



Klingenbergstraße 26 D-32758 Detmold Germany

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# **Product image**













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180° female plug with 10.16 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SU 10.16 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.

Also optionally available without middle flange interlock.

## **General ordering data**

PCB plug-in connector, female plug, 10.16 mm,
Number of poles: 4, 180°, Clamping yoke connec-
tion, Clamping range, max. : 16 mm², Box
2000430000
BUZ 10.16IT/04/180MF3 AG BK BX
4050118382020
18 items
IEC: 1000 V / 78.3 A / 0.2 - 16 mm <sup>2</sup>
UL: 600 V / 60 A / AWG 22 - AWG 4
Вох





Weidmüller Interface GmbH & Co. KG

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# Technical data

Approvals	Αı	pp	ro	va	Is
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Approvals	c <b>FL</b> *us
ROHS	Conform
UL File Number Search	<u>UL Website</u>
Certificate No. (cURus)	E60693

# **Dimensions and weights**

Depth	52.3 mm	Depth (inches)	2.0591 inch
Height	36 mm	Height (inches)	1.4173 inch
Net weight	56.7 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 BU/SU 10.16IT	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	10.16 mm
Pitch in inches (P)	0.400 "	Conductor outlet direction	180°
Number of poles	4	L1 in mm	40.64 mm
L1 in inches	1.600 "	Number of rows	1
Pin series quantity	1	Rated cross-section	16 mm²
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.	1.2 Nm
Tightening torque, max.	2 Nm	Clamping screw	M 4
Screwdriver blade standard	DIN 5264, ISO 8764/2-PZ	Plugging cycles	25
Plugging force/pole, max.	14.5 N	Pulling force/pole, max.	14.5 N

# **Material data**

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Moisture Level (MSL)	
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.	130 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	130 °C

# **Conductors suitable for connection**

Clamping range, min.	0.2 mm <sup>2</sup>
Clamping range, max.	16 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 22
Wire connection cross section AWG, max.	AWG 4
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	16 mm <sup>2</sup>

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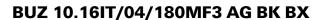
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# Technical data

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Stranded, min. H07V-R	6 mm <sup>2</sup>	
Stranded, max. H07V-R	16 mm²	
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>	
Flexible, max. H05(07) V-K	16 mm²	
w. plastic collar ferrule, DIN 46228 pt min.	14, 0.25 mm²	
w. plastic collar ferrule, DIN 46228 pt	4, 16 mm²	
max.		
w. wire end ferrule, DIN 46228 pt 1,	0.25 mm <sup>2</sup>	
min.	40	
w. wire end ferrule, DIN 46228 pt 1, max.	16 mm²	
Plug gauge in accordance with EN	5.3mm (B6)	
60999 a x b; ø	3.3 (23)	
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- H0,5/18 OR
		end ferrule
	Cross-section for conductor connection	Type fine-wired nominal 1 mm²
	wire end ferrule	Stripping length nominal 15 mm
	whe end lerrule	Recommended wire- H1,0/18 GE
		end ferrule
	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- H1,5/18D SW
		end ferrule
		Stripping length nominal 12 mm
		Recommended wire- H1,5/12 end ferrule
	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- H0,75/18 W
		end ferrule
	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
		Stripping length nominal 12 mm
		Recommended wire- H2,5/12
		end ferrule
	Cross-section for conductor connection	Type fine-wired
		nominal 4 mm <sup>2</sup>
	wire end ferrule	Stripping length nominal 12 mm
		Recommended wire- H4,0/12 end ferrule
		Stripping length nominal 14 mm
		Recommended wire- H4,0/20D GR
		end ferrule
	Cross-section for conductor connection	Type fine-wired
		nominal 6 mm <sup>2</sup>
	wire end ferrule	Stripping length nominal 14 mm
		Recommended wire- H6,0/20 SW
		end ferrule
		Stripping length nominal 12 mm







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# **Technical data**

	Recommended wire- end ferrule	H6,0/12	
Cross-section for conductor connection	Type	fine-wired	
	nominal	10 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	12 mm
	Recommended wire- end ferrule	H10,0/12	
	Stripping length	nominal	15 mm
	Recommended wire- end ferrule	H10,0/22	<u>EB</u>
Cross-section for conductor connection	Туре	fine-wired	
	nominal	16 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	12 mm
	Recommended wire- end ferrule	H16,0/12	
	Stripping length	nominal	15 mm
	Recommended wire- end ferrule	H16,0/22	<u>GN</u>

Reference text

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)	78.3 A
Rated current, max. number of poles (Tu=20°C)	67.9 A	Rated current, min. number of poles (Tu=40°C)	70.6 A
Rated current, max. number of poles (Tu=40°C)	61.3 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	1000 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 mit 1000 A
Creepage distance, min.	15.1 mm	Clearance, min.	15.1 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)	60 A
Rated current (Use group C / CSA)	60 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 22	Wire cross-section, AWG, max.	AWG 4

# 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)	60 A
Rated current (Use group C / UL 1059)	60 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 22	Wire cross-section, AWG, max.	AWG 4
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

# **Packing**

Packaging	Box	VPE length	352.00 mm
VPE width	135.00 mm	VPE height	61.00 mm

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# **Technical data**

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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> <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>

# Classifications

			<u>'</u>
ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	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	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

# Weidmüller **3**

# **BUZ 10.16IT/04/180MF3 AG BK BX**

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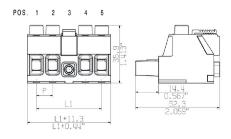
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# **Drawings**

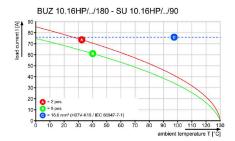
# **Product image**

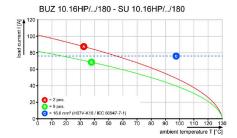


# **Dimensional drawing**



Graph Graph







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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	KO BU/SU10.16HP BK	Version
Order No.	1824410000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4032248326716	of poles: 1
Qty.	50 ST	
Туре	KO BU/SU10.16HP WT	Version
Type Order No.	KO BU/SU10.16HP WT 2592600000	Version PCB plug-in connector, Accessories, Coding element, Natural, Number
	, i	

#### 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 SI	DS 0.8X4.5X125	Version
Order No. 90	009020000	Screwdriver, Screwdriver
GTIN (EAN) 40	032248266883	
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
Order No. 9008480000
GTIN (EAN) 4032248056477

GTIN (EAN) 403224805047

Qty. 1 S7

Version

Screwdriver, Screwdriver





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# Counterpart

#### **SU 10.16IT 270MF**



Male header with middle solder flange fastening in 10.16 pitch for 400-V IT systems according to IEC 61800-5-1. UL approval in compliance with UL840 (600 V) when using leading contact. When used together with the BUZ 10.16 IT, they comply with the expanded requirements for 5.5 mm of touch protection with IT systems (400 V relative to earth), according to IEC 61800-5-1. The middle-flange interlock feature decreases the space

required by one pitch width when compared to other standard solutions.

Available on request with screw flange or without flange.

#### **General ordering data**

 Type
 SU 10.16IT/04/270MF3 3....
 Version

 Order No.
 2630190000
 PCB plug-in connector, male header, closed side, Middle flange, THT

 GTIN (EAN)
 4050118633863
 solder connection, 10.16 mm, Number of poles: 4, 270°, Solder pin

 Qty.
 36 ST
 length (I): 3.5 mm, black

#### **SU 10.16IT 90MF**



Male header with middle solder flange fastening in 10.16 pitch for 400-V IT systems according to IEC 61800-5-1. UL approval in compliance with UL840 (600 V) when using leading contact. When used together with the BUZ 10.16 IT, they comply with the expanded requirements for 5.5 mm of touch protection with IT systems (400 V relative to earth), according to IEC 61800-5-1. The middle-flange interlock feature decreases the space

required by one pitch width when compared to other standard solutions.

Available on request with screw flange or without flange.

## **General ordering data**

Туре	SU 10.16IT/04/90MF3 3.5	Version
Order No.	2000440000	PCB plug-in connector, male header, closed side, Middle flange, THT
GTIN (EAN)	4050118381962	solder connection, 10.16 mm, Number of poles: 4, 90°, Solder pin
Qty.	36 ST	length (I): 3.5 mm, silver-plated, black, Box

#### SU 10.16HP/270MF



Single-row, high-performance male header for side-byside 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 wave soldering, plug-in direction 270° to solder pins.





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# Counterpart

## **General ordering data**

Type SU 10.16HP/04/270MF3 3.... Version Order No. 2580870000 PCB plu

<u>2580870000</u> PCB plug-in connector, male header, THT solder connection, 10.16

GTIN (EAN) 4050118589481 mm, Number of poles: 4, 270°, Solder pin length (I): 3.5 mm, tinned,

Qty. 36 ST black, Box

## SU 10.16HP/90MF



Single-row, high-current male header, for side-by-side mounting without sacrificing any poles, or with patented flange for fast locking 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 wave soldering, plug-in direction 90° to solder pins.

#### **General ordering data**

Туре	SU 10.16HP/04/90MF3 3.5	Version	
Order No.	<u>2580420000</u>	PCB plug-in connector, male header, closed side, Middle flange, THT	
GTIN (EAN)	4050118589375	solder connection, 10.16 mm, Number of poles: 4, 90°, Solder pin	
Qty.	36 ST	length (I): 3.5 mm, silver-plated, black, Box	

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