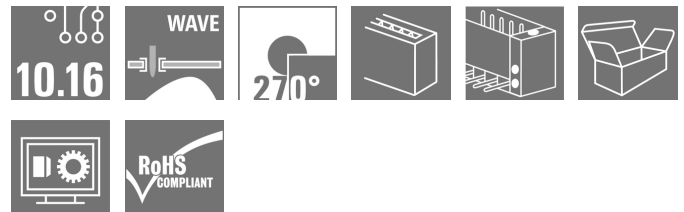


**OMNIMATE Power - series BU/SU 10.16IT
SU 10.16IT/04/270MF2 3.5AG BK BX**

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Product image

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. With its isolated pin tips, the mating profile ensures that more than 1 mm of touch safety is present (also without a socket block) with a finger pressure of 20 N. 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/04/270MF2 3.5AG BK BX |
| Order No. | 1157340000 |
| Version | PCB plug-in connector, male header, closed side, Middle flange, THT solder connection, 10.16 mm, Number of poles: 4, 270°, Solder pin length (l): 3.5 mm, silver-plated, black, Box |
| GTIN (EAN) | 4032248944798 |
| Qty. | 36 pc(s). |
| Product data | IEC: 1000 V / 78.3 A UL: 300 V / 60 A |
| Packaging | Box |

Creation date May 2, 2020 9:02:18 AM CEST

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Technical data
Dimensions and weights

Net weight 17.68 g

System specifications

| Product family | | Type of connection | |
|--|-----------------------|--|---------------------------------|
| OMNIMATE Power - series BU/SU 10.16IT | | Board connection | |
| Mounting onto the PCB | THT solder connection | Pitch in mm (P) | 10.16 mm |
| Pitch in inches (P) | 0.4 inch | Outgoing elbow | 270° |
| Number of poles | 4 | Number of solder pins per pole | 3 |
| Solder pin length (l) | 3.5 mm | Solder pin length tolerance | +0.1 / -0.3 mm |
| Tolerance of solder pin position | ± 0.1 mm | Solder pin dimensions | 1.2 x 1.1 mm |
| Solder pin dimensions = d tolerance | +0.1 / -0.1 mm | Solder eyelet hole diameter (D) | 1.6 mm |
| Solder eyelet hole diameter tolerance (D) | + 0,1 mm | L1 in mm | 40.64 mm |
| L1 in inches | 1.6 inch | Number of rows | 1 |
| Pin series quantity | 1 | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch, plugged |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged | Volume resistance | 2.00 mΩ |
| Can be coded | Yes | Plugging cycles | ≤ 50 |

Material data

| | | | |
|---------------------------------------|--------------|---------------------------------------|---------------------|
| Insulating material | PA GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | GWFI | 960 °C |
| Contact material | Copper alloy | Contact surface | silver-plated |
| Layer structure of solder connection | 3- μm Ag | Layer structure of plug contact | 3- μm Ag |
| Storage temperature, min. | -25 °C | Storage temperature, max. | 50 °C |
| Max. relative humidity during storage | 70 % | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 120 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 120 °C | | |

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 | 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 | 690 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 |
| Clearance, min. | 8.9 mm | Creepage distance, min. | 10.5 mm |

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Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

| | |
|-----------------------------------|-------|
| Rated voltage (Use group B / CSA) | 300 V |
| Rated voltage (Use group D / CSA) | 600 V |
| Rated current (Use group C / CSA) | 60 A |

| | |
|-----------------------------------|-------|
| Rated voltage (Use group C / CSA) | 300 V |
| Rated current (Use group B / CSA) | 60 A |
| Rated current (Use group D / CSA) | 5 A |

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | |
|---------------------------------------|-------|
| Rated voltage (Use group B / UL 1059) | 300 V |
| Rated voltage (Use group D / UL 1059) | 600 V |
| Rated current (Use group C / UL 1059) | 60 A |

| | |
|---------------------------------------|---------|
| Rated voltage (Use group C / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 60 A |
| Rated current (Use group D / UL 1059) | 5 A |
| Creepage distance, min. | 10.5 mm |

Clearance distance, min.

8.9 mm

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

| | | | |
|-----------|-----|------------|---|
| Packaging | Box | VPE length | 0 |
| VPE width | 0 | VPE height | 0 |

Classifications

| | | | |
|-------------|-------------|------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |
| eClass 10.0 | 27-44-04-02 | | |

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Technical data

Notes

- | | |
|-------|--|
| Notes | <ul style="list-style-type: none"> • Additional colours 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. • MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3 • 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. |
|-------|--|

| | |
|----------------|--|
| 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. |
|----------------|--|

Approvals

Approvals



| | |
|------|---------|
| ROHS | Conform |
|------|---------|

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |
| Engineering Data | EPLAN, WSCAD |
| Engineering Data | STEP |
| White paper power electronics connected correctly | Download Whitepaper |
| White paper UL 600 V | Download Whitepaper |

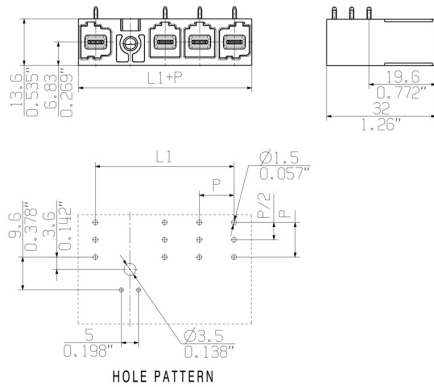
Data sheet

OMNIMATE Power - series BU/SU 10.16IT SU 10.16IT/04/270MF2 3.5AG BK BX

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Drawings

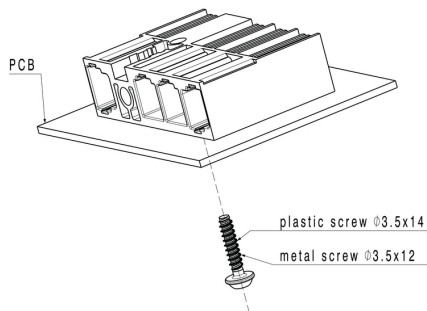
Dimensional drawing



Connection diagram

| | | | | | | | | |
|-------------|----------------------------|---|---|---|---|---|---|---|
| 6 | M(S)F6 | o | o | o | o | o | X | o |
| 6 | M(S)F5 | o | o | o | o | o | X | 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 | | | | |
| No of poles | X = middle flange position | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Example of use



**OMNIMATE Power - series BU/SU 10.16IT
SU 10.16IT/04/270MF2 3.5AG BK BX**

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Mating connector (conditionally pluggable)
BUF 10.16IT 180MSF AG


Device connectivity | OMNIMATE® Power BUF 10.16
PUSH IN PCB connector, 16mm², 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

| Type | BUF 10.16IT/04/180MSF2 ... | Version | Product data | Packaging |
|------------|----------------------------|--|---|-----------|
| Order No. | 2493260000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 76 A / 2.5 - 16 mm ² | Box |
| GTIN (EAN) | 4050118503043 | 180°, PUSH IN with actuator, Clamping range, max. : 16 mm ² , Box | UL: 600 V / 34 A / AWG 12 - AWG 6 | |
| Qty. | 24 pc(s). | | | |

**OMNIMATE Power - series BU/SU 10.16IT
SU 10.16IT/04/270MF2 3.5AG BK BX**

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Mating connector (fully pluggable)
BUZ 10.16HP/180MF


High-performance female header with the proven, 100% maintenance-free Weidmüller steel clamping yoke. Side-by-side mounting without sacrificing any poles or with patented multifunction flange for secure, fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, unique coding diversity, protection against incorrect wiring and 4-point silver contact.

General ordering data

| Type | BUZ 10.16IT/04/180MF2 A ... | Version | Product data | Packaging |
|------------|-----------------------------|---|---|-----------|
| Order No. | 1081920000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² | Box |
| GTIN (EAN) | 4032248844753 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² , | BoxUL: 600 V / 60 A / AWG 22 - AWG 4 | |
| Qty. | 18 pc(s). | | | |

BUZ 10.16IT/180MF


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

| Type | BUZ 10.16IT/04/180MF2 A ... | Version | Product data | Packaging |
|------------|-----------------------------|---|---|-----------|
| Order No. | 1156630000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² | Box |
| GTIN (EAN) | 4032248943562 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² , | BoxUL: 600 V / 60 A / AWG 22 - AWG 4 | |
| Qty. | 18 pc(s). | | | |
| Type | BUZ 10.16IT/04/180MF2 A ... | Version | Product data | Packaging |
| Order No. | 1254950000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² | Box |
| GTIN (EAN) | 4050118047745 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² , | BoxUL: 600 V / 60 A / AWG 22 - AWG 4 | |
| Qty. | 18 pc(s). | | | |

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Mating connector (fully pluggable)
BUZ 10.16IT/180MF SH

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. Including pre-assembled pluggable shield connection for large area shielding in your application.

General ordering data

| Type | BUZ 10.16IT/04/180MF2SH ... | Version | Product data |
|------------|-----------------------------|---|---|
| Order No. | 2627390000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² |
| GTIN (EAN) | 4050118631272 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² | UL: 600 V / 60 A / AWG 22 - AWG 4 |
| Qty. | 20 pc(s). | | |
| Type | BUZ 10.16IT/04/180MF2SH ... | Version | Product data |
| Order No. | 2627340000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² |
| GTIN (EAN) | 4050118631227 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² | UL: 600 V / 60 A / AWG 22 - AWG 4 |
| Qty. | 20 pc(s). | | |
| Type | BUZ 10.16IT/04/180MF2SH ... | Version | Product data |
| Order No. | 2627440000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 78.3 A / 0.2 - 16 mm ² |
| GTIN (EAN) | 4050118631326 | 180°, Clamping yoke connection, Clamping range, max. : 16 mm ² | UL: 600 V / 60 A / AWG 22 - AWG 4 |
| Qty. | 20 pc(s). | | |

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SU 10.16IT/04/270MF2 3.5AG BK BX**

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Mating connector (fully pluggable)
BUF 10.16IT 180MF AG


Device connectivity | OMNIMATE® Power BUF 10.16
PUSH IN PCB connector, 16mm², 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

| Type | BUF 10.16IT/04/180MF2 A ... | Version | Product data | Packaging |
|------------|-----------------------------|--|---|-----------|
| Order No. | 2493200000 | PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4, | IEC: 1000 V / 76 A / 2.5 - 16 mm ² | Box |
| GTIN (EAN) | 4050118502787 | 180°, PUSH IN with actuator, Clamping range, max. : 16 mm ² , Box | UL: 600 V / 34 A / AWG 12 - AWG 6 | |
| Qty. | 24 pc(s). | | | |

OMNIMATE Power - series BU/SU 10.16IT SU 10.16IT/04/270MF2 3.5AG BK BX

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Accessories

Coding elements



**Only connects what is supposed to be connected:
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

| | Type | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Type | KO BU/SU10.16HP BK | | | |
| Order No. | 1824410000 | PCB plug-in connector, Accessories, Coding element, black, Number | | Box |
| GTIN (EAN) | 4032248326716 | of poles: 1 | | |
| Qty. | 50 pc(s). | | | |

Recommended wave soldering profiles

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Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.