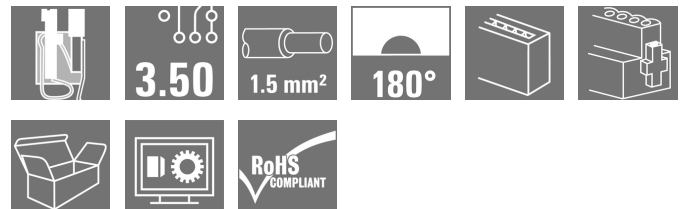


OMNIMATE Signal - series BL/SL 3.50 BL-I/O 3.50/10FP SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
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Germany
Fon: +49 5231 14-0
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Product image



Similar to illustration

Female plugs with spring connection (PUSH IN) as a plug-in connection level for decentralised I/O electronic components; used together with male headers in a 3.50-mm pitch.

General ordering data

| | |
|--------------|--|
| Type | BL-I/O 3.50/10FP SN BK BX |
| Order No. | 1779870000 |
| Version | PCB plug-in connector, female plug, 3.50 mm, No. of poles: 10, 180°, PUSH IN, Tension-clamp connection, Clamping range, max.: 1.5 mm², Box |
| GTIN (EAN) | 4032248165193 |
| Qty. | 20 pc(s). |
| Product data | IEC: 200 V / 2.2 A / 0.2 - 1.5 mm² UL: 50 V / 5 A / AWG 24 - AWG 16 |
| Packaging | Box |

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Technical data**Dimensions and weights**

| | | | |
|------------|---------|-----------------|------------|
| Width | 42 mm | Width (inches) | 1.654 inch |
| Height | 10.3 mm | Height (inches) | 0.406 inch |
| Depth | 27 mm | Depth (inches) | 1.063 inch |
| Net weight | 11.15 g | | |

system parameters

| | | | |
|--|-------------------------------------|--|-------------------|
| Product family | OMNIMATE Signal - series BL/SL 3.50 | Type of connection | Field connection |
| Wire connection method | PUSH IN, Tension-clamp connection | Pitch in mm (P) | 3.5 mm |
| Pitch in inches (P) | 0.138 inch | Conductor outlet direction | 180° |
| No. of poles | 10 | L1 in mm | 31.5 mm |
| L1 in inches | 1.24 inch | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 1 mm ² |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch | Touch-safe protection acc. to DIN VDE 0470 | IP 20 |
| Can be coded | Yes | Stripping length | 8 mm |
| Tightening torque for screw flange, min. | 0.15 Nm | Tightening torque for screw flange, max. | 0.2 Nm |
| Screwdriver blade | 0.4 x 2.5 | Screwdriver blade standard | DIN 5264 |
| Plugging force/pole, max. | 6 N | Pulling force/pole, max. | 6 N |

Material data

| | | | |
|---------------------------------------|-----------------|---------------------------------------|---------------------|
| Insulating material | PBT | Colour code | black |
| Colour of operational elements | grey, red, blue | Material of operational elements | PBT |
| Colour chart (similar) | RAL 9011 | Insulating material group | Illa |
| CTI | ≥ 200 | Insulation strength | ≥ 10 ⁸ Ω |
| UL 94 flammability rating | V-0 | GWFI | 960 °C |
| Contact base material | Copper alloy | Contact material | Copper alloy |
| Contact surface | tinned | Storage temperature, min. | -25 °C |
| Storage temperature, max. | 55 °C | Max. relative humidity during storage | 80 % |
| Operating temperature, min. | -50 °C | Operating temperature, max. | 75 °C |
| Temperature range, installation, min. | -30 °C | Temperature range, installation, max. | 75 °C |

Conductors suitable for connection

| | |
|--|------------------------|
| Clamping range, min. | 0.2 mm ² |
| Clamping range, max. | 1.5 mm ² |
| Wire connection cross section AWG, min. | AWG 24 |
| Wire connection cross section AWG, max. | AWG 16 |
| Solid, min. H05(07) V-U | 0.2 mm ² |
| Solid, max. H05(07) V-U | 1.5 mm ² |
| Flexible, min. H05(07) V-K | 0.2 mm ² |
| Flexible, max. H05(07) V-K | 1.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm ² max. | |
| w. wire end ferrule, DIN 46228 pt 1, min. 0.2 mm ² | |
| w. wire end ferrule, DIN 46228 pt 1, 1 mm ² max. | |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.4 mm x 1.5 mm; 1.9mm |

Creation date April 25, 2019 8:51:21 PM CEST

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Technical data

| | | | |
|---------------------|--|------------------|----------------------|
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.25 mm ² |
| | AEH | Stripping length | nominal 10 mm |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.34 mm ² |
| | AEH | Stripping length | nominal 10 mm |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.5 mm ² |
| Max. clamping range | AEH | Stripping length | nominal 10 mm |
| | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.75 mm ² |
| | AEH | Stripping length | nominal 10 mm |


Rated data acc. to IEC

| | | | |
|---|------------------------|---|-------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C) | 2.2 A |
| Rated current, max. no. of poles (Tu=20°C) | 2 A | Rated current, min. no. of poles (Tu=40°C) | 2.2 A |
| Rated current, max. no. of poles (Tu=40°C) | 2 A | Rated voltage for surge voltage class / pollution degree II/2 | 200 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 160 V | Rated voltage for surge voltage class / pollution degree III/3 | 50 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 2.5 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 0.8 kV | Short-time withstand current resistance | 3 x 1s with 120 A |

Rated data acc. to CSA

| | | | |
|-----------------------------------|---|-----------------------------------|----------------|
| Institute (CSA) |  | Certificate No. (CSA) | 154685-1202189 |
| Rated voltage (Use group B / CSA) | 50 V | Rated voltage (Use group D / CSA) | 50 V |
| Rated current (Use group B / CSA) | 5 A | Rated current (Use group D / CSA) | 5 A |
| Wire cross-section, AWG, min. | AWG 22 | Wire cross-section, AWG, max. | AWG 16 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (UR) |  | Certificate No. (UR) | E60693 |
| Rated voltage (Use group B / UL 1059) | 50 V | Rated voltage (Use group D / UL 1059) | 50 V |
| Rated current (Use group B / UL 1059) | 5 A | Rated current (Use group D / UL 1059) | 5 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 16 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

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Technical data**Packing**

| | | | |
|-----------|-------|------------|--------|
| Packaging | Box | VPE length | 40 mm |
| VPE width | 90 mm | VPE height | 126 mm |

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 3.0 | EC001284 | ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 | ETIM 6.0 | EC002637 |
| UNSPSC | 30-21-18-10 | eClass 5.1 | 27-26-07-04 |
| eClass 6.2 | 27-26-07-04 | eClass 7.1 | 27-44-04-02 |
| eClass 8.1 | 27-44-04-02 | eClass 9.0 | 27-44-04-02 |
| eClass 9.1 | 27-44-04-02 | | |

Notes

| | |
|----------------|---|
| Notes | <ul style="list-style-type: none"> • Additional colours on request • P on drawing = pitch • Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes. • Total load-carrying capacity of the potential bridges when feeding with 1.5 mm² is max. 17.5 A (so the capacity is 2.18 A for poles 2 through 9) • Wire end ferrule without plastic collar to DIN 46228/1 • Wire end ferrule with plastic collar to DIN 46228/4 • Conductor < 0.2 mm² tinned • Max. outer diameter of the conductor: 2.9 mm • 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. |
| 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

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Technical data**Downloads**

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Brochure/Catalogue | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY 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 wire connection | Download Whitepaper |

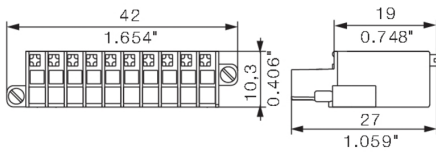
Data sheet

**OMNIMATE Signal - series BL/SL 3.50
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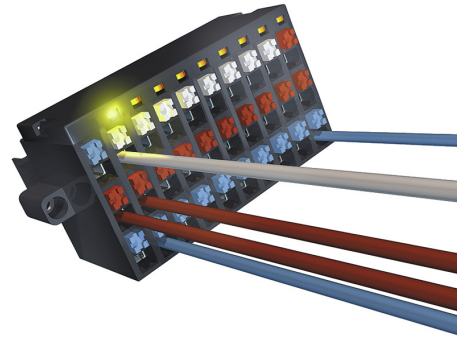
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Drawings

Dimensional drawing



Product benefits

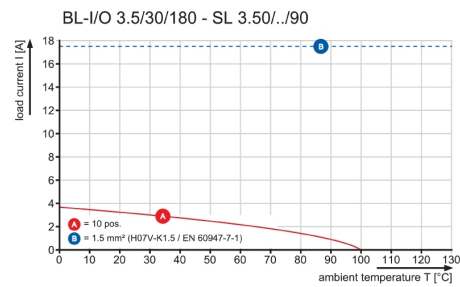
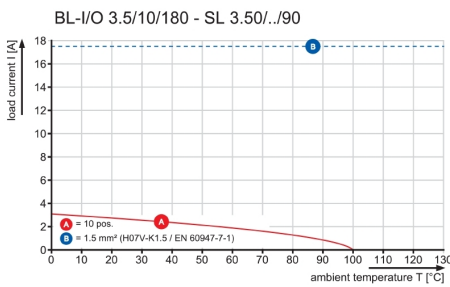


PUSH IN - fast and secure
Invented by Weidmüller

Graph

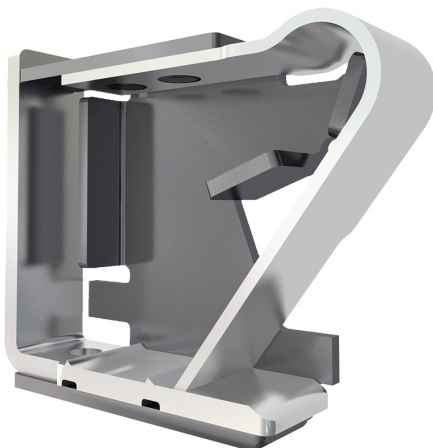
Integrated electronics
For more space on the circuit board

Graph

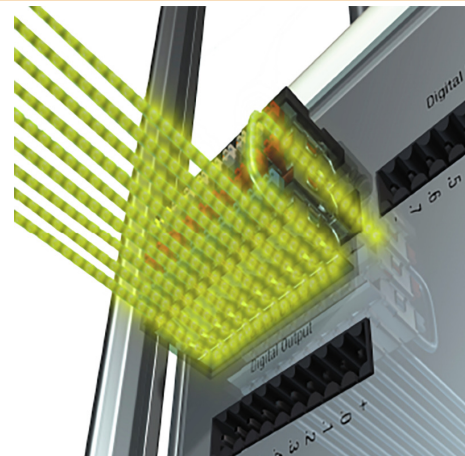


Product benefits

Product benefits



Solid PUSH IN contact
Safe and durable



Multiplies the potential
Low wiring costs