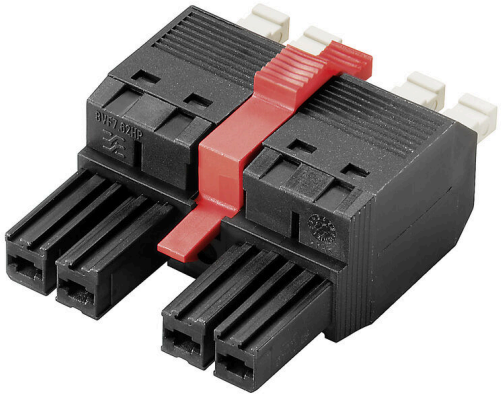
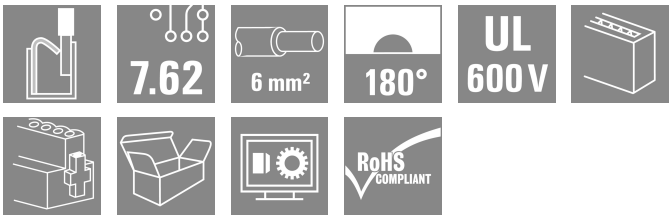
Data sheet

BVFL 7.62HP/04/180MF3 SN BK BX

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

www.weidmueller.com





180° female plug with PUSH IN connection system with adjustable actuator (pusher) for field wiring 6 mm² in a 7.62 pitch. Meets the requirements of UL 1059 600 V Class C ad IEC 61800-5-1. Also ideal as a touch-safe solution for the power output. The self-locking middle flange which can optionally also be screwed, reduces the space requirements by one pitch width in comparison with conventional solutions. Variants: without flange, external flange, middle flange with snap-on mechanism and optionally additional screw mount

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4, 180°, PUSH IN with actuator, Clamping range, max. : 6 mm², Box
Order No.	1547540000
Type	BVFL 7.62HP/04/180MF3 SN BK BX
GTIN (EAN)	4050118353310
Qty.	48 items
Product data	IEC: 1000 V / 41 A / 0.5 - 6 mm² UL: 600 V / 39 A / AWG 24 - AWG 8
Packaging	Box

Data sheet

BVFL 7.62HP/04/180MF3 SN BK BX

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Technical data

Approvals

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

Dimensions and weights

Depth	52.1 mm	Depth (inches)	2.0512 inch
Height	20.6 mm	Height (inches)	0.811 inch
Net weight	11.88 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 with actuator	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.300 "	Conductor outlet direction	180°
Number of poles	4	L1 in mm	30.48 mm
L1 in inches	1.200 "	Number of rows	1
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

Material data

Insulating material	PA GF	Colour	black
Colour of operational elements	white	Colour chart (similar)	RAL 9011
Insulating material group	II	Comparative Tracking Index (CTI)	≥ 600
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.	6 mm²
Solid, min. H05(07) V-U	0.5 mm²
Solid, max. H05(07) V-U	6 mm²
Flexible, min. H05(07) V-K	0.5 mm²
Flexible, max. H05(07) V-K	6 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.	6 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
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.		

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Technical data

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	41 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)	38 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

Institute (CSA)	CSA	Certificate No. (CSA)	200039-70176790
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
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)	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	138.00 mm	VPE height	61.00 mm

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. • Additional pole combinations on request • 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

BVFL 7.62HP/04/180MF3 SN BK BX

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Technical data

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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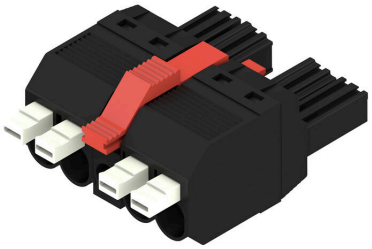
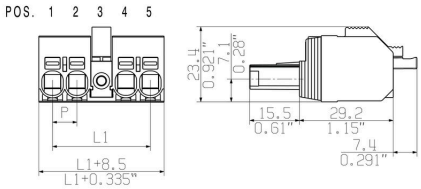
Drawings

Product image



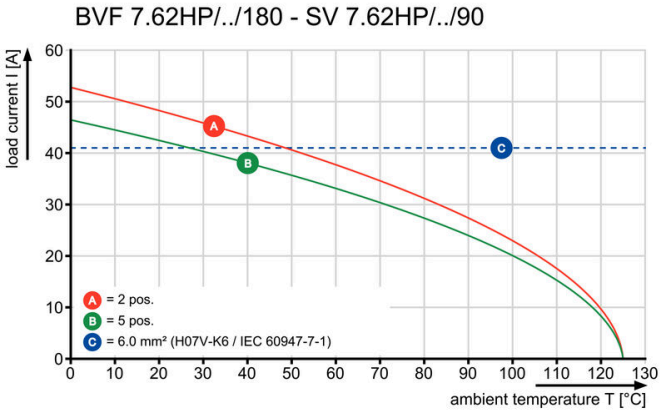
Dimensional drawing



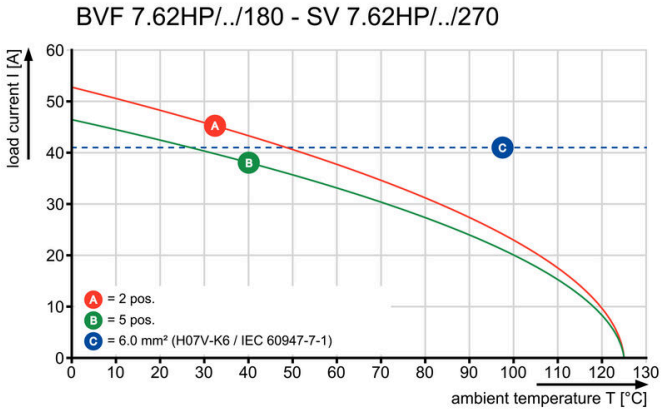
Connection diagram

6	M(S)F6	o	o	o	o	o	X	o
6	M(S)F5	o	o	o	o	X	o	o
6	M(S)F4	o	o	o	X	o	o	o
6	M(S)F3	o	o	X	o	o	o	o
6	M(S)F2	o	X	o	o	o	o	o
5	M(S)F5	o	o	o	o	X	o	
5	M(S)F4	o	o	o	X	o	o	
5	M(S)F3	o	o	X	o	o	o	
5	M(S)F2	o	X	o	o	o	o	
4	M(S)F4	o	o	o	X	o		
4	M(S)F3	o	o	X	o	o		
4	M(S)F2	o	X	o	o	o		
3	M(S)F3	o	o	X	o			
3	M(S)F2	o	X	o	o			
2	M(S)F2	o	X	o				
		1	2	3	4	5	6	7
NO OF POLES	X = MIDDLE FLANGE POSITION	POS. 1 2 3 4 5						

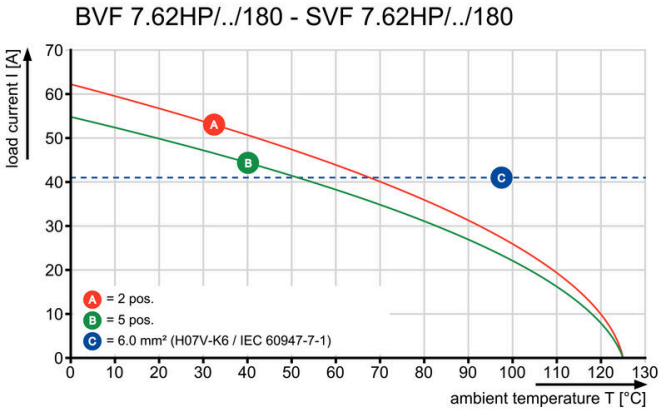
Graph



Graph



Graph



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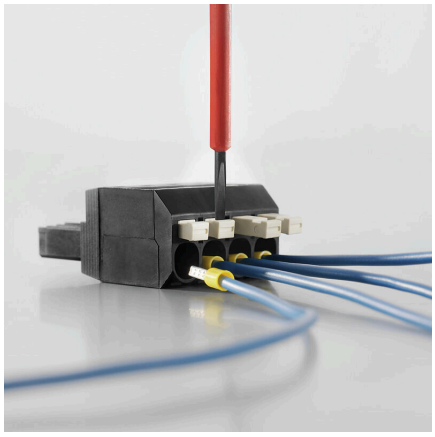
Drawings

Product benefits



Secure connection of small conductorsPUSH IN WIRE READY

Product benefits

Installation without toolsOutlet direction: 90° und 180°

BVFL 7.62HP/04/180MF3 SN BK BX

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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	

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

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	

Coupling set

With the aid of the SVF/BVF 7.62HP COUPLE SET the two plug-in elements can be connected back-to-back to form a 2-row connector with a maximum of 2 x 4 poles.

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Accessories

General ordering data

Type	SVF/BVF 7.62HP COUPLE S...	Version
Order No.	1440850000	PCB plug-in connector, Accessories, Mounting block, black
GTIN (EAN)	4050118247060	
Qty.	20 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 0.6X3.5X100	Version
Order No.	9008330000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056286	
Qty.	1 ST	

BVFL 7.62HP/04/180MF3 SN BK BX

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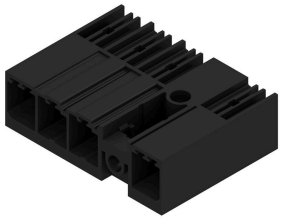
Counterpart

SV 7.62HP 90MSF SN

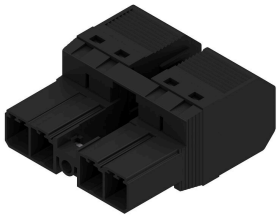


Single-row, high-current and high-performance male headers for side-by-side mounting without sacrificing any poles or with flange for fast fixing without tools.
Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, unique coding diversity and additional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

General ordering data

Type	SV 7.62HP/04/90MSF3 3.5...	Version
Order No.	1048580000	PCB plug-in connector, male header, closed side, Middle screw flange,
GTIN (EAN)	4032248786442	THT solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box

SVF 7.62HP/180MSF

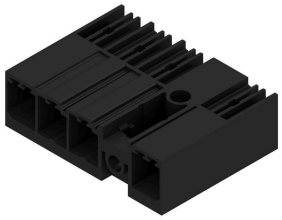


180° inverted inverse voltage-safe male header with PUSH IN connection technology for field wiring.
With automatically locking middle flange for field wiring in 6 mm² with 7.62 pitch.
Also ideal as a touch-safe solution for inverse voltages.
Meets the requirements of UL1059 600 V class C and IEC 61800-5-1.
On request, also available without middle flange.

General ordering data

Type	SVF 7.62HP/04/180MSF3 S...	Version
Order No.	1061140000	PCB plug-in connector, male plug, 7.62 mm, Number of poles:
GTIN (EAN)	4032248810628	4, 180°, PUSH IN without actuator, Tension-clamp connection,
Qty.	40 ST	Clamping range, max. : 10 mm², Box

SV-SMT 7.62IT 90MSF SN BX



OMNIMATE Power for IT networks – scalable to 50 kVA
Tailor-made solutions for special requirements
More standard-compliance means fewer compromises: OMNIMATE Power for IT networks has integrated features incorporated as standard across the range. This makes the design-in and approvals process simpler and makes them safer and more reliable in operation.
Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process.
In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process.

BVFL 7.62HP/04/180MF3 SN BK BX

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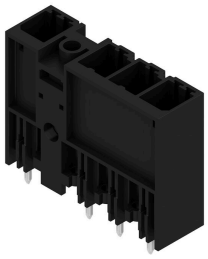
Counterpart

General ordering data

Type	SV-SMT 7.62IT/04/90MSF3...	Version
Order No.	2499840000	PCB plug-in connector, male header, Middle screw flange, THT/THR
GTIN (EAN)	4050118513264	solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin
Qty.	48 ST	length (l): 2.6 mm, tinned, black, Box

Type	SV-SMT 7.62IT/04/90MSF3...	Version
Order No.	2498720000	PCB plug-in connector, male header, Middle screw flange, THT/THR
GTIN (EAN)	4050118511925	solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin
Qty.	50 ST	length (l): 3.5 mm, tinned, black, Box

SV 7.62HP 180MF SN

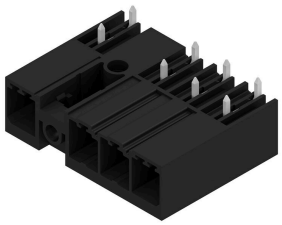


180° male header with middle flange with a 7.62 pitch. Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V.
Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.
The automatically locking middle flange which can optionally also be screwed, reduces space requirements by one pitch width in comparison with conventional solutions.
On request: available with screw flange or without flange.

General ordering data

Type	SV 7.62HP/04/180MF3 3.5...	Version
Order No.	1048530000	PCB plug-in connector, male header, closed side, Middle flange, THT
GTIN (EAN)	4032248786497	solder connection, 7.62 mm, Number of poles: 4, 180°, Solder pin
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box

SV 7.62HP 270MF SN



270° male header with middle flange with a 7.62 pitch. Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V. Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.
The automatically locking middle flange which can optionally also be screwed, reduces space requirements by one pitch width in comparison with conventional solutions.
On request: available with screw flange or without flange.

General ordering data

Type	SV 7.62HP/04/270MF3 3.5...	Version
Order No.	1048550000	PCB plug-in connector, male header, closed side, Middle flange, THT
GTIN (EAN)	4032248786473	solder connection, 7.62 mm, Number of poles: 4, 270°, Solder pin
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box

BVFL 7.62HP/04/180MF3 SN BK BX

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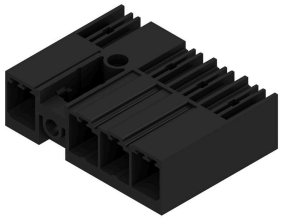
Counterpart

SV 7.62HP 90MF SN

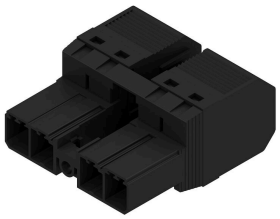


90° male header with middle flange with a 7.62 pitch.
Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V.
Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.
The automatically locking middle flange which can optionally also be screwed, reduces space requirements by one pitch width in comparison with conventional solutions.
On request: available with screw flange or without flange.

General ordering data

Type	SV 7.62HP/04/90MF3 3.5S...	Version
Order No.	1048570000	PCB plug-in connector, male header, closed side, Middle flange, THT
GTIN (EAN)	4032248786459	solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box

SVF 7.62HP/180MF



180° inverted inverse voltage-safe male header with PUSH IN connection technology for field wiring.
With automatically locking middle flange for field wiring in 6 mm² with 7.62 pitch.
Also ideal as a touch-safe solution for inverse voltages.
Meets the requirements of UL1059 600 V class C and IEC 61800-5-1.
On request, also available without middle flange.

General ordering data

Type	SVF 7.62HP/04/180MF3 SN...	Version
Order No.	1061050000	PCB plug-in connector, male plug, 7.62 mm, Number of poles:
GTIN (EAN)	4032248810697	4, 180°, PUSH IN without actuator, Tension-clamp connection,
Qty.	40 ST	Clamping range, max. : 10 mm², Box

SVF 7.62HP/180SFMF

180° inverted male header with PUSH IN connection technology for field wiring in 6 mm² with 7.62 pitch as "three-flange variant" for housing passage. Suitable for housings with a max. wall thickness of 2 mm.
Also perfect as a finger-safe solution for inverse voltages.
Meets the requirements of UL1059 600 V class C and IEC 61800-5-1.

BVFL 7.62HP/04/180MF3 SN BK BX

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

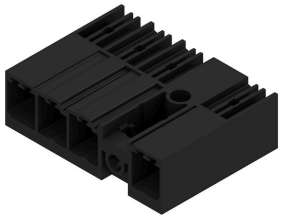
www.weidmueller.com

Counterpart

General ordering data

Type	SVF 7.62HP/04/180SFMF3 ...	Version
Order No.	1427260000	PCB plug-in connector, male plug, 7.62 mm, Number of poles:
GTIN (EAN)	4050118231298	4, 180°, PUSH IN without actuator, Tension-clamp connection,
Qty.	25 ST	Clamping range, max. : 10 mm², Box

SV-SMT 7.62IT 90MF SN BX

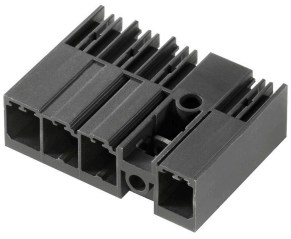


OMNIMATE Power for IT networks – scalable to 50 kVA
Tailor-made solutions for special requirements
More standard-compliance means fewer compromises: OMNIMATE Power for IT networks has integrated features incorporated as standard across the range. This makes the design-in and approvals process simpler and makes them safer and more reliable in operation.
Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process.
In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process.

General ordering data

Type	SV-SMT 7.62IT/04/90MF3 ...	Version
Order No.	2499750000	PCB plug-in connector, male header, Middle flange, THT/THR solder
GTIN (EAN)	4050118513172	connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l):
Qty.	48 ST	2.6 mm, tinned, black, Box

SV-SMT 7.62IT 90MF SN RL



OMNIMATE Power for IT networks – scalable to 50 kVA
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In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process.

General ordering data

Type	SV-SMT 7.62IT/04/90MF3 ...	Version
Order No.	2536580000	PCB plug-in connector, male header, Middle flange, THT/THR solder
GTIN (EAN)	4050118548631	connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l):
Qty.	110 ST	2.6 mm, tinned, black, Tape

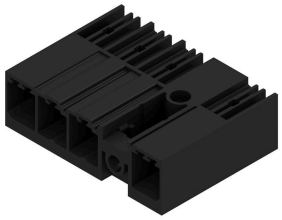
BVFL 7.62HP/04/180MF3 SN BK BX

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

www.weidmueller.com

Counterpart

SV-SMT 7.62IT 90MF SN BX



OMNIMATE Power for IT networks – scalable to 50 kVA
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Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process.
In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process.

General ordering data

Type	SV-SMT 7.62IT/04/90MF3 ...	Version
Order No.	2498620000	PCB plug-in connector, male header, Middle flange, THT/THR solder
GTIN (EAN)	4050118511826	connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l):
Qty.	50 ST	3.5 mm, tinned, black, Box