversity and additional fastening in the flange.

General ordering data

Type	SV 7.62HP/02/90G 3.5SN ...	Version
Order No.	1930270000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248580149	connection, 7.62 mm, Number of poles: 2, 90°, Solder pin length (I):
Qty.	120 ST	3.5 mm, tinned, black, Box

BVF 7.62HP/02/180 SN BK BX LRP

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Counterpart

SVD 7.62HP 270G SN

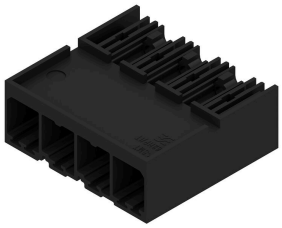


Double-row high-current, high-performance pin headers, with or without flange, for fast, tool-free locking. Optimised for “book-size modules” measuring 50mm wide and above. With integrated mounting option for mounting to the housing wall.Exceptional reliability and operational safety thanks to 100% failsafe mating profile, unique coding and optional additional screw mounting in the flange.

General ordering data

Type	SVD 7.62HP/04/270G 3.2S...	Version
Order No.	1543290000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4050118348323	connection, 7.62 mm, Number of poles: 4, 270°, Solder pin length (l):
Qty.	60 ST	3.2 mm, tinned, black, Box

SV-SMT 7.62HP 270G BX



OMNIMATE Power BV / SV 7.62HP – the 28 kVA performance class
Tailor-made solutions for high performers
More power reserves for higher load bearing capacity: The OMNIMATE Power BV / SV 7.62HP is the middle-class of the power connector systems. It has a large clamping capacity, high overload resistance and the largest range of variants and accessories to choose from: the high performer of the HP range. HP means High Performance – this performance covers a great deal: the full rated current up to 50°C without derating, unlimited 600-V approval according to UL, and the additional finger safety for 400 V-TN systems (+ 3.0 mm) in compliance with the application directive IEC 61800-5-1.

General ordering data

Type	SV-SMT 7.62HP/02/270G 2...	Version
Order No.	2499330000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4050118512427	connection, 7.62 mm, Number of poles: 2, 270°, Solder pin length (l):
Qty.	120 ST	2.6 mm, tinned, black, Box
Type	SV-SMT 7.62HP/02/270G 3...	Version
Order No.	2498380000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4050118511543	connection, 7.62 mm, Number of poles: 2, 270°, Solder pin length (l):
Qty.	50 ST	3.5 mm, tinned, black, Box

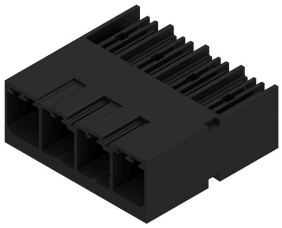
BVF 7.62HP/02/180 SN BK BX LRP

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Counterpart

SV-SMT 7.62HP 90G BX



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Tailor-made solutions for high performers
More power reserves for higher load bearing capacity: The OMNIMATE Power BV / SV 7.62HP is the middle-class of the power connector systems. It has a large clamping capacity, high overload resistance and the largest range of variants and accessories to choose from: the high performer of the HP range. HP means High Performance – this performance covers a great deal: the full rated current up to 50°C without derating, unlimited 600-V approval according to UL, and the additional finger safety for 400 V-TN systems (+ 3.0 mm) in compliance with the application directive IEC 61800-5-1.

General ordering data

Type	SV-SMT 7.62HP/02/90G 2....	Version
Order No.	2499320000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4050118512403	connection, 7.62 mm, Number of poles: 2, 90°, Solder pin length (l):
Qty.	120 ST	2.6 mm, tinned, black, Box
Type	SV-SMT 7.62HP/02/90G 3....	Version
Order No.	2498310000	PCB plug-in connector, male header, closed side, THT/THR solder
GTIN (EAN)	4050118511499	connection, 7.62 mm, Number of poles: 2, 90°, Solder pin length (l):
Qty.	50 ST	3.5 mm, tinned, black, Box

SVF 7.62HP/180G



180° inverted pin header with PUSH IN connection technology for field wiring in 6mm² in a 7.62 pitch, as a “three-flange variant” for enclosure feed-through. Suitable for enclosures with a max. wall thickness of 2mm. Also perfect as a touch-safe solution for reverse voltages. Meets the requirements of UL1059 600 V Class C and IEC 61800-5-1.

General ordering data

Type	SVF 7.62HP/02/180G SN B...	Version
Order No.	1060830000	PCB plug-in connector, male plug, 7.62 mm, Number of poles:
GTIN (EAN)	4032248810871	2, 180°, PUSH IN without actuator, Tension-clamp connection,
Qty.	95 ST	Clamping range, max. : 10 mm², Box

BVF 7.62HP/02/180 SN BK BX LRP

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Counterpart

SVZ 7.62HP 180 SN



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

Type	SVZ 7.62HP/02/180G SN B...	Version
Order No.	1931620000	PCB plug-in connector, male plug, 7.62 mm, Number of poles: 2,
GTIN (EAN)	4032248581627	180°, Clamping yoke connection, Clamping range, max. : 6 mm², Box
Qty.	100 ST	