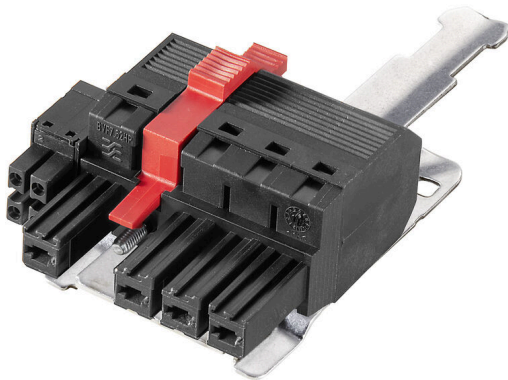


BVF 7.62HP/4/180MSF4 BCF/4 SNBKBX SH180

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

www.weidmueller.com



180° female plug with energy and signal contacts in PUSH IN wire connection in 7.62 pitch.

Fulfils the IEC 61800-5-1 requirement and for the energy contact UL 1059 Class C 600 V. The self-locking middle flange with automatic interlock reduces the space requirements by one pitch width in comparison with conventional solutions. Optionally also available with additional mounting screw. Including pre-assembled pluggable shield connection for large area shielding in your application.

Directly during the plug-in process itself, the shield connection is attached vibration-proof to the contact area of the metal housing.

General ordering data

| | |
|--------------|--|
| Version | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4, 180°, PUSH IN with actuator, PUSH IN without actuator, Clamping range, max.: 10 mm ² , Box |
| Order No. | 2681780000 |
| Type | BVF 7.62HP/4/180MSF4 BCF/4 SNBKBX SH180 |
| GTIN (EAN) | 4050118691436 |
| Qty. | 20 items |
| Product data | IEC: 800 V / 38 A / 0.5 - 10 mm ² UL: / AWG 24 - AWG 8 |
| Packaging | Box |

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Technical data**Approvals**

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

Dimensions and weights

| | |
|------------|---------|
| Net weight | 43.37 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 with actuator, PUSH IN without actuator | Pitch in mm (P) | 7.62 mm |
| Pitch in inches (P) | 0.300 " | Conductor outlet direction | 180° |
| Number of poles | 4 | L1 in mm | 30.48 mm |
| L1 in inches | 1.200 " | L2 in mm | 3.81 mm |
| L2 in inch | 0.150 " | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 6 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 | 4.50 mΩ | Can be coded | Yes |
| Stripping length | 12 mm | Tightening torque for screw flange, min. | 0.2 Nm |
| Tightening torque for screw flange, max. | 0.3 Nm | 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 mm ² |
| Clamping range, max. | 10 mm ² |
| Solid, min. H05(07) V-U | 0.5 mm ² |
| Solid, max. H05(07) V-U | 10 mm ² |
| Stranded, max. H07V-R | 10 mm ² |
| Flexible, min. H05(07) V-K | 0.5 mm ² |
| Flexible, max. H05(07) V-K | 10 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² min. | |
| w. plastic collar ferrule, DIN 46228 pt 4, 6 mm ² max. | |
| w. wire end ferrule, DIN 46228 pt 1, 1.5 mm ² min. | |

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Technical data

w. wire end ferrule, DIN 46228 pt 1, 10 mm² max.

| | | | |
|--|--|------------------------------|-----------------------------|
| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
| | | nominal | 0.5 mm ² |
| wire end ferrule | | Stripping length | nominal 14 mm |
| | | Recommended wire-end ferrule | H0.5/18 OR |
| | | | |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 1 mm ² | |
| 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 mm ² | |
| wire end ferrule | | Stripping length | nominal 15 mm |
| | | Recommended wire-end ferrule | H1.5/18D SW |
| | | Stripping length | nominal 12 mm |
| | | Recommended wire-end ferrule | H1.5/12 |
| | | | |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 0.75 mm ² | |
| 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 | 2.5 mm ² | |
| wire end ferrule | | Stripping length | nominal 14 mm |
| | | Recommended wire-end ferrule | H2.5/19D BL |
| | | Stripping length | nominal 12 mm |
| | | Recommended wire-end ferrule | H2.5/12 |
| | | | |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 4 mm ² | |
| 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 mm ² | |
| wire end ferrule | | Stripping length | nominal 14 mm |
| | | Recommended wire-end ferrule | H6.0/20 SW |
| | | Stripping length | nominal 12 mm |
| | | Recommended wire-end ferrule | H6.0/12 |
| | | | |
| Cross-section for conductor connection | Type | fine-wired | |
| | nominal | 10 mm ² | |
| wire end ferrule | | Stripping length | nominal 12 mm |
| | | 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.

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Technical data
Rated data acc. to IEC

| | | | |
|---|------------------------|---|-------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 38 A |
| Rated current, max. number of poles (Tu=20°C) | 38 A | Rated current, min. number of poles (Tu=40°C) | 34 A |
| Rated current, max. number of poles (Tu=40°C) | 34 A | Rated voltage for surge voltage class / pollution degree II/2 | 800 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 630 V | Rated voltage for surge voltage class / pollution degree III/3 | 630 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 | 6 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 6 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 UL 1059

| | | | |
|---------------------------------------|--------|---------------------------------------|-------|
| Rated voltage (Use group F / UL 1059) | 600 V | Rated current (Use group F / UL 1059) | 33 A |
| Wire cross-section, AWG, min. | AWG 24 | Wire cross-section, AWG, max. | AWG 8 |

Packing

| | | | |
|-----------|-----------|------------|-----------|
| Packaging | Box | VPE length | 354.00 mm |
| VPE width | 141.00 mm | VPE height | 63.00 mm |

Technical data - hybrid

| | | | |
|---|---------------------|---|------------------|
| Pitch in mm (Signal) | 3.81 mm | Pitch in inches (Signal) | 0.15 inch |
| Number of poles (Signal) | 4 | L2 in mm | 3.81 mm |
| L2 in inch | 0.150 " | Number of rows (Signal) | 2 |
| Contact material (Signal) | CuMg | Contact surface (Signal) | tinned |
| Layer structure of the plug contact (Signal) | 1-3 μ Ni / 4-8 μ Sn | Rated voltage for overvoltage class/ pollution severity level II/2 (Signal) | 250 V |
| Rated voltage for overvoltage class/ pollution severity level III/2 (Signal) | 150 V | Rated voltage for overvoltage class/ pollution severity level III/3 (Signal) | 63 V |
| Rated impulse voltage for overvoltage class/pollution severity level II/2 (Signal) | 2.5 kV | Rated impulse voltage for overvoltage class/pollution severity level III/2 (Signal) | 2.5 kV |
| Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal) | 2.5 kV | Short-time withstand current resistance (Signal) | 3 x 1s with 80 A |
| Connector cross-section (Signal) | AWG 26...AWG 16 | | |

Conductors that can be connected - Hybrid

| | | | |
|---|--------------------------|--|----------------------------|
| Clamping range, rated connection (Power) | 0.5...10 mm ² | Clamping range, rated connection (Signal) | 0.2...1.5 mm ² |
| Connector cross-section (Power) | AWG 24...AWG 8 | Connector cross-section AWG (Signal) | AWG 26...AWG 16 |
| solid, H05(07) V-U (Power) | 0.5...10 mm ² | solid, H05(07) V-U (Signal) | 0.14...1.5 mm ² |
| flexible, H05(07) V-K (Power) | 0.5...6 mm ² | flexible, H05(07) V-K (Signal) | 0.14...1.5 mm ² |
| with wire-end ferrule with collar (Power) | 0.5...6 mm ² | with wire-end ferrule with collar, DIN 46 228/4 (Signal) | 0.25...1.5 mm ² |
| with wire-end ferrule according to DIN 46 228/1 (Power) | 0.5...6 mm ² | with wire-end ferrule according to DIN 46 228/1 (Signal) | 0.25...1.5 mm ² |

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.

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fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

Notes

- Technical specifications refer to the power contacts
- Technical data of signal contacts: 50V / 5A, stripping length 8mm
- Additional variants 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
- 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.
- 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 | 27-46-03-02 |
| ECLASS 15.0 | 27-46-03-02 | | |

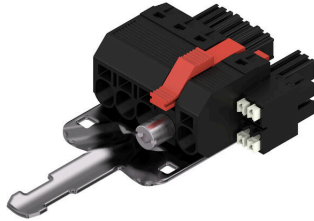
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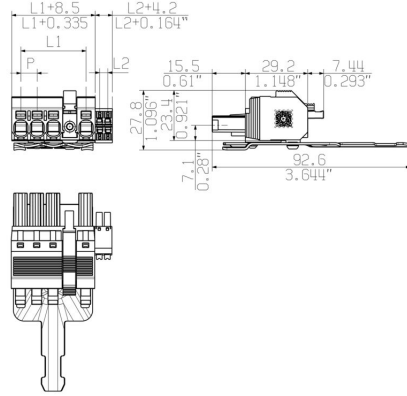
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Drawings

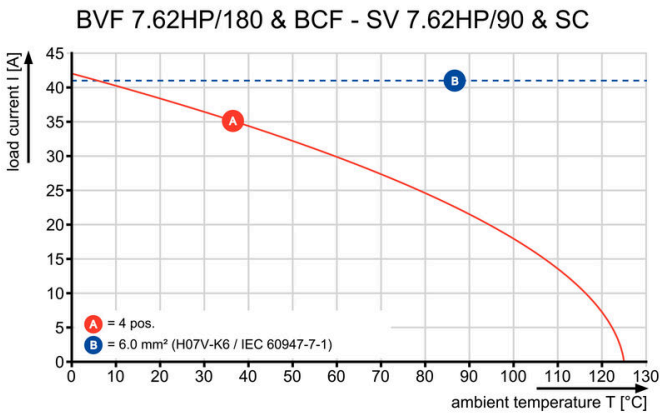
Product image



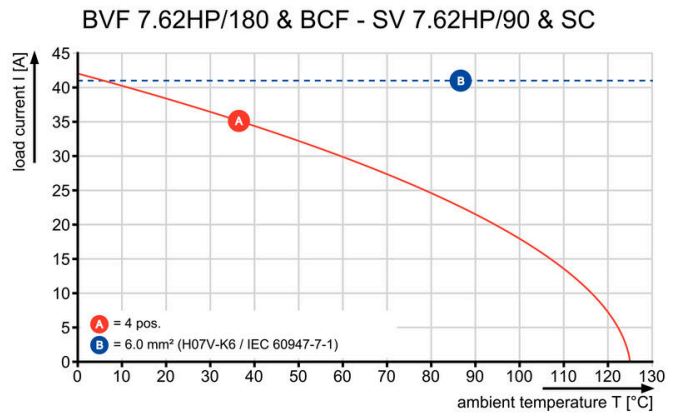
Dimensional drawing



Graph



Graph

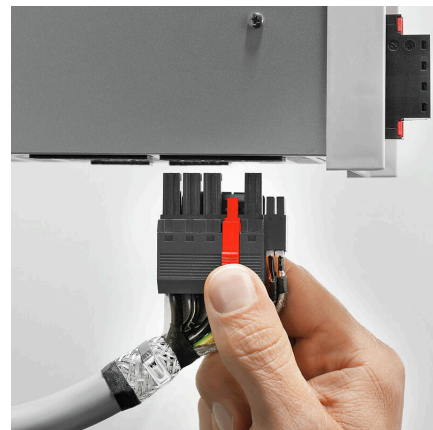


Product benefits



one connector for: Power, Signal (data) and Shielding

Product benefits



Single-handed operation Automatic latching

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Accessories

Coding elements



The pluggable connections for power electronics - optimised for modern drive technologies, e.g. motor starters, frequency converters and servo-controllers. OMNIMATE Power sets the new standard – with increased safety and innovative solutions such as the pluggable shield, integrated signal contacts and one-handed operation.

The three product lines offer you further advantages:

- Application-oriented scalability: from the compact 4 mm² connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm² connector for 76 A (IEC) or 54 A (UL)
- Unlimited usage up to 1,000 V (IEC) or 600 V (UL)
- A variety of application optimised mounting options

Our service:

Design your individual connectors simply by using the product configurator.

General ordering data

| | | | |
|------------|----------------------------|---|--|
| Type | BV/SV 7.62HP KO | Version | |
| Order No. | 1937590000 | PCB plug-in connector, Accessories, Coding element, black, Number | |
| GTIN (EAN) | 4032248608881 | of poles: 1 | |
| Qty. | 50 ST | | |

Slotted screwdriver



Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

| | | | |
|------------|----------------------------|--------------------------|--|
| Type | SDS 0.8X4.5X125 | Version | |
| Order No. | 9009020000 | Screwdriver, Screwdriver | |
| GTIN (EAN) | 4032248266883 | | |
| Qty. | 1 ST | | |

Crimping tools



Crimping tools for wire end ferrules, with and without plastic collars

- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

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Accessories

General ordering data

| | | | |
|------------|----------------------------|--|--|
| Type | PZ 6/5 | Version | |
| Order No. | 9011460000 | Pressing tool, Crimping tool for wire-end ferrules, 0.25mm ² , 6mm ² , | |
| GTIN (EAN) | 4008190165352 | Trapezoidal indentation crimp | |
| Qty. | 1 ST | | |

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Counterpart

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SV 7.62HP / SC 3.81 90MSF


Combined 90° male header with power and signal contacts in PUSH IN connection technology incl. self-locking middle flange interlock and (optional) pluggable shield connection with a 7.62 pitch.

Enables simultaneous connection of power, signals and (optional) EMC shielding. Ideal for connecting servo and asynchronous drives.

Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V when combined with female header BVF 7.62HP/...BCF..R...

Without a female header, the mating profile guarantees minimum power-contact touch-safety of >3 mm with 20 N pressure on the test finger.

The self-locking middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

Optionally on request: without flange fastening, with additional screw mount or with soldered flange fastening.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SV 7.62HP/04/90MSF4 SC/... | Version |
| Order No. | 1090370000 | PCB plug-in connector, male header, closed side, Middle screw flange, |
| GTIN (EAN) | 4032248858842 | THT solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin |
| Qty. | 36 ST | length (l): 3.5 mm, tinned, black, Box |

SV 7.62HP / SC 3.81 270MSF


Combined 270° male header with power and signal contacts incl. self-locking middle flange interlock with a 7.62 pitch.

Enables simultaneous connection of power, signals and (optional) EMC shielding. Ideal for connecting servo and asynchronous drives.

Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V when combined with female header BVF 7.62HP/...BCF..R...

Without a female header, the mating profile guarantees minimum power-contact touch-safety of >3 mm with 20 N pressure on the test finger.

The self-locking middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

Optionally on request: without flange fastening, with additional screw mount or with soldered flange fastening.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SV 7.62HP/04/270MSF4 SC... | Version |
| Order No. | 1090060000 | PCB plug-in connector, male header, closed side, Middle screw flange, |
| GTIN (EAN) | 4032248861392 | THT solder connection, 7.62 mm, Number of poles: 4, 270°, Solder |
| Qty. | 36 ST | pin length (l): 3.5 mm, tinned, black, Box |

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Counterpart

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SV-SMT 7.62HP / SC 3.81 270 MSF


OMNIMATE Power BV / SV 7.62HP Hybrid – for power, signals and EMC

Three functions in one!

The OMNIMATE Power Hybrid connector provides developers and users with the perfect three-in-one solution.

This hybrid motor connector simultaneously unites power, signals and pluggable EMC shield support. Thus you save space on the PCB, on the outer side of the housing, and in the electrical cabinet. The self-snapping one-handed interlock mechanism requires only one plugging step and thus speeds up installation and maintenance procedures. It is easy to handle and interlocks automatically – even in difficult installation positions. The unique shielding shape and slender 30° wire entry enable a space savings of up to 10 cm between rows.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | SV-SMT 7.62HP/04/270MSF... | Version |
| Order No. | 2529630000 | PCB plug-in connector, male header, closed side, Middle screw flange, |
| GTIN (EAN) | 4050118539905 | THT/THR solder connection, 7.62 mm, Number of poles: 4, 270°, |
| Qty. | 36 ST | Solder pin length (l): 2.6 mm, tinned, black, Box |

SV-SMT 7.62HP / SC 3.81 90 MSF


OMNIMATE Power BV / SV 7.62HP Hybrid – for power, signals and EMC

Three functions in one!

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General ordering data

| | | |
|------------|----------------------------|---|
| Type | SV-SMT 7.62HP/04/90MSF4... | Version |
| Order No. | 2545830000 | PCB plug-in connector, male header, closed side, Middle screw flange, |
| GTIN (EAN) | 4050118555868 | THT/THR solder connection, 7.62 mm, Number of poles: 4, 90°, |
| Qty. | 95 ST | Solder pin length (l): 2.6 mm, tinned, black, Tape |