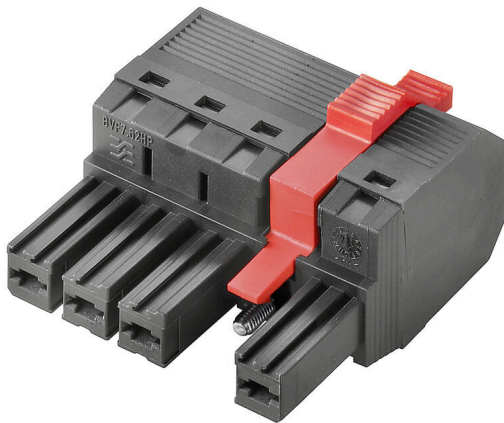


**BVF 7.62HP/04/180MSF2 SN BK BX**

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

www.weidmueller.com



180° female header with PUSH IN connection technology for field wiring in 6 mm<sup>2</sup> 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: 4, 180°, PUSH IN without actuator, Tension-clamp connection, Clamping range, max.: 10 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1430090000</a>  |
| Type         | BVF 7.62HP/04/180MSF2 SN BK BX  |
| GTIN (EAN)   | 4050118235135   |
| Qty.         | 40 items  |
| Product data | IEC: 1000 V / 57 A / 0.5 - 10 mm <sup>2</sup><br>UL: 600 V / 39 A / AWG 24 - AWG 8  |
| Packaging    | Box   |

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## Technical data

## Approvals

Approvals



|                         |                            |
|-------------------------|----------------------------|
| ROHS                    | Conform                    |
| UL File Number Search   | <a href="#">UL Website</a> |
| 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 | 22.58 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<br>BV/SV 7.62HP               | Type of connection                            | Field connection  |
| Wire connection method                          | PUSH IN without actuator,<br>Tension-clamp connection | 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 "   | Number of rows                                | 1                 |
| Pin series quantity                             | 1   | Rated cross-section                           | 6 mm <sup>2</sup> |
| Touch-safe protection acc. to DIN VDE<br>57 106 | Safe from finger touch                                | Touch-safe protection acc. to DIN VDE<br>0470 | IP 20             |
| Protection degree                               | IP20  | 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 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 <sup>2</sup> |
| Clamping range, max.    | 10 mm <sup>2</sup>  |
| Solid, min. H05(07) V-U | 0.5 mm <sup>2</sup> |
| Solid, max. H05(07) V-U | 10 mm <sup>2</sup>  |
| Stranded, max. H07V-R   | 10 mm <sup>2</sup>  |

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**Technical data**

|   |                     |
|---|---------------------|
| Flexible, min. H05(07) V-K  | 0.5 mm <sup>2</sup> |
| Flexible, max. H05(07) V-K  | 10 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min. |                     |
| w. plastic collar ferrule, DIN 46228 pt 4, 6 mm <sup>2</sup> max.   |                     |
| w. wire end ferrule, DIN 46228 pt 1, 0.5 mm <sup>2</sup> min.       |                     |
| w. wire end ferrule, DIN 46228 pt 1, 10 mm <sup>2</sup> max.        |                     |

|  |  |                              |                             |
|--|--|------------------------------|-----------------------------|
| Clampable conductor                    | Cross-section for conductor connection | Type                         | fine-wired                  |
|  |  | nominal                      | 0.5 mm <sup>2</sup>         |
| wire end ferrule                       |  | Stripping length             | nominal 14 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H0.5/12 OR</a>  |
|  |  |                              |                             |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 0.75 mm <sup>2</sup>         |                             |
| wire end ferrule                       |  | Stripping length             | nominal 14 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H0.75/18 W</a>  |
|  |  |                              |                             |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 1 mm <sup>2</sup>            |                             |
| wire end ferrule                       |  | Stripping length             | nominal 15 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H1.0/18 GE</a>  |
|  |  |                              |                             |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 1.5 mm <sup>2</sup>          |                             |
| wire end ferrule                       |  | Stripping length             | nominal 12 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H1.5/12</a>     |
|  |  | Stripping length             | nominal 15 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H1.5/18D SW</a> |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 2.5 mm <sup>2</sup>          |                             |
| wire end ferrule                       |  | Stripping length             | nominal 12 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H2.5/12</a>     |
|  |  | Stripping length             | nominal 14 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H2.5/19D BL</a> |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 4 mm <sup>2</sup>            |                             |
| wire end ferrule                       |  | Stripping length             | nominal 12 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H4.0/12</a>     |
|  |  | Stripping length             | nominal 14 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H4.0/20D GR</a> |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 6 mm <sup>2</sup>            |                             |
| wire end ferrule                       |  | Stripping length             | nominal 12 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H6.0/12</a>     |
|  |  | Stripping length             | nominal 14 mm               |
|  |  | Recommended wire-end ferrule | <a href="#">H6.0/20 SW</a>  |
| Cross-section for conductor connection | Type                                   | fine-wired                   |                             |
|  | nominal                                | 10 mm <sup>2</sup>           |                             |
| wire end ferrule                       |  | Stripping length             | nominal 12 mm               |

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**Technical data**

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 | 351.00 mm |
| VPE width | 137.00 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   |
| Test: Misengagement (Non-interchangeability) | Evaluation | passed   |
|  | 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 mm <sup>2</sup>    |
|   |                | Type of conductor and conductor cross-section                                      | stranded 0.5 mm <sup>2</sup> |
|   |                | Type of conductor and conductor cross-section                                      | solid 6 mm <sup>2</sup>      |
|   |                | Type of conductor and conductor cross-section                                      | stranded 6 mm <sup>2</sup>   |
|   |                | 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<br>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
  - Wire end ferrule with plastic collar to DIN 46228/4
  - Wire end ferrule without plastic collar to DIN 46228/1
  - 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.
  - 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 |             |             |

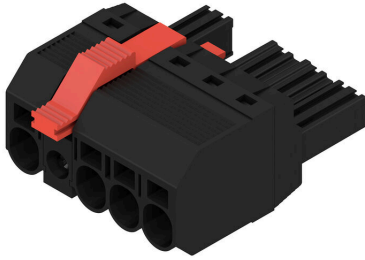
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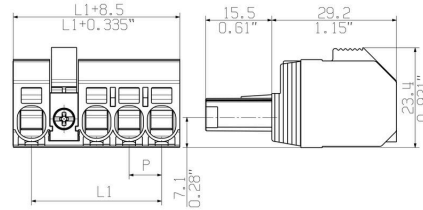
www.weidmueller.com

Drawings

Product image




Dimensional drawing

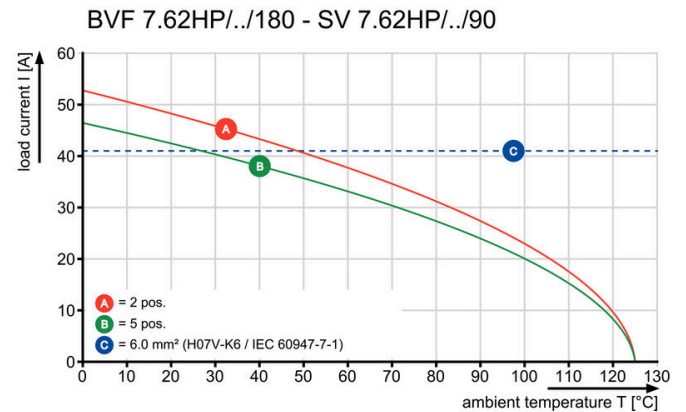


Connection diagram

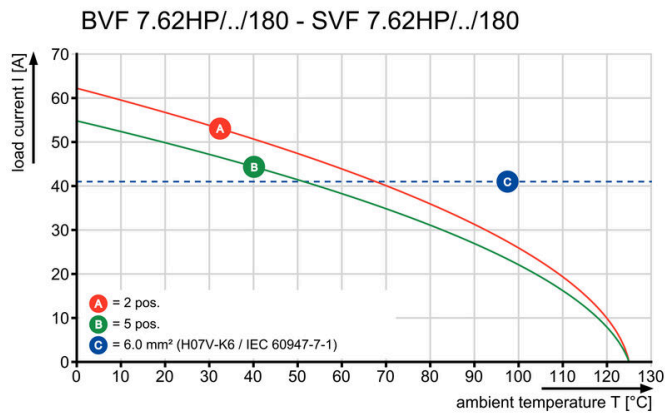
|             |                            |                |   |   |   |   |   |   |
|-------------|----------------------------|----------------|---|---|---|---|---|---|
| 6           | M(S)F6                     | o              | o | o | o | o | X | o |
| 6           | M(S)F5                     | 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 | o |
| 5           | M(S)F4                     | o              | o | o | X | o | o | o |
| 5           | M(S)F3                     | o              | o | X | o | o | o | o |
| 5           | M(S)F2                     | o              | X | o | o | o | o | o |
| 4           | M(S)F4                     | o              | o | o | X | o | o | o |
| 4           | M(S)F3                     | o              | o | X | o | o | o | o |
| 4           | M(S)F2                     | o              | X | o | o | o | o | o |
| 3           | M(S)F3                     | o              | o | X | o | o | o | o |
| 3           | M(S)F2                     | o              | X | o | o | o | o | o |
| 2           | M(S)F2                     | o              | X | o | o | o | o | o |
| NO OF POLES | X = MIDDLE FLANGE POSITION | 1              | 2 | 3 | 4 | 5 | 6 | 7 |
|             |                            | POS. 1 2 3 4 5 |   |   |   |   |   |   |



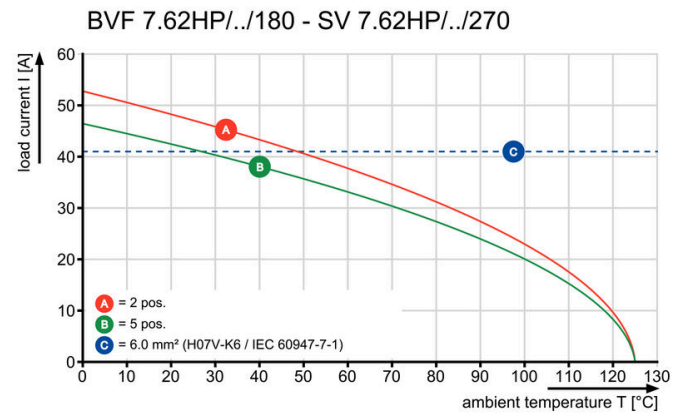
Graph



Graph



Graph



**BVF 7.62HP/04/180MSF2 SN BK BX**

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**Drawings**

[www.weidmueller.com](http://www.weidmueller.com)

**Product benefits**



Installation without tools Outlet direction: 90° und 180°

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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 mm<sup>2</sup> connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm<sup>2</sup> 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.  | <a href="#">1937590000</a> | PCB plug-in connector, Accessories, Coding element, black, Number |  |
| GTIN (EAN) | 4032248608881              | of poles: 1   |  |
| Qty.       | 50 ST                      |   |  |

### Shielding



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 mm<sup>2</sup> connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm<sup>2</sup> 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       | BVF 7.62HP SH150 4-6 KIT   | Version   |  |
| Order No.  | <a href="#">1118480000</a> | PCB plug-in connector, Accessories, For a shield connection, black, |  |
| GTIN (EAN) | 4032248899449              | Number of poles: 0  |  |
| Qty.       | 25 ST                      |   |  |
| Type       | BVF 7.62HP SH180 4-6 KIT   | Version   |  |
| Order No.  | <a href="#">1118470000</a> | PCB plug-in connector, Accessories, For a shield connection, black, |  |
| GTIN (EAN) | 4032248899456              | Number of poles: 0  |  |
| Qty.       | 25 ST                      |   |  |

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## Accessories

|            |                            |   |  |
|------------|----------------------------|---|--|
| Type       | BVF 7.62HP SH210 4-6 KIT   | Version   |  |
| Order No.  | <a href="#">1118490000</a> | PCB plug-in connector, Accessories, For a shield connection, black, |  |
| GTIN (EAN) | 4032248899302              | Number of poles: 0  |  |
| Qty.       | 25 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.  | <a href="#">9009020000</a> | 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

#### General ordering data

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