

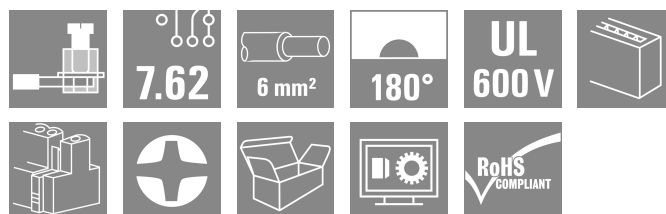
**BVZ 7.62IT/04/180MF2 SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



180° female plug with a 7.62 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SV 7.62 IT.. with leading contact.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth.

The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

On request also available without middle flange interlock.

**General ordering data**

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4, 180°, Clamping yoke connection, Clamping range, max. : 10 mm <sup>2</sup> , Box
Order No.	<a href="#">1156740000</a>
Type	BVZ 7.62IT/04/180MF2 SN BK BX
GTIN (EAN)	4032248943845
Qty.	32 items
Product data	IEC: 1000 V / 57 A / 0.2 - 10 mm <sup>2</sup> UL: 600 V / 40.5 A / AWG 24 - AWG 8
Packaging	Box

## BVZ 7.62IT/04/180MF2 SN BK BX

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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	43.1 mm	Depth (inches)	1.6968 inch
Height	26.1 mm	Height (inches)	1.0276 inch
Width	38.1 mm	Width (inches)	1.5 inch
Net weight	23.07 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 7.62IT	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	4	L1 in mm	30.48 mm
L1 in inches	1.200 "	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	IP 20
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
Plugging force/pole, max.	14 N	Pulling force/pole, max.	14 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	Copper 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.	0.2 mm <sup>2</sup>
Clamping range, max.	10 mm <sup>2</sup>
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>

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Flexible, max. H05(07) V-K	10 mm <sup>2</sup>			
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.				
w. plastic collar ferrule, DIN 46228 pt 4, 6 mm <sup>2</sup> max.				
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	Stripping length	nominal	14 mm
		Recommended wire-end ferrule	<a href="#">H0.5/18 OR</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	15 mm
		Recommended wire-end ferrule	<a href="#">H1.0/18 GE</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm <sup>2</sup>	
	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	Type	fine-wired		
	nominal	0.75 mm <sup>2</sup>		
wire end ferrule	Stripping length	nominal	14 mm	
	Recommended wire-end ferrule	<a href="#">H0.75/18 W</a>		
Cross-section for conductor connection	Type	fine-wired		
	nominal	2.5 mm <sup>2</sup>		
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	Type	fine-wired		
	nominal	4 mm <sup>2</sup>		
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	Type	fine-wired		
	nominal	6 mm <sup>2</sup>		
wire end ferrule	Stripping length	nominal	14 mm	
	Recommended wire-end ferrule	<a href="#">H6.0/20 SW</a>		
	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.

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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)	57 A
Rated current, min. 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.	10.2 mm

**Rated data acc. to CSA**

Institute (CSA)	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)	40.5 A
Rated current (Use group C / CSA)	40.5 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 voltage (Use group F / UL 1059)	1000 V
Rated current (Use group B / UL 1059)	40.5 A	Rated current (Use group C / UL 1059)	40.5 A
Rated current (Use group D / UL 1059)	5 A	Rated current (Use group F / UL 1059)	40.5 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	351.00 mm
VPE width	135.00 mm	VPE height	49.00 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	<ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</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> <li>• 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</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

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## Technical data

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### 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		

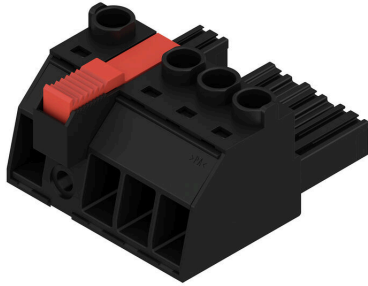
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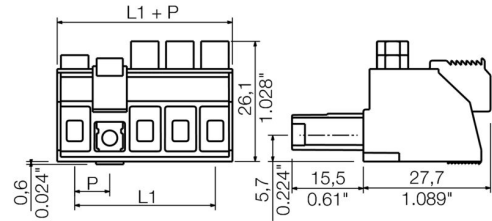
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Drawings

Product image

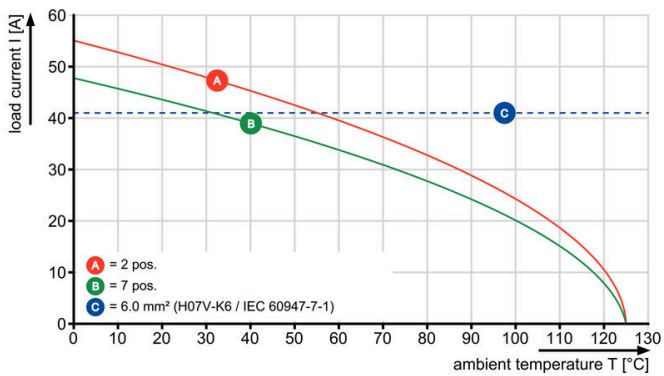


Dimensional drawing



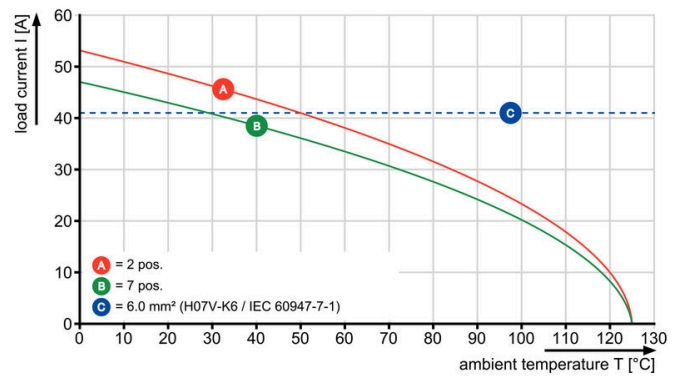
Graph

BVZ 7.62HP/..180 - SV 7.62HP/..90



Graph

BVZ 7.62HP/..180 - SV 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 RD 2022	Version	
Order No.	<a href="#">2007300000</a>	PCB plug-in connector, Accessories, Coding element, red, Number of	
GTIN (EAN)	4050118392715	poles: 1	
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 0.8X4.5X125	Version	
Order No.	<a href="#">9009020000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248266883		
Qty.	1 ST		

Type	SDIS 0.8X4.0X100	Version	
Order No.	<a href="#">9008400000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056361		
Qty.	1 ST		

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**Accessories**
**Crosshead screwdriver Phillips**


Crosshead screwdriver, Phillips, SDK PH DIN 5262, ISO 8764/2-PH, output to ISO 8764-PH, ChromTop tip, SoftFinish grip

**General ordering data**

Type	SDK PH1	Version	
Order No.	<a href="#">9008480000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056477		
Qty.	1 ST		
Type	SDIK PH1	Version	
Order No.	<a href="#">9008570000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056569		
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

**General ordering data**

Type	PZ 6/5	Version	
Order No.	<a href="#">9011460000</a>	Pressing tool, Crimping tool for wire-end ferrules, 0.25mm <sup>2</sup> , 6mm <sup>2</sup> ,	
GTIN (EAN)	4008190165352	Trapezoidal indentation crimp	
Qty.	1 ST		

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## Counterpart

### SV 7.62IT 90MF SN



90° male header with soldered flange fastening with 7.62 pitch for 400 V IT power networks according to IEC 61800-5-1.

UL approval as per UL840 600 V.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth when combined with female header BVZ 7.62 IT...

Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.

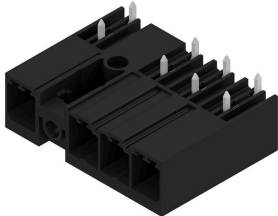
The automatically locking middle flange which can optionally also be screwed, reduces space requirements by one pitch width in comparison with conventional solutions.

On request: available with screw flange or without flange.

#### General ordering data

Type	SV 7.62IT/04/90MF2 3.5S...	Version	
Order No.	<a href="#">1156580000</a>	PCB plug-in connector, male header, closed side, Middle flange, THT	
GTIN (EAN)	4032248943524	solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin	
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box	

### SV 7.62IT 270MF SN



270° male header with 7.62 pitch for 400 V IT power networks according to IEC 61800-5-1.

UL approval as per UL840 600 V.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth when combined with female header BVZ 7.62 IT... Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.

#### General ordering data

Type	SV 7.62IT/04/270MF2 3.5...	Version	
Order No.	<a href="#">1156520000</a>	PCB plug-in connector, male header, closed side, Middle flange, THT	
GTIN (EAN)	4032248943388	solder connection, 7.62 mm, Number of poles: 4, 270°, Solder pin	
Qty.	48 ST	length (l): 3.5 mm, tinned, black, Box	

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**Counterpart**

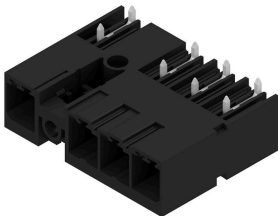
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**SV-SMT 7.62IT 90MF SN BX**


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/04/90MF2 ...	Version
Order No.	<a href="#">2499740000</a>	PCB plug-in connector, male header, Middle flange, THT/THR solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l):
GTIN (EAN)	4050118513165	2.6 mm, tinned, black, Box
Qty.	48 ST	

**SV-SMT 7.62IT 270MF 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/04/270MF2...	Version
Order No.	<a href="#">2500240000</a>	PCB plug-in connector, male header, Middle flange, THT/THR solder connection, 7.62 mm, Number of poles: 4, 270°, Solder pin length (l):
GTIN (EAN)	4050118512946	2.6 mm, tinned, black, Box
Qty.	48 ST	