

**BUF 10.16IT/03/180MF2 AG BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Device connectivity | OMNIMATE® Power BUF 10.16  
PUSH IN PCB connector, 16mm<sup>2</sup>, with wire-ready function

- PUSH IN technology with settable wire-ready contact point simplifies the connection of stranded wires without wire-end ferrules and wires with particularly rigid insulation
- Direct and tool-free connection of solid wires and wires with crimped wire-end ferrules for fast and safe wiring
- Single-hand operation of the plug-in connector and automatic connection thanks to the middle flange with snap-on mechanism and optionally with additional screw fastening

**General ordering data**

Version	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 3, 180°, PUSH IN with actuator, Clamping range, max. : 16 mm <sup>2</sup> , Box
Order No.	<a href="#">2493180000</a>
Type	BUF 10.16IT/03/180MF2 AG BK BX
GTIN (EAN)	4050118502763
Qty.	28 pc(s).
Product data	IEC: 1000 V / 76 A / 2.5 - 16 mm <sup>2</sup> UL: 600 V / 51 A / AWG 12 - AWG 6
Packaging	Box

Creation date June 14, 2024 10:36:52 AM CEST

Catalogue status 01.06.2024 / We reserve the right to make technical changes.

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

Depth	39.5 mm	Depth (inches)	1.555 inch
Height	33.3 mm	Height (inches)	1.311 inch
Width	40.64 mm	Width (inches)	1.6 inch
Net weight	42.62 g		

**System Parameters**

Product family	OMNIMATE Power - series BU/SU 10.16	Type of connection	Field connection
Wire connection method	PUSH IN with actuator	Pitch in mm (P)	10.16 mm
Pitch in inches (P)	0.4 "	Conductor outlet direction	180°
Number of poles	3	L1 in mm	30.48 mm
L1 in inches	1.2 "	Number of rows	1
Pin series quantity	1	Rated cross-section	16 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
Protection degree	IP20	Can be coded	Yes
Stripping length	18 mm	Screwdriver blade	0.8 x 4.0
Screwdriver blade standard	DIN 5264	Plugging cycles	25
Plugging force/pole, max.	15 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)	≥ 400	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	Cu-alloy
Contact surface	silver-plated	Layer structure of plug contact	≥ 3 µm Ag
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C

**Conductors suitable for connection**

Clamping range, min.	2.5 mm <sup>2</sup>
Clamping range, max.	16 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 12
Wire connection cross section AWG, max.	AWG 4
Solid, min. H05(07) V-U	2.5 mm <sup>2</sup>
Solid, max. H05(07) V-U	10 mm <sup>2</sup>
Stranded, min. H07V-R	10 mm <sup>2</sup>
Stranded, max. H07V-R	16 mm <sup>2</sup>
Flexible, min. H05(07) V-K	2.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	16 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 16 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, 2.5 mm <sup>2</sup> min.	
w. wire end ferrule, DIN 46228 pt 1, 16 mm <sup>2</sup> max.	

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**Technical data**

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	2.5 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	<a href="#">H2.5/25D BL</a>
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	<a href="#">H2.5/18</a>
	Cross-section for conductor connection	Type	fine-wired
		nominal	4 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	<a href="#">H4.0/26D GR</a>
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	<a href="#">H4.0/18</a>
	Cross-section for conductor connection	Type	fine-wired
		nominal	6 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	<a href="#">H6.0/26 SW</a>
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	<a href="#">H6.0/18</a>
	Cross-section for conductor connection	Type	fine-wired
		nominal	10 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	<a href="#">H10.0/28 EB</a>
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	<a href="#">H10.0/18</a>
	Cross-section for conductor connection	Type	fine-wired
		nominal	16 mm <sup>2</sup>
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	<a href="#">H16.0/28 GN</a>
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	<a href="#">H16.0/18</a>

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage.

**Rated data acc. to IEC**

Rated current, min. number of poles (Tu=20°C)	76 A	Rated current, max. number of poles (Tu=20°C)	71 A
Rated current, min. number of poles (Tu=40°C)	70 A	Rated current, max. number of poles (Tu=40°C)	62 A
Rated voltage for surge voltage class / pollution degree II/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/3	1,000 V	Rated impulse voltage for surge voltage class/ pollution degree II/2	8 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 800A		

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**Technical data**
**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059) 600 V

Rated voltage (Use group C / UL 1059) 600 V

Rated current (Use group B / UL 1059) 51 A

Rated current (Use group C / UL 1059) 51 A

Wire cross-section, AWG, min. AWG 12

Wire cross-section, AWG, max. AWG 6

 Reference to approval values  
 Specifications are maximum values, details - see approval certificate.

**Packing**

Packaging	Box	VPE length	356 mm
VPE width	186 mm	VPE height	76 mm

**Type tests**

Test: Durability of markings	Standard	IEC 60068-2-70 / 12.95
	Test	mark of origin, type identification, pitch, durability
	Evaluation	available
Test: Clampable cross section	Standard	IEC 60999-1:1999-11 section 9.1, IEC 60947-1:2011-03 section 8.2.4.5.1
	Conductor type	Type of conductor and stranded 2.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 16 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 10 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 12/1 conductor cross-section
		Type of conductor and AWG 12/19 conductor cross-section
	Evaluation	passed

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**Technical data**

Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1:1999-11 section 9.4 bzw. section 8.10	
	Requirement	0.7 kg	
	Conductor type	Type of conductor and H07V-K2.5 conductor cross-section	
		Type of conductor and H07V-U2.5 conductor cross-section	
		Type of conductor and AWG 14/1 conductor cross-section	
		Type of conductor and AWG 14/19 conductor cross-section	
	Evaluation	passed	
	Requirement	2.9 kg	
	Conductor type	Type of conductor and H07V-K16 conductor cross-section	
		Type of conductor and H07V-U16 conductor cross-section	
	Evaluation	passed	
Pull-out test	Standard	IEC 60999-1:1999-11 section 9.5	
	Requirement	≥50 N	
	Conductor type	Type of conductor and AWG 14/1 conductor cross-section	
		Type of conductor and AWG 14/19 conductor cross-section	
		Type of conductor and H07V-K2.5 conductor cross-section	
		Type of conductor and H07V-U2.5 conductor cross-section	
	Evaluation	passed	
	Requirement	≥100 N	
	Conductor type	Type of conductor and H07V-K16 conductor cross-section	
		Type of conductor and H07V-U16 conductor cross-section	
	Evaluation	passed	

**Classifications**

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ECLASS 9.0	27-44-03-09	ECLASS 9.1	27-44-03-09
ECLASS 10.0	27-44-03-09	ECLASS 11.0	27-46-02-02
ECLASS 12.0	27-46-02-02	ECLASS 13.0	27-46-02-02

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**Technical data**
**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>• For all applications with flange we recommend to fix the pin header with the help of the soldering flange or a self-tapping screw on the board.</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>

**Approvals**

Approvals



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

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">20220208 Visual change Temporarily different color for connectors and accessories</a> <a href="#">20220208 Visuelle Änderung Vorübergehend anderer Farbton für Steckverbinder und Zubehör</a>
User Documentation	<a href="#">Assembly instructions PUSH IN connector with actuator – BUF 10.16 IT</a> <a href="#">QR-Code product handling video</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

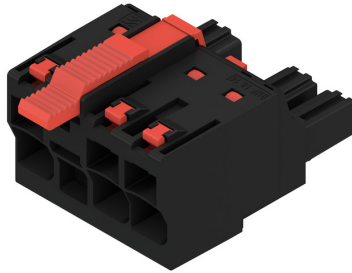
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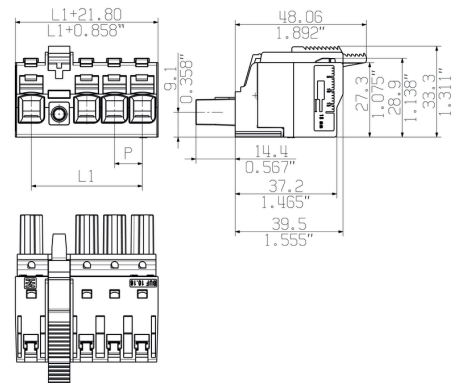
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## **Drawings**

### **Product image**

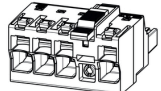


### **Dimensional drawing**

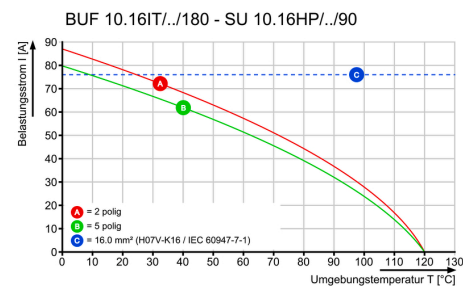


Similar to illustration

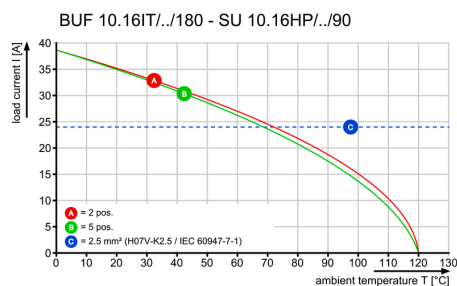
### **Connection diagram**

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		
NO OF POLES	X = MIDDLE FLANGE POSITION	POS. 1 2 3 4 5				
						

### **Graph**

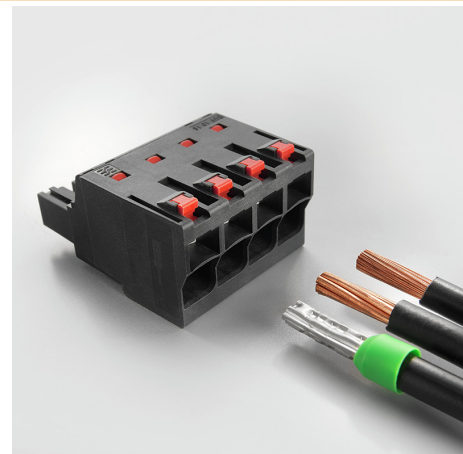


### **Graph**



Easy connection of conductors  
 WIRE READY

### **Product benefits**



Easy connection of conductors  
 WIRE READY

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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

**General ordering data**

Type	KO BU/SU 10.16HP BK	Version	Product data	Packaging
Order No.	<a href="#">1824410000</a>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248326716	of poles: 1		
Qty.	50 pc(s).			
Type	KO BU/SU 10.16HP WT	Version	Product data	Packaging
Order No.	<a href="#">2592600000</a>	PCB plug-in connector, Accessories, Coding element, Natural, Number		Box
GTIN (EAN)	4050118717389	of poles: 1		
Qty.	50 pc(s).			

**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 pc(s).	



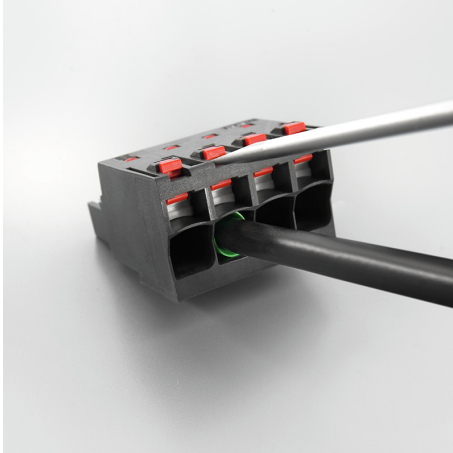
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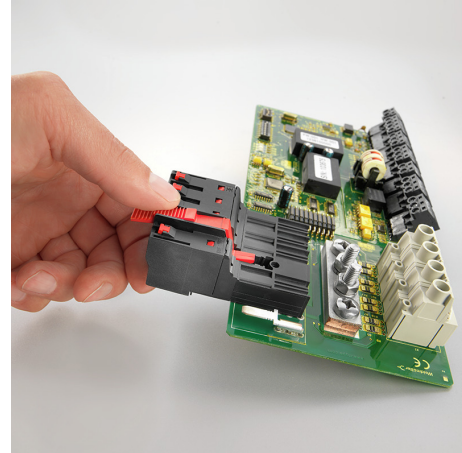
# Drawings

## Product benefits



Quick wiring

## Product benefits



Single-handed operation  
Automatic latching