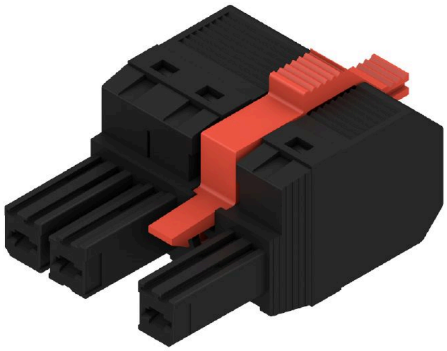
Data sheet

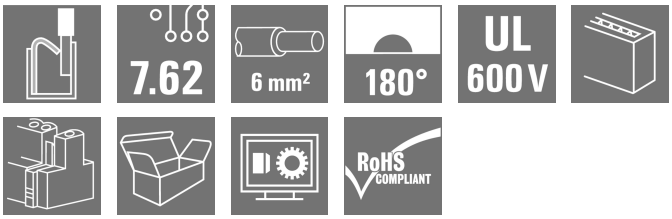
# BVF 7.62HP/03/180MF2 SN BK BX

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

www.weidmueller.com

## Product image






180° female header with PUSH IN connection technology for field wiring in 6 mm² with 7.62 pitch.
Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1. Ideal touch-safe solution for the power output.
The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.
Variants: without flange, external flange, middle flange with detent fastening and optionally additional screw mount.

### General ordering data

| | |
|---|---|
| Version | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 3, 180°, PUSH IN without actuator, Tension-clamp connection, Clamping range, max. : 10 mm², Box |
| Order No. | 1060570000 |
| Type | BVF 7.62HP/03/180MF2 SN BK BX |
| GTIN (EAN) | 4032248809974 |
| Qty. | 50 items |
| Product data | IEC: 1000 V / 57 A / 0.5 - 10 mm²<br>UL: 600 V / 39 A / AWG 24 - AWG 8 |
| Packaging | Box |

# Data sheet

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# Technical data

### Approvals

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

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 47.7 mm | Depth (inches) | 1.8779 inch |
| Height | 22.9 mm | Height (inches) | 0.9016 inch |
| Net weight | 19.66 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 BV/SV 7.62HP | Type of connection | Field connection |
| Wire connection method | PUSH IN without actuator, Tension-clamp connection | Pitch in mm (P) | 7.62 mm |
| Pitch in inches (P) | 0.300 " | Conductor outlet direction | 180° |
| Number of poles | 3 | L1 in mm | 22.86 mm |
| L1 in inches | 0.900 " | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 6 mm² |
| 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 | Volume resistance | 4.50 mΩ |
| Can be coded | Yes | Stripping length | 12 mm |
| Screwdriver blade | 0.6 x 3.5 | Plugging cycles | 25 |
| Plugging force/pole, max. | 17 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) | ≥ 500 | Moisture Level (MSL) | |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Layer structure of plug contact | 6...8 µm Sn glossy |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -50 °C | Operating temperature, max. | 125 °C |
| Temperature range, installation, min. | -25 °C | Temperature range, installation, max. | 125 °C |

### Conductors suitable for connection

| | |
|---|---|
| Clamping range, min. | 0.5 mm² |
| Clamping range, max. | 10 mm² |
| Solid, min. H05(07) V-U | 0.5 mm² |
| Solid, max. H05(07) V-U | 10 mm² |
| Stranded, max. H07V-R | 10 mm² |
| Flexible, min. H05(07) V-K | 0.5 mm² |

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| | | | | |
|---|---|---|---|---|
| Flexible, max. H05(07) V-K | 10 mm² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm² | | | |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 6 mm² | | | |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.5 mm² | | | |
| w. wire end ferrule, DIN 46228 pt 1, max. | 10 mm² | | | |
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 14 mm |
| | | Recommended wire-end ferrule | H0,5/12 OR | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 0.75 mm² | |
| | wire end ferrule | Stripping length | nominal | 14 mm |
| | | Recommended wire-end ferrule | H0,75/18 W | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1 mm² | |
| | wire end ferrule | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H1,0/18 GE | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 1.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H1,5/12 | |
| | | Stripping length | nominal | 15 mm |
| | | Recommended wire-end ferrule | H1,5/18D SW | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 2.5 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H2,5/12 | |
| | | Stripping length | nominal | 14 mm |
| | | Recommended wire-end ferrule | H2,5/19D BL | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 4 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H4,0/12 | |
| | | Stripping length | nominal | 14 mm |
| | | Recommended wire-end ferrule | H4,0/20D GR | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 6 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |
| | | Recommended wire-end ferrule | H6,0/12 | |
| | | Stripping length | nominal | 14 mm |
| | | Recommended wire-end ferrule | H6,0/20 SW | |
| | Cross-section for conductor connection | Type | fine-wired | |
| | | nominal | 10 mm² | |
| | wire end ferrule | Stripping length | nominal | 12 mm |

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| | | | |
|---|---|---|---|
| | | Recommended wire-end ferrule | H10,0/12 |
| 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) | 57 A |
| Rated current, max. number of poles (Tu=20°C) | 51 A | Rated current, min. number of poles (Tu=40°C) | 57 A |
| Rated current, max. number of poles (Tu=40°C) | 45 A | 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 | 800 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 with 420 A |
| Creepage distance, min. | 12.7 mm | Clearance, min. | 10.4 mm |

### Rated data acc. to CSA

| | | | |
|---|---|---|---|
| Institute (CSA) | CSA | Certificate No. (CSA) | 200039-1121690 |
| Rated voltage (Use group B / CSA) | 600 V | Rated voltage (Use group C / CSA) | 600 V |
| Rated voltage (Use group D / CSA) | 600 V | Rated current (Use group B / CSA) | 33 A |
| Rated current (Use group C / CSA) | 33 A | Rated current (Use group D / CSA) | 5 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 8 |
| 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) | 600 V | Rated voltage (Use group C / UL 1059) | 600 V |
| Rated voltage (Use group D / UL 1059) | 600 V | Rated current (Use group B / UL 1059) | 39 A |
| Rated current (Use group C / UL 1059) | 39 A | Rated current (Use group D / UL 1059) | 5 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 8 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 352.00 mm |
| VPE width | 136.00 mm | VPE height | 61.00 mm |

### 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 |
| | 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 |

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## Technical data

| | | | |
|---|---|---|---|
| | Test | 180° turned without coding elements | |
| | 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 0.5 mm² |
| | | Type of conductor and conductor cross-section | stranded 0.5 mm² |
| | | Type of conductor and conductor cross-section | solid 6 mm² |
| | | Type of conductor and conductor cross-section | stranded 6 mm² |
| | | Type of conductor and conductor cross-section | AWG 24/1 |
| | | Type of conductor and conductor cross-section | AWG 24/19 |
| | | 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 | 0.3 kg | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |
| | | Type of conductor and conductor cross-section | H05V-K0.5 |
| | | Type of conductor and conductor cross-section | AWG 20/1 |
| | | Type of conductor and conductor cross-section | AWG 20/19 |
| | Evaluation | passed | |
| | Requirement | 1.4 kg | |
| | Conductor type | Type of conductor and conductor cross-section | H07V-U6 |
| | | Type of conductor and conductor cross-section | H07V-K6 |
| | | Type of conductor and conductor cross-section | AWG 10/1 |
| | | Type of conductor and conductor cross-section | AWG 10/19 |
| | Evaluation | passed | |
| Pull-out test | Standard | DIN EN 60999-1 section 9.5 / 12.00 | |
| | Requirement | ≥20 N | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |

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## Technical data

| | | | |
|---|---|---|---|
| | | Type of conductor and conductor cross-section | H05V-K0.5 |
| | | Type of conductor and conductor cross-section | AWG 20/1 |
| | | Type of conductor and conductor cross-section | AWG 20/19 |
| | Evaluation | passed | |
| | Requirement | ≥80 N | |
| | Conductor type | Type of conductor and conductor cross-section | H07V-U6 |
| | | Type of conductor and conductor cross-section | H07V-K6 |
| | | Type of conductor and conductor cross-section | AWG 10/1 |
| | | Type of conductor and conductor cross-section | AWG 10/19 |
| | 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>• Wire end ferrule with plastic collar to DIN 46228/4<br>• Wire end ferrule without plastic collar to DIN 46228/1<br>• P on drawing = pitch<br>• 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.<br>• 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<br>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 6.0 | EC002638 | ETIM 7.0 | EC002638 |
| ETIM 8.0 | EC002638 | ETIM 9.0 | EC002638 |
| ETIM 10.0 | 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 |
| ECLASS 13.0 | 27-46-02-02 | ECLASS 14.0 | 27-46-02-02 |
| ECLASS 15.0 | 27-46-02-02 | | |

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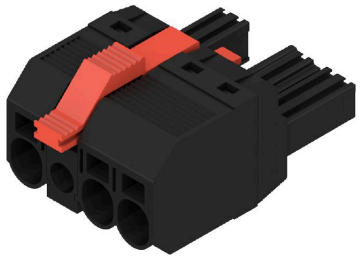
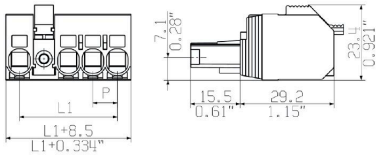
## Drawings

### Product image



### Dimensional drawing

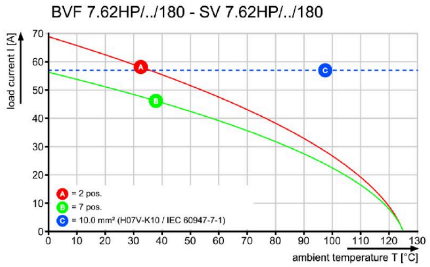



Similar to illustration

### Connection diagram

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | M(S)F6 | o | o | o | o | o | X | o |
| 6 | M(S)F5 | o | o | o | o | X | o | 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 | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| NO OF POLES | X = MIDDLE FLANGE POSITION | POS. 1 2 3 4 5 | | | | | | |

### Graph

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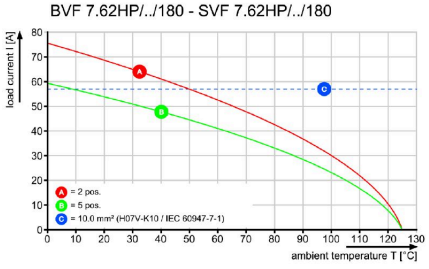


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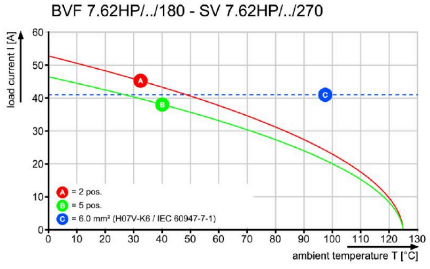

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## Drawings

### Product benefits



Installation without toolsOutlet direction: 90° und 180°