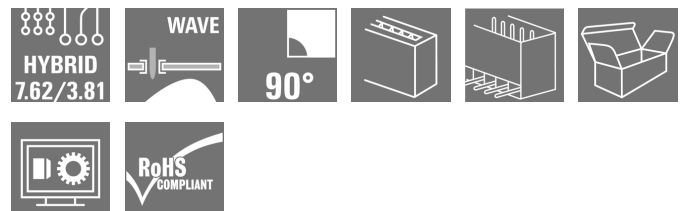


**OMNIMATE Power - series BV/SV 7.62HP  
SV 7.62HP/04/90G SC/06R SN BK BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com



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/04/90G SC/06R SN BK BX                                                                                                                    |
| Order No.    | <a href="#">1090360000</a>                                                                                                                          |
| Version      | PCB plug-in connector, male header, closed side, THT solder connection, 7.62 mm, No. of poles: 4, 90°, Solder pin length (l): 3.5 mm, tinned, Black |
| GTIN (EAN)   | 4032248859146                                                                                                                                       |
| Qty.         | 42 pc(s).                                                                                                                                           |
| Product data | IEC: 1000 V / 41 A<br>UL: 300 V / 35 A                                                                                                              |

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## Technical data

### Dimensions and weights

|            |        |
|------------|--------|
| Net weight | 6.68 g |
|------------|--------|

### System specifications

|                                              |                                                      |                                            |                   |
|----------------------------------------------|------------------------------------------------------|--------------------------------------------|-------------------|
| Product family                               | OMNIMATE Power - series BV/SV 7.62HP                 | Type of connection                         | Solder connection |
| Mounting onto the PCB                        | THT solder connection                                | Pitch in mm (P)                            | 7.62 mm           |
| Pitch in inches (P)                          | 0.3 inch                                             | Outgoing elbow                             | 90°               |
| No. of poles                                 | 4                                                    | Number of solder pins per pole             | 2                 |
| Solder pin length (l)                        | 3.5 mm                                               | Solder pin length tolerance                | +0.1 / -0.3 mm    |
| Tolerance of solder pin position             | ± 0.1 mm                                             | Solder pin dimensions                      | 0.8 x 1.0 mm      |
| Solder eyelet hole diameter (D)              | 1.3 mm                                               | Solder eyelet hole diameter tolerance (D)  | + 0.1 mm          |
| L1 in mm                                     | 22.86 mm                                             | L1 in inches                               | 0.9 inch          |
| Number of rows                               | 1                                                    | Pin series quantity                        | 1                 |
| Touch-safe protection acc. to DIN VDE 57 106 | safe to back of hand above the printed circuit board | Touch-safe protection acc. to DIN VDE 0470 | IP 20             |
| Volume resistance                            | 2.00 mΩ                                              | Can be coded                               | Yes               |
| Plugging cycles                              | 25                                                   | push-in force/pole                         | 12 N              |
| Withdrawal force per pole                    | 7 N                                                  |                                            |                   |

### Material data

|                                       |                            |                                       |                            |
|---------------------------------------|----------------------------|---------------------------------------|----------------------------|
| Insulating material                   | PA GF                      | Colour                                | Black                      |
| Colour chart (similar)                | RAL 9011                   | Insulating material group             | II                         |
| CTI                                   | ≥ 500                      | Insulation resistance                 | ≥ 10 <sup>8</sup> Ω        |
| UL 94 flammability rating             | V-0                        | Contact material                      | Copper alloy               |
| Contact surface                       | tinned                     | Layer structure of solder connection  | 1-3 µm Ni / 4-6 µm Sn matt |
| Layer structure of plug contact       | 1-3 µm Ni / 4-6 µm Sn matt | Storage temperature, min.             | -25 °C                     |
| Storage temperature, max.             | 55 °C                      | Max. relative humidity during storage | 80 %                       |
| Operating temperature, min.           | -50 °C                     | Operating temperature, max.           | 130 °C                     |
| Temperature range, installation, min. | -25 °C                     | Temperature range, installation, max. | 130 °C                     |

### Rated data acc. to IEC

|                                                                           |                        |                                                                       |                   |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. no. of poles (Tu=20°C)                            | 41 A              |
| Rated current, max. no. of poles (Tu=20°C)                                | 41 A                   | Rated current, min. no. of poles (Tu=40°C)                            | 41 A              |
| Rated current, max. no. of poles (Tu=40°C)                                | 41 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 1,000 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 |

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**Technical data**
**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

|                              |                                                                        |
|------------------------------|------------------------------------------------------------------------|
| Rated voltage (Use group B)  | 300 V                                                                  |
| Rated voltage (use group D)  | 600 V                                                                  |
| Rated current (use group C)  | 33 A                                                                   |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

|                             |       |
|-----------------------------|-------|
| Rated voltage (Use group C) | 300 V |
| Rated current (use group B) | 33 A  |
| Rated current (use group D) | 5 A   |

**Rated data acc. to UL 1059**

Institute (cURus)



Certificate No. (cURus)

E60693

|                              |                                                                        |
|------------------------------|------------------------------------------------------------------------|
| Rated voltage (use group B)  | 300 V                                                                  |
| Rated voltage (use group D)  | 600 V                                                                  |
| Rated current (use group C)  | 35 A                                                                   |
| Clearance distance, min.     | 6.9 mm                                                                 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

|                             |        |
|-----------------------------|--------|
| Rated voltage (use group C) | 300 V  |
| Rated current (use group B) | 35 A   |
| Rated current (use group D) | 5 A    |
| Creepage distance, min.     | 9.6 mm |

**System specifications - Hybrid board | Technical data**

|                                                                                     |                  |                                                                                     |           |
|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|-----------|
| Pitch in mm (Signal)                                                                | 3.81 mm          | Pitch in inches (Signal)                                                            | 0.15 inch |
| Number of poles (Signal)                                                            | 6                | Number of solder pins per pole (Signal)                                             | 1         |
| Solder pin dimensions (Signal)                                                      | 0.8 x 0.8 mm     | L2 in mm                                                                            | 7.62 mm   |
| L2 in inch                                                                          | 0.3 inch         | Number of rows (Signal)                                                             | 2         |
| Contact material (Signal)                                                           | CuMg             | Contact surface (Signal)                                                            | tinned    |
| Rated voltage for overvoltage class/pollution severity level II/2 (Signal)          | 320 V            | Rated voltage for overvoltage class/pollution severity level III/2 (Signal)         | 160 V     |
| Rated voltage for overvoltage class/pollution severity level III/3 (Signal)         | 160 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 | Rated voltage (Use group B) (Signal)                                                | 300 V     |
| Rated voltage (Use group C) (Signal)                                                | 50 V             | Rated current (Use group B) (Signal)                                                | 9 A       |
| Rated current (Use group C) (Signal)                                                | 9 A              | Rated current (Use group D) (Signal)                                                | 9 A       |
| Rated voltage (Use group B) (Signal)                                                | 300 V            | Rated voltage (Use group C) (Signal)                                                | 50 V      |
| Rated current (Use group B) (Signal)                                                | 5 A              | Rated current (Use group C) (Signal)                                                | 5 A       |

**Classifications**

|            |             |            |             |
|------------|-------------|------------|-------------|
| ETIM 4.0   | EC002637    | ETIM 5.0   | EC002637    |
| ETIM 6.0   | EC002637    | eClass 6.2 | 27-26-07-04 |
| eClass 7.1 | 27-44-04-02 | eClass 8.1 | 27-44-04-02 |
| eClass 9.0 | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |

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## Technical data

### Notes

#### Notes

- Technical specifications refer to the power contacts
- Technical data of signal contacts: 50V / 5A, stripping length 8mm
- Rated current related to rated cross-section & min. No. of poles.
- Specifications of diagram: P1=7.62 mm; P2=3.81 mm
- 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.

#### 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.

### Approvals

#### Approvals



#### ROHS

Conform

### Downloads

#### Approval/Certificate/Document of Conformity

[Declaration of the Manufacturer](#)

#### Brochure/Catalogue

[FL DRIVES EN](#)  
[MB DEVICE MANUF. EN](#)  
[FL DRIVES DE](#)  
[CAT 2 PORTFOLIOGUIDE EN](#)  
[FL HEATING ELECTR EN](#)  
[FL APPL INVERTER EN](#)  
[FL BASE STATION EN](#)  
[FL ELEVATOR EN](#)  
[FL POWER SUPPLY EN](#)  
[FL 72H SAMPLE SER EN](#)  
[PO OMNIMATE EN](#)

#### Engineering Data

[EPLAN, WSCAD](#)

#### Motion controllers white paper

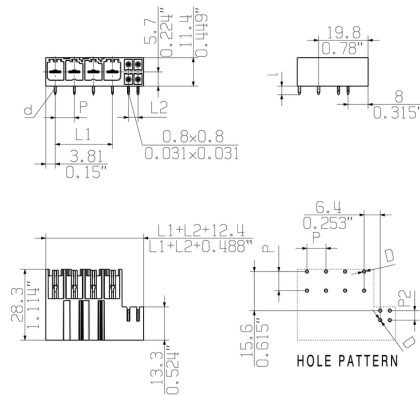
[Download Whitepaper](#)

#### White Paper UL 600 V

[Download Whitepaper](#)

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## Dimensional drawing



## Recommended wave soldering profiles

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### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.