Data sheet

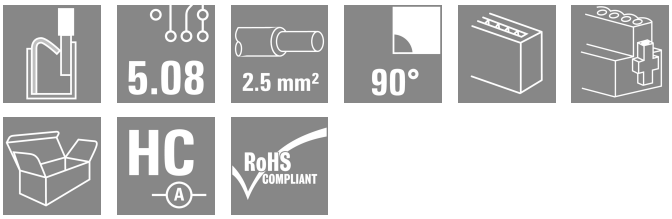
# BLF 5.08HC/07/90F SN OR BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image






Just as reliable as the millionfold proven original and featuring innovative details:
The BLF 5.08HC PUSH IN version of the BLZP 5.08HC female connector is not only different in terms of connection system; it also has a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current.
In terms of versatility, the BLF 5.08HC offers just as much as the version which served as a model:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user
- Use the BLF 5.08HC and SL 5.08HC plug combination to reach the max. rated specifications

## General ordering data

| | |
|---|---|
| Version | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 7, 90°, PUSH IN with actuator, Clamping range, max. : 3.31 mm², Box |
| Order No. | 1002140000 |
| Type | BLF 5.08HC/07/90F SN OR BX |
| GTIN (EAN) | 4032248694099 |
| Qty. | 36 items |
| Product data | IEC: 400 V / 24 A / 0.2 - 2.5 mm²<br>UL: 300 V / 18.5 A / AWG 26 - AWG 12 |
| Packaging | Box |



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# Data sheet

## BLF 5.08HC/07/90F SN OR BX

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# Technical data

### Approvals

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

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 26.2 mm | Depth (inches) | 1.0315 inch |
| Height | 20.6 mm | Height (inches) | 0.811 inch |
| Width | 45.36 mm | Width (inches) | 1.7858 inch |
| Net weight | 14.45 g | | |

### Environmental Product Compliance

| | | |
|---|---|---|
| RoHS Compliance Status | Compliant without exemption | |
| REACH SVHC | No SVHC above 0.1 wt% | |
| Product Carbon Footprint | Cradle to gate | 0,574 kg CO2 eq. |

### System Parameters

| | | | | |
|---|---|---|---|---|
| Product family | OMNIMATE Signal - series BL/SL 5.08 | | | |
| Type of connection | Field connection | | | |
| Wire connection method | PUSH IN with actuator | | | |
| Pitch in mm (P) | 5.08 mm | | | |
| Pitch in inches (P) | 0.200 " | | | |
| Conductor outlet direction | 90° | | | |
| Number of poles | 7 | | | |
| L1 in mm | 30.48 mm | | | |
| L1 in inches | 1.200 " | | | |
| Number of rows | 1 | | | |
| Pin series quantity | 1 | | | |
| Rated cross-section | 2.5 mm² | | | |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch | | | |
| Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged | | | |
| Protection degree | IP20 | | | |
| Volume resistance | ≤5 mΩ | | | |
| Can be coded | Yes | | | |
| Stripping length | 10 mm | | | |
| Screwdriver blade | 0.6 x 3.5 | | | |
| Screwdriver blade standard | DIN 5264 | | | |
| Plugging cycles | 25 | | | |
| Plugging force/pole, max. | 7 N | | | |
| Pulling force/pole, max. | 5.5 N | | | |
| Tightening torque | Torque type | Screw flange | | |
| | Usage information | Tightening torque | min. | 0.2 Nm |
| | | | max. | 0.25 Nm |



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## Technical data

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PBT | Colour | orange |
| Colour of operational elements | black | Colour chart (similar) | RAL 2000 |
| Insulating material group | IIIa | Comparative Tracking Index (CTI) | ≥ 200 |
| Moisture Level (MSL) | | UL 94 flammability rating | V-0 |
| Contact material | Cu-alloy | Contact surface | tinned |
| Layer structure of plug contact | 4...8 µm Sn hot-dip tinned | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 100 °C | Temperature range, installation, min. | -30 °C |
| Temperature range, installation, max. | 100 °C | | |

### Conductors suitable for connection

| | | | | |
|---|---|---|---|---|
| Clamping range, min. | 0.13 mm² | | | |
| Clamping range, max. | 3.31 mm² | | | |
| Wire connection cross section AWG, min. | AWG 26 | | | |
| Wire connection cross section AWG, max. | AWG 12 | | | |
| Solid, min. H05(07) V-U | 0.2 mm² | | | |
| Solid, max. H05(07) V-U | 2.5 mm² | | | |
| Flexible, min. H05(07) V-K | 0.2 mm² | | | |
| Flexible, max. H05(07) V-K | 2.5 mm² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm² | | | |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.25 mm² | | | |
| w. wire end ferrule, DIN 46228 pt 1, max. | 2.5 mm² | | | |
| Plug gauge in accordance with EN 60999 a x b; ø | 2.8 mm x 2.0 mm | | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H0,5/16 OR | |
| | | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0,5/10 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.75 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H0,75/16 W | |
| | | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H0,75/10 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H1,0/16D R | |
| | | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H1,0/10 | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1.5 mm² | |



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## Technical data

| | | | | |
|---|---|---|---|---|
| | wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H1,5/10 | |
| | | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H1,5/16 R | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 2.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 10 mm |
| | | Recommended wire-end ferrule | H2,5/10 | |
| | | Stripping length | nominal | 13 mm |
| | | Recommended wire-end ferrule | H2,5/16DS BL | |
| 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) | 24 A |
| Rated current, max. number of poles (Tu=20°C) | 19 A | Rated current, min. number of poles (Tu=40°C) | 21 A |
| Rated current, max. number of poles (Tu=40°C) | 16.5 A | Rated voltage for surge voltage class / pollution degree II/2 | 400 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 320 V | Rated voltage for surge voltage class / pollution degree III/3 | 250 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 4 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV | Short-time withstand current resistance | 3 x 1s with 120 A |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | CSA | Certificate No. (CSA) | 200039-1121690 |
| Rated voltage (Use group B / CSA) | 300 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 12 | Wire cross-section, AWG, max. | AWG 26 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Institute (cURus) | CURUS | Certificate No. (cURus) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group D / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 18.5 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 349.00 mm |
| VPE width | 139.00 mm | VPE height | 32.00 mm |



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## Technical data

### Type tests

| | | | |
|---|---|---|---|
| Test: Durability of markings | Standard | DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96 | |
| | Test | mark of origin, type identification, pitch, type of material, date clock | |
| | Evaluation | available | |
| | Test | durability | |
| | Evaluation | passed | |
| Test: Misengagement (Non-interchangeability) | Standard | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.08 | |
| | Test | 180° turned with coding elements | |
| | Evaluation | passed | |
| | Test | visual examination | |
| | Evaluation | passed | |
| Test: Clampable cross section | Standard | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 04.08 | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.2 mm² |
| | | Type of conductor and conductor cross-section | stranded 0.2 mm² |
| | | Type of conductor and conductor cross-section | solid 2.5 mm² |
| | | Type of conductor and conductor cross-section | stranded 2.5 mm² |
| | | 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 14/1 |
| | | Type of conductor and conductor cross-section | AWG 14/19 |
| | Evaluation | passed | |
| Test for damage to and accidental loosening of conductors | Standard | DIN EN 60999-1 section 9.4 / 12.00 | |
| | 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 | |
| | 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 | 0.7 kg | |



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| | | | |
|---|---|---|---|
| | Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 |
| | | Type of conductor and conductor cross-section | H07V-K2.5 |
| | Evaluation | passed | |
| | Requirement | 0.9 kg | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 12/1 |
| | | Type of conductor and conductor cross-section | AWG 12/19 |
| | Evaluation | passed | |
| Pull-out test | Standard | DIN EN 60999-1 section 9.5 / 12.00 | |
| | 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 | |
| | 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 | ≥50 N | |
| | Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 |
| | | Type of conductor and conductor cross-section | H07V-K2.5 |
| | Evaluation | passed | |
| | Requirement | ≥60 N | |
| | Conductor type | Type of conductor and conductor cross-section | AWG 12/1 |
| | | Type of conductor and conductor cross-section | AWG 12/19 |
| | 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. |
| Notes | • Additional variants on request<br>• Gold-plated contact surfaces on request<br>• Rated current related to rated cross-section & min. No. of poles.<br>• Wire end ferrule without plastic collar to DIN 46228/1<br>• Wire end ferrule with plastic collar to DIN 46228/4<br>• P on drawing = pitch<br>• Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.<br>• The test point can only be used as potential-pickup point. |



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## Technical data

- 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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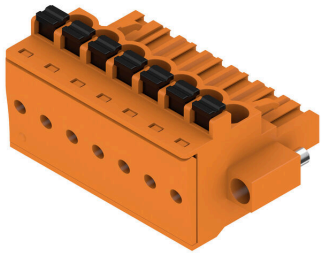
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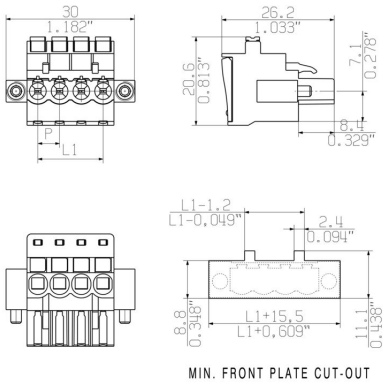
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## Drawings

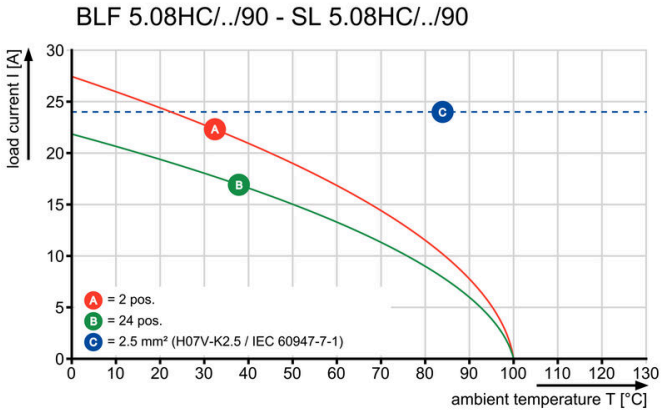
### Product image



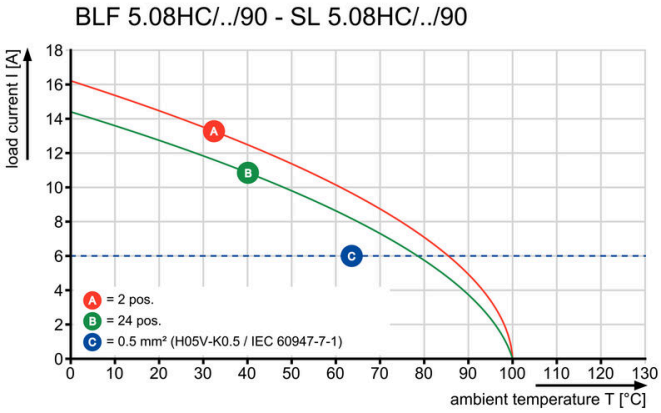
### Dimensional drawing




### Graph




### Graph






Uncompromising functionalityHigh vibration resistance



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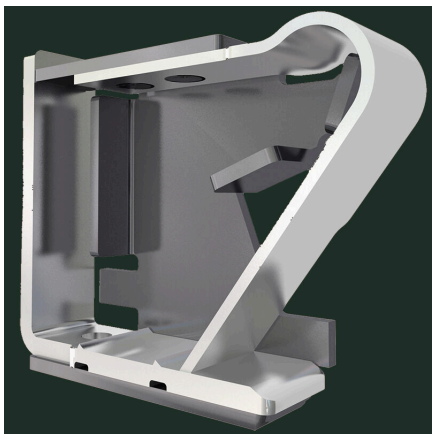
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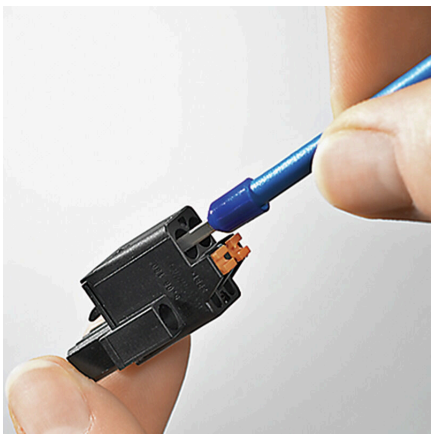
## Drawings

### Product benefits



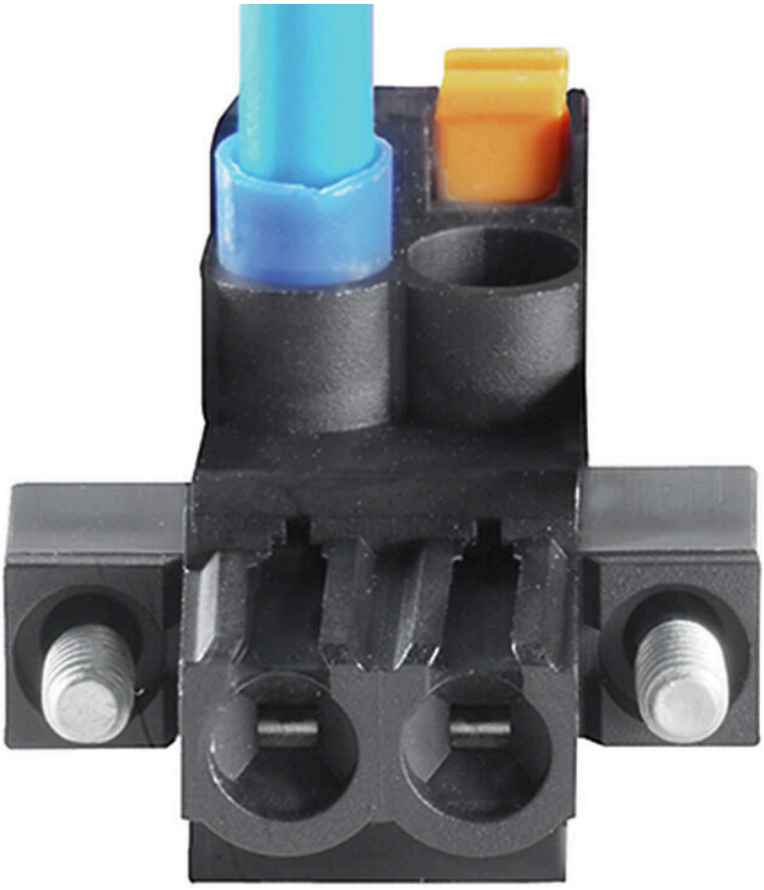
Solid PUSH IN contactSafe and durable

### Product benefits



Cost-effective wiringQuick and intuitive operation

### Product benefits



Wide clamping rangeTool-free wire connection



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