

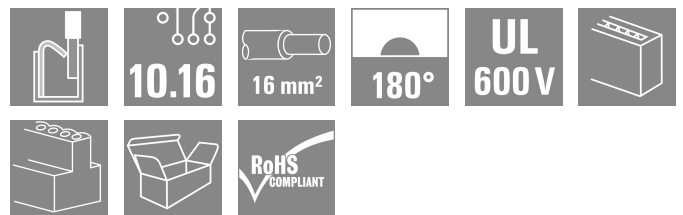
**BUF 10.16IT/03/180 AG BK BX****Weidmüller Interface GmbH & Co. KG**

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="#">2493400000</a>   |
| Type         | BUF 10.16IT/03/180 AG BK BX  |
| GTIN (EAN)   | 4050118502992  |
| Qty.         | 36 items   |
| Product data | IEC: 1000 V / 76 A / 2.5 - 16 mm <sup>2</sup><br>UL: 600 V / 51 A / AWG 12 - AWG 6   |
| Packaging    | Box  |

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## Technical data

## Approvals

Approvals



ROHS Conform  
UL File Number Search [UL Website](#)  
Certificate No. (cURus) E60693

## Dimensions and weights

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 39.5 mm  | Depth (inches)  | 1.5551 inch |
| Height     | 28.9 mm  | Height (inches) | 1.1378 inch |
| Width      | 30.48 mm | Width (inches)  | 1.2 inch    |
| Net weight | 34.64 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 10.16 | Type of connection                         | Field connection   |
| Wire connection method                       | PUSH IN with actuator               | Pitch in mm (P)                            | 10.16 mm           |
| Pitch in inches (P)                          | 0.400 "                             | Conductor outlet direction                 | 180°               |
| Number of poles                              | 3                                   | L1 in mm                                   | 20.32 mm           |
| L1 in inches                                 | 0.800 "                             | 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 resistance       | ≥ 10 <sup>8</sup> Ω |
| 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.      | 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>  |

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## Technical data

|   |                     |
|---|---------------------|
| 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, min.                           | 2.5 mm <sup>2</sup> |
| w. wire end ferrule, DIN 46228 pt 1, max.                           | 16 mm <sup>2</sup>  |

|  |  |                              |                             |       |
|--|--|------------------------------|-----------------------------|-------|
| 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 |

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**Technical data**

|   |                  |   |        |
|---|------------------|---|--------|
| 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      | 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 |   |        |

**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 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 | 356.00 mm |
| VPE width | 185.00 mm | VPE height | 74.00 mm  |

**Type tests**

|   |                |  |                              |  |
|---|----------------|--|------------------------------|--|
| Test: Durability of markings                              | Standard       | IEC 60068-2-70 / 12.95   |                              |  |
|   | Test           | mark of origin, type identification, pitch, durability, stripping length |                              |  |
|   | 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 conductor cross-section                            | stranded 2.5 mm <sup>2</sup> |  |
|   |                | Type of conductor and conductor cross-section                            | solid 2.5 mm <sup>2</sup>    |  |
|   |                | Type of conductor and conductor cross-section                            | stranded 16 mm <sup>2</sup>  |  |
|   |                | Type of conductor and conductor cross-section                            | solid 10 mm <sup>2</sup>     |  |
|   |                | Type of conductor and conductor cross-section                            | AWG 12/1                     |  |
|   |                | Type of conductor and conductor cross-section                            | AWG 12/19                    |  |
|   |                | Type of conductor and conductor cross-section                            | AWG 4/1                      |  |
|   |                | Type of conductor and conductor cross-section                            | AWG 4/19                     |  |
| Evaluation  | passed         |  |                              |  |
| 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 conductor cross-section                            | H07V-K2.5                    |  |

Technical data

|               |                |   |           |
|---------------|----------------|---|-----------|
|               |                | Type of conductor and conductor cross-section | H07V-U2.5 |
|               |                | Type of conductor and conductor cross-section | AWG 14/1  |
|               |                | Type of conductor and conductor cross-section | AWG 14/19 |
|               | Evaluation     | passed  |           |
|               | Requirement    | 2.9 kg  |           |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-K16  |
|               |                | Type of conductor and conductor cross-section | H07V-U16  |
|               | Evaluation     | passed  |           |
|               | Requirement    | 4,5 kg  |           |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 4/7   |
|               |                | Type of conductor and conductor cross-section | AWG 4/19  |
| Pull-out test | Standard       | IEC 60999-1:1999-11 section 9.5               |           |
|               | Requirement    | ≥50 N   |           |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 14/1  |
|               |                | Type of conductor and conductor cross-section | AWG 14/19 |
|               |                | Type of conductor and conductor cross-section | H07V-K2.5 |
|               |                | Type of conductor and conductor cross-section | H07V-U2.5 |
|               | Evaluation     | passed  |           |
|               | Requirement    | ≥100 N  |           |
|               | Conductor type | Type of conductor and conductor cross-section | H07V-K16  |
|               |                | Type of conductor and conductor cross-section | H07V-U16  |
|               | Evaluation     | passed  |           |
|               | Requirement    | ≥ 135 N                                       |           |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 4/7   |
|               |                | Type of conductor and conductor cross-section | AWG4/19   |
|               | 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.

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## Technical data

### Notes

- Additional variants on request
- Rated current related to rated cross-section & min. No. of poles.
- 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 |             |             |

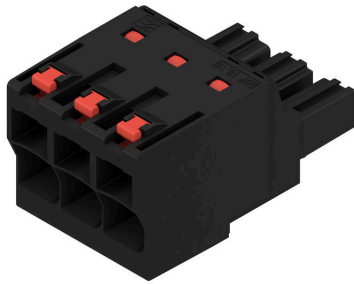
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Drawings

Product image



Dimensional drawing



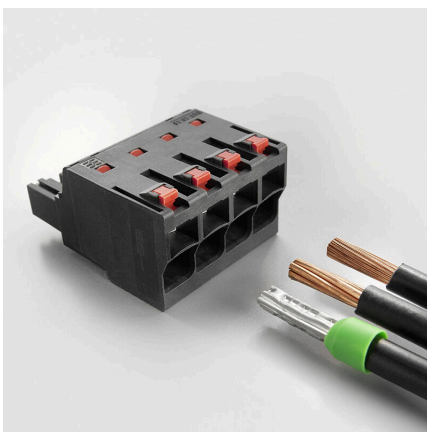
Graph



Graph



Product benefits



Easy connection of conductors WIRE READY

Product benefits



Quick wiring

**Product benefits**



Single-handed operation Automatic latching

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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.  | <a href="#">1824410000</a> | PCB plug-in connector, Accessories, Coding element, black, Number   |  |
| GTIN (EAN) | 4032248326716              | of poles: 1   |  |
| Qty.       | 50 ST                      |   |  |
| Type       | KO BU/SU10.16HP WT         | Version   |  |
| Order No.  | <a href="#">2592600000</a> | PCB plug-in connector, Accessories, Coding element, Natural, Number |  |
| GTIN (EAN) | 4050118717389              | 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.  | <a href="#">9009020000</a> | Screwdriver, Screwdriver |  |
| GTIN (EAN) | 4032248266883              |                          |  |
| Qty.       | 1 ST                       |                          |  |

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## Counterpart

### SU 10.16HP/180G



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, additional fastening and integrable positioning aid. 3.5 mm pin length is optimised for wave soldering, plug-in direction 180° to solder pins.

#### General ordering data

| Type       | SU 10.16HP/03/180G 3.5A... | Version   |
|------------|----------------------------|---|
| Order No.  | <a href="#">1813420000</a> | PCB plug-in connector, male header, closed side, THT solder connection, 10.16 mm, Number of poles: 3, 180°, Solder pin length |
| GTIN (EAN) | 4032248297610              | (l): 3.5 mm, silver-plated, black, Box  |
| Qty.       | 60 ST                      |   |

### SU 10.16HP/270G



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 wave soldering, plug-in direction 270° to solder pins.

#### General ordering data

| Type       | SU 10.16HP/03/270G 3.5A... | Version   |
|------------|----------------------------|---|
| Order No.  | <a href="#">1813500000</a> | PCB plug-in connector, male header, closed side, THT solder connection, 10.16 mm, Number of poles: 3, 270°, Solder pin length |
| GTIN (EAN) | 4032248297719              | (l): 3.5 mm, silver-plated, black, Box  |
| Qty.       | 60 ST                      |   |

### SU 10.16HP/90G



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

| Type       | SU 10.16HP/03/90G 3.5AG... | Version   |
|------------|----------------------------|---|
| Order No.  | <a href="#">1813340000</a> | PCB plug-in connector, male header, closed side, THT solder connection, 10.16 mm, Number of poles: 3, 90°, Solder pin length (l): |
| GTIN (EAN) | 4032248297535              | 3.5 mm, silver-plated, black, Box   |
| Qty.       | 60 ST                      |   |

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## Counterpart

|            |                            |   |
|------------|----------------------------|---|
| Type       | SU 10.16HP/03/90G 3.5AG... | Version   |
| Order No.  | <a href="#">1026070000</a> | PCB plug-in connector, male header, closed side, THT solder           |
| GTIN (EAN) | 4032248750504              | connection, 10.16 mm, Number of poles: 3, 90°, Solder pin length (l): |
| Qty.       | 50 ST                      | 3.5 mm, silver-plated, Signal green, Box                              |
| Type       | SU 10.16HP/03/90G 3.5AG... | Version   |
| Order No.  | <a href="#">1026080000</a> | PCB plug-in connector, male header, closed side, THT solder           |
| GTIN (EAN) | 4032248751013              | connection, 10.16 mm, Number of poles: 3, 90°, Solder pin length (l): |
| Qty.       | 50 ST                      | 3.5 mm, silver-plated, orange, Box                                    |
| Type       | SU 10.16HP/03/90G 3.5AG... | Version   |
| Order No.  | <a href="#">1969430000</a> | PCB plug-in connector, male header, closed side, THT solder           |
| GTIN (EAN) | 4032248671939              | connection, 10.16 mm, Number of poles: 3, 90°, Solder pin length (l): |
| Qty.       | 60 ST                      | 3.5 mm, Traffic grey (RAL), Box                                       |

## SUZ 10.16HP 180G AG



OMNIMATE Power BU / SU 10.16HP - the 50 kVA power class  
 More current for higher performance.  
 Top of the class in today's connector systems – the OMNIMATE Power SU / BUZ 10.16HP. They feature a very durable contact system which makes it a pluggable power transmission solution with maximum load reserves. HP stands for High Performance – performance exemplified by a long-term usage temperature of 120°C. This custom, pluggable solution is suitable for all applications that must meet 600 V UL or 1,000 V (IEC) with up to 76 A (IEC) and 54 A (UL).

### General ordering data

|            |                            |   |
|------------|----------------------------|---|
| Type       | SUZ 10.16HP/03/180G AG ... | Version   |
| Order No.  | <a href="#">1947490000</a> | PCB plug-in connector, male plug, 10.16 mm, Number of poles: 3, |
| GTIN (EAN) | 4032248623778              | 180°, Clamping yoke connection, Clamping range, max. : 16 mm²,  |
| Qty.       | 44 ST                      | Box   |