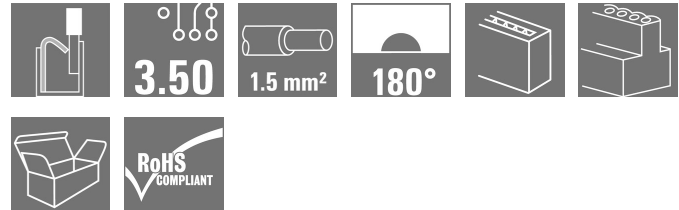


BLF 3.50/05/180 SN OR BX
Weidmüller Interface GmbH & Co. KG

 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com
Product image


similar to illustration

Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

General ordering data

| | |
|--------------|---|
| Version | PCB plug-in connector, female plug, 3.50 mm, Number of poles: 5, 180°, PUSH IN with actuator, Tension-clamp connection, Clamping range, max. : 1.5 mm², Box |
| Order No. | 2459080000 |
| Type | BLF 3.50/05/180 SN OR BX |
| GTIN (EAN) | 4050118474435 |
| Qty. | 102 pc(s). |
| Product data | IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / AWG 26 - AWG 16 |
| Packaging | Box |

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Technical data
Dimensions and weights

| | | | |
|------------|---------|-----------------|------------|
| Depth | 22.7 mm | Depth (inches) | 0.894 inch |
| Height | 9 mm | Height (inches) | 0.354 inch |
| Width | 17.5 mm | Width (inches) | 0.689 inch |
| Net weight | 3.5 g | | |

System Parameters

| | | | |
|--|---|------|--|
| Product family | OMNIMATE Signal - series BL/SL 3.50 | | |
| Type of connection | Field connection | | |
| Wire connection method | PUSH IN with actuator, Tension-clamp connection | | |
| Pitch in mm (P) | 3.5 mm | | |
| Pitch in inches (P) | 0.138 inch | | |
| Conductor outlet direction | 180° | | |
| Number of poles | 5 | | |
| L1 in mm | 14 mm | | |
| L1 in inches | 0.551 inch | | |
| Number of rows | 1 | | |
| Pin series quantity | 1 | | |
| Rated cross-section | 1.5 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 | | |
| Volume resistance | ≤5 mΩ | | |
| Can be coded | Yes | | |
| Stripping length | 8 mm | | |
| Stripping length tolerance | min. | 0 mm | |
| | max. | 1 mm | |
| Screwdriver blade | 0.4 x 2.5 | | |
| Screwdriver blade standard | DIN 5264-A | | |
| Plugging cycles | 25 | | |
| Plugging force/pole, max. | 6 N | | |
| Pulling force/pole, max. | 6 N | | |

Material data

| | | | |
|---------------------------------------|--------------|---------------------------------------|--------|
| Insulating material | PA GF | Colour | orange |
| Colour chart (similar) | RAL 2000 | Insulating material group | II |
| Comparative Tracking Index (CTI) | ≥ 400, ≤ 600 | UL 94 flammability rating | V-0 |
| Contact material | Copper alloy | Contact surface | tinned |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -50 °C | Operating temperature, max. | 120 °C |
| Temperature range, installation, min. | -30 °C | Temperature range, installation, max. | 100 °C |

Conductors suitable for connection

| | |
|---|----------------------|
| Clamping range, min. | 0.14 mm ² |
| Clamping range, max. | 1.5 mm ² |
| Wire connection cross section AWG, min. | AWG 26 |
| Wire connection cross section AWG, max. | AWG 16 |
| Solid, min. H05(07) V-U | 0.14 mm ² |
| Solid, max. H05(07) V-U | 1.5 mm ² |
| Flexible, min. H05(07) V-K | 0.14 mm ² |

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Technical data

Flexible, max. H05(07) V-K 1.5 mm²
 w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm²
 min.

w. plastic collar ferrule, DIN 46228 pt 4, 1 mm²
 max.

w. wire end ferrule, DIN 46228 pt 1, 0.25 mm²
 min.

w. wire end ferrule, DIN 46228 pt 1, 1 mm²
 max.

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm

| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
|--|--|------------------------------|-------------------------------|
| | | nominal | 0.25 mm ² |
| wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0.25/12 HBL |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 0.34 mm ² | |
| wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0.34/12 TK |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 0.5 mm ² | |
| wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0.5/14 OR |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 0.75 mm ² | |
| wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0.75/14T HBL |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 1 mm ² | |
| wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H1.0/14 GE |

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P). 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) | 17.5 A |
| Rated current, max. number of poles (Tu=20°C) | 14.7 A | Rated current, min. number of poles (Tu=40°C) | 17.1 A |
| Rated current, max. number of poles (Tu=40°C) | 13.1 A | Rated voltage for surge voltage class / pollution degree II/2 | 320 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 160 V | Rated voltage for surge voltage class / pollution degree III/3 | 160 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 | 2.5 kV | Short-time withstand current resistance | 1 x 1s with 120 A |

Rated data acc. to CSA

| | | | |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group C / CSA) | 50 V |
| Rated voltage (Use group D / CSA) | 300 V | Rated current (Use group B / CSA) | 10 A |
| Rated current (Use group D / CSA) | 10 A | Wire cross-section, AWG, min. | AWG 26 |
| Wire cross-section, AWG, max. | AWG 16 | | |

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Technical data

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 350 mm |
| VPE width | 135 mm | VPE height | 31 mm |

Type tests

| | | | | |
|--|----------------|---|-----------|----------------------|
| Visual and dimensional test | Standard | IEC 60512-1-1:2002-02 | | |
| | Test | dimensional inspection | | |
| | Evaluation | passed | | |
| | Standard | IEC 60512-1-2:2002-02 | | |
| | Test | weight check | | |
| | Evaluation | passed | | |
| | Standard | IEC 61984:2001-10 section 6.2 | | |
| Test: Durability of markings | Test | visual examination | | |
| | Evaluation | passed | | |
| | Standard | IEC 60068-2-70:1995-12 test Xb | | |
| Test: Misengagement (Non-interchangeability) | Test | mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking CSA, durability | | |
| | Evaluation | available | | |
| | Standard | IEC 60512-13-5:2006-02 | | |
| | Test | intentional plugging | | |
| | Evaluation | passed | | |
| | Test | 180° turned without coding elements | | |
| | Evaluation | passed | | |
| | Test | 180° turned with coding elements | | |
| Test: Clampable cross section | Evaluation | passed | | |
| | 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 | solid | 0.14 mm ² |
| | | Type of conductor and conductor cross-section | stranded | 0.14 mm ² |
| | | Type of conductor and conductor cross-section | solid | 1.5 mm ² |
| | | Type of conductor and conductor cross-section | stranded | 1.5 mm ² |
| | | Type of conductor and conductor cross-section | AWG 26/1 | |
| | | Type of conductor and conductor cross-section | AWG 26/19 | |
| | | Type of conductor and conductor cross-section | AWG 16/1 | |
| | | Type of conductor and conductor cross-section | AWG 16/19 | |
| | 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 | 0.3 kg | |
| Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |
| | Type of conductor and conductor cross-section | H05V-K0.5 |
| Evaluation | passed | |
| Requirement | 0.4 kg | |
| Conductor type | Type of conductor and conductor cross-section | H07V-U1.5 |
| | Type of conductor and conductor cross-section | H07V-K1.5 |
| | Type of conductor and conductor cross-section | AWG 16/1 |
| | Type of conductor and conductor cross-section | AWG 16/19 |
| Evaluation | passed | |
| Requirement | 0.2 kg | |
| Conductor type | Type of conductor and conductor cross-section | AWG 26/1 |
| | Type of conductor and conductor cross-section | AWG 26/19 |
| Evaluation | passed | |

Pull-out test

| | | |
|----------------|---|-----------|
| Standard | IEC 60999-1:1999-11 section 9.5 | |
| Requirement | ≥20 N | |
| Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |
| | Type of conductor and conductor cross-section | H05V-K0.5 |
| Evaluation | passed | |
| Requirement | ≥40 N | |
| Conductor type | Type of conductor and conductor cross-section | H07V-U1.5 |
| | Type of conductor and conductor cross-section | H07V-K1.5 |
| | Type of conductor and conductor cross-section | AWG 16/1 |
| | Type of conductor and conductor cross-section | AWG 16/19 |
| Evaluation | passed | |
| Requirement | ≥10 N | |
| Conductor type | Type of conductor and conductor cross-section | AWG 26/1 |
| | Type of conductor and conductor cross-section | AWG 26/19 |
| Evaluation | passed | |

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Technical data
Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002638 | ETIM 7.0 | EC002638 |
| ETIM 8.0 | 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 |

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

- Additional variants on request
- Gold-plated contact surfaces on request
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- Wire end ferrule with plastic collar to DIN 46228/4
- 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.
- The test point can only be used as potential-pickup point.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



| | |
|-------------------------|------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E60693 |

Downloads

| | |
|------------------|--|
| Engineering Data | CAD data – STEP |
| Catalogues | Catalogues in PDF-format |

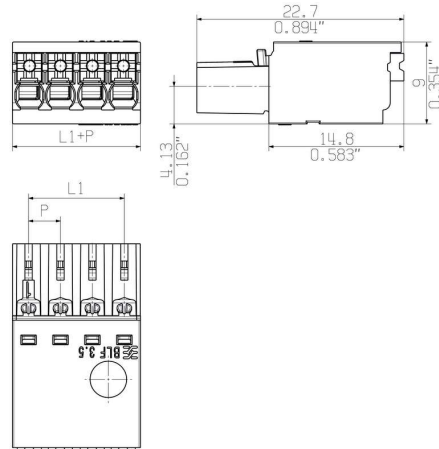
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Drawings

Dimensional drawing



Product benefits



Solid PUSH IN contact
Safe and durable