

SV 7.62HP/05/90MSF4 SC/06R SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

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

| | |
|--------------|--|
| Version | PCB plug-in connector, male header, closed side, Middle screw flange, THT solder connection, 7.62 mm, Number of poles: 5, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box |
| Order No. | 1090900000 |
| Type | SV 7.62HP/05/90MSF4 SC/06R SN BK BX |
| GTIN (EAN) | 4032248860203 |
| Qty. | 30 pc(s). |
| Product data | IEC: 1000 V / 41 A UL: 300 V / 35 A |
| Packaging | Box |

SV 7.62HP/05/90MSF4 SC/06R SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 28.3 mm | Depth (inches) | 1.114 inch |
| Height | 14.9 mm | Height (inches) | 0.587 inch |
| Height of lowest version | 11.4 mm | Width | 58.12 mm |
| Width (inches) | 2.288 inch | Net weight | 8.35 g |

System specifications

| | | | |
|--|--------------------------------------|--|--|
| Product family | OMNIMATE Power - series BV/SV 7.62HP | Type of connection | Board connection |
| Mounting onto the PCB | THT solder connection | Pitch in mm (P) | 7.62 mm |
| Pitch in inches (P) | 0.3 " | Outgoing elbow | 90° |
| Number of poles | 5 | Number of solder pins per pole | 2 |
| Solder pin length (l) | 3.5 mm | Solder pin length tolerance | +0.1 / -0.3 mm |
| Solder pin dimensions | 0.8 x 1.0 mm | Solder eyelet hole diameter (D) | 1.4 mm |
| Solder eyelet hole diameter tolerance (D)+ | 0.1 mm | L1 in mm | 38.1 mm |
| L1 in inches | 1.5 " | L2 in mm | 7.62 mm |
| L2 in inch | 0.3 " | 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 | Tightening torque for screw flange, min. | 0.2 Nm |
| Tightening torque for screw flange, max. | 0.3 Nm | Plugging cycles | 25 |
| Plugging force/pole, max. | 12 N | Pulling force/pole, max. | 7 N |

Material data

| | | | |
|---------------------------------------|--------------------------------|---------------------------------------|--------------------------------|
| Insulating material | PA GF | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | II |
| Comparative Tracking Index (CTI) | ≥ 500 | UL 94 flammability rating | V-0 |
| Contact material | Cu-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. | -40 °C | Storage temperature, max. | 70 °C |
| 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. number of poles (Tu=20°C) | 41 A |
| Rated current, max. number of poles (Tu=20°C) | 41 A | Rated current, min. number of poles (Tu=40°C) | 41 A |
| Rated current, max. number 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 |

SV 7.62HP/05/90MSF4 SC/06R SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1121690

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

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

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

| | |
|---------------------------------------|--|
| Rated voltage (Use group B / UL 1059) | 300 V |
| Rated voltage (Use group D / UL 1059) | 600 V |
| Rated current (Use group C / UL 1059) | 33 A |
| Clearance distance, min. | 6.9 mm |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. |

| | |
|---------------------------------------|--------|
| Rated voltage (Use group C / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 35 A |
| Rated current (Use group D / UL 1059) | 5 A |
| Creepage distance, min. | 9.6 mm |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 350 mm |
| VPE width | 142 mm | VPE height | 42 mm |

Technical data - hybrid

| | | |
|--|-------------------------------------|---|
| Pitch in mm (hybrid) | nominal | 3.81 mm |
| | Hybrid component | Signal |
| Pitch in mm (Signal) | 3.81 mm | |
| Pitch in inch (hybrid) | nominal | 0.15 " |
| | Hybrid component | Signal |
| Pitch in inches (Signal) | 0.15 " | |
| Pole count (hybrid) | nominal | 6 |
| | Hybrid component | Signal |
| Number of poles (Signal) | 6 | |
| Number of solder pins per pole (hybrid) | Hybrid component | Signal |
| | nominal | 1 |
| Number of solder pins per pole (Signal) | 1 | |
| Solder pin dimensions (hybrid) | Hybrid component | Signal |
| | Solder pin dimensions | 0.8 x 0.8 mm |
| Solder pin dimensions (Signal) | 0.8 x 0.8 mm | |
| Solder pin dimensions = d tolerance (hybrid) | Solder pin dimensions = d tolerance | Lower tolerance with prefix (reveals minimum) -0,03 |
| | | Upper tolerance with prefix (reveals maximum) +0,01 |
| | | Tolerance, unit mm |
| | Hybrid component | Signal |

Creation date June 26, 2024 9:51:13 AM CEST

Catalogue status 14.06.2024 / We reserve the right to make technical changes.

SV 7.62HP/05/90MSF4 SC/06R SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

| | | | | |
|---|---|------------------|------|------|
| Solder pin dimensions = d tolerance (Signal) | | -0,03 / +0,01 mm | | |
| Diameter of solder eyelet (hybrid) | Hybrid component | Signal | | |
| | nominal | 1.3 mm | | |
| PCB hole diameter (Signal) | 1.3 mm | | | |
| Tolerance of the diameter of the solder eyelet (hybrid) | Hybrid component | Signal | | |
| | Solder eyelet hole diameter tolerance (D) | ± 0.1 mm | | |
| PCB hole diameter tolerance (Signal) | ± 0.1 mm | | | |
| L2 in mm | 7.62 mm | | | |
| L2 in inch | 0.3 " | | | |
| Number of rows (hybrid) | Hybrid component | Signal | | |
| Number of rows (Signal) | 2 | | | |
| Contact material (hybrid) | Hybrid component | Signal | | |
| | Contact material | CuMg | | |
| Contact material (Signal) | CuMg | | | |
| Contact surface (hybrid) | Hybrid component | Signal | | |
| | Contact surface | tinned | | |
| Contact surface (Signal) | tinned | | | |
| Layer structure of the solder connection (hybrid) | Layer structure of the solder connection | Layer strength | min. | 1 µm |
| | | | max. | 3 µm |
| | | Material | Ni | |
| | | Layer strength | min. | 4 µm |
| | | | max. | 8 µm |
| | | Material | Sn | |
| Hybrid component | Signal | | | |
| Layer structure of the solder connection (Signal) | 1-3 µm Ni / 4-8 µm Sn | | | |
| Layer structure of the plug contact (hybrid) | Layer structure of the plug contact | Layer strength | min. | 1 µm |
| | | | max. | 3 µm |
| | | Material | Ni | |
| | | Layer strength | min. | 4 µm |
| | | | max. | 8 µm |
| | | Material | Sn | |
| Hybrid component | Signal | | | |
| Layer structure of the plug contact (Signal) | 1-3 µm Ni / 4-8 µm Sn | | | |
| Rated voltage for overvoltage class / pollution severity level II/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 320 V | | |
| Rated voltage for overvoltage class/pollution severity level II/2 (Signal) | 320 V | | | |
| Rated voltage for overvoltage class / pollution severity level III/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 160 V | | |
| Rated voltage for overvoltage class/pollution severity level III/2 (Signal) | 160 V | | | |
| Rated voltage for overvoltage class / pollution severity level III/3 (hybrid) | Hybrid component | Signal | | |
| | nominal | 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 (hybrid) | Hybrid component | Signal | | |
| | nominal | 2.5 kV | | |
| 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 (hybrid) | Hybrid component | Signal | | |
| | nominal | 2.5 kV | | |

SV 7.62HP/05/90MSF4 SC/06R SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

| | | |
|---|---|------------------|
| 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 (hybrid) | Hybrid component | Signal |
| | nominal | 2.5 kV |
| Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal) | 2.5 kV | |
| Rated current, number of poles (Tu=40°C) (hybrid) | Hybrid component | Signal |
| | min. | 12.7 A |
| Rated current, number of poles (Tu=20°C) (hybrid) | Hybrid component | Signal |
| | min. | 14.2 A |
| Short-time withstand current capacity (hybrid) | Hybrid component | Signal |
| | Short-time withstand current resistance | 3 x 1s with 80 A |
| Short-time withstand current resistance (Signal) | 3 x 1s with 80 A | |
| Creepage distance (hybrid) | Hybrid component | Signal |
| | min. | 4.38 mm |
| Clearance distance (hybrid) | Hybrid component | Signal |
| | min. | 3.6 mm |
| Rated voltage (Use group B / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 300 V |
| Rated voltage (Use group B / CSA) (Signal) | 300 V | |
| Rated voltage (Use group C / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 50 V |
| Rated voltage (Use group C / CSA) (Signal) | 50 V | |
| Rated current (Use group B / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group B / CSA) (Signal) | 9 A | |
| Rated current (Use group C / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group C / CSA) (Signal) | 9 A | |
| Rated current (Use group D / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group D / CSA) (Signal) | 9 A | |
| Rated voltage (Use group B / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 300 V |
| Rated voltage (Use group B / UL 1059) (Signal) | 300 V | |
| Rated voltage (Use group C / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 50 V |
| Rated voltage (Use group C / UL 1059) (Signal) | 50 V | |
| Rated voltage (Use group D / UL 1059) (Hybrid) | Hybrid component | Signal |
| | | |
| Rated current (Use group B / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 5 A |
| Rated current (Use group B / UL 1059) (Signal) | 5 A | |
| Rated current (Use group C / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 5 A |

SV 7.62HP/05/90MSF4 SC/06R SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Rated current (Use group C / UL 1059) 5 A
(Signal)Rated current (Use group D / UL 1059) Hybrid component
(Hybrid)

Signal

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| ETIM 8.0 | EC002637 | ETIM 9.0 | EC002637 |
| ECLASS 9.0 | 27-44-04-02 | ECLASS 9.1 | 27-44-04-02 |
| ECLASS 10.0 | 27-44-04-02 | ECLASS 11.0 | 27-46-02-01 |
| ECLASS 12.0 | 27-46-03-01 | ECLASS 13.0 | 27-46-03-01 |

Environmental Product Compliance

REACH SVHC

/

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

- 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.
- MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3
- 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

Approvals

Approvals



ROHS

Conform

UL File Number Search

UL Website

Certificate No. (cURus)

E60693

SV 7.62HP/05/90MSF4 SC/06R SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Technical data****Downloads**Approval/Certificate/Document of Con-
formity[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

[FL DRIVES EN](#)[MB DEVICE MANUF. EN](#)[FL DRIVES DE](#)[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](#)[PO OMNIMATE EN](#)

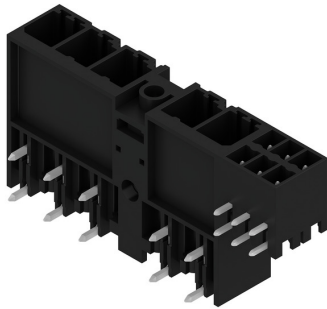
SV 7.62HP/05/90MSF4 SC/06R SN BK BX

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

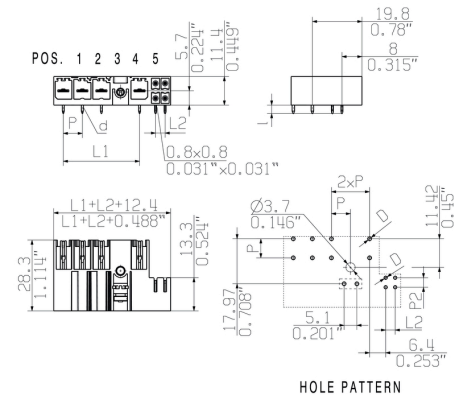
www.weidmueller.com

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 | |
| 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 | | | | |
| NO OF POLES | X = MIDDLE FLANGE POSITION | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | POS. 1 2 3 4 5  | | | | | | |

SV 7.62HP/05/90MSF4 SC/06R SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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

General ordering data

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

Recommended wave soldering profiles

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

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.