

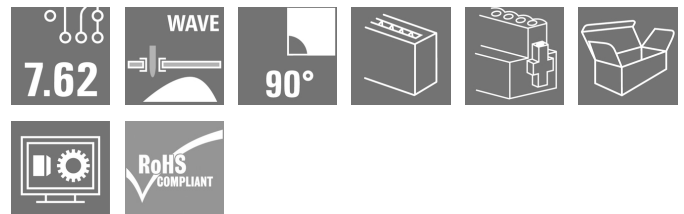
**BVL 7.62HP/07/90FI 3.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

High-performance female header with solder connection. Side-by-side mounting without sacrificing any poles or with patented multifunction flange for secure, fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, with unique coding diversity, protection against faulty wiring and 4-point contact.

**General ordering data**

|              |                                                                                                                                                                            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female header, Clip-on flange, inverted, THT solder connection, 7.62 mm, Number of poles: 7, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box |
| Order No.    | <a href="#">1928440000</a>                                                                                                                                                 |
| Type         | BVL 7.62HP/07/90FI 3.5SN BK BX                                                                                                                                             |
| GTIN (EAN)   | 4032248577668                                                                                                                                                              |
| Qty.         | 50 pc(s).                                                                                                                                                                  |
| Product data | IEC: 1000 V / 56.8 A<br>UL: 300 V / 35 A                                                                                                                                   |
| Packaging    | Box                                                                                                                                                                        |

Creation date May 11, 2025 8:14:21 PM CEST

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**Technical data****Dimensions and weights**

|            |          |                 |            |
|------------|----------|-----------------|------------|
| Depth      | 28 mm    | Depth (inches)  | 1.102 inch |
| Height     | 14.8 mm  | Height (inches) | 0.583 inch |
| Width      | 68.58 mm | Width (inches)  | 2.7 inch   |
| Net weight | 18.322 g |                 |            |

**System Parameters**

|                                               |                                         |                                                 |                                    |
|-----------------------------------------------|-----------------------------------------|-------------------------------------------------|------------------------------------|
| Product family                                | OMNIMATE Power - series<br>BV/SV 7.62HP | Type of connection                              | Board connection                   |
| Pitch in mm (P)                               | 7.62 mm                                 | Pitch in inches (P)                             | 0.3 "                              |
| Number of poles                               | 7                                       | L1 in mm                                        | 45.72 mm                           |
| L1 in inches                                  | 1.8 "                                   | Number of rows                                  | 1                                  |
| Pin series quantity                           | 1                                       | Touch-safe protection acc. to DIN VDE<br>57 106 | Safe from finger touch,<br>plugged |
| Touch-safe protection acc. to DIN VDE<br>0470 | IP 20                                   | Protection degree                               | IP20                               |
| Volume resistance                             | 2.00 mΩ                                 | Can be coded                                    | Yes                                |
| Plugging cycles                               | 25                                      | Plugging force/pole, max.                       | 7 N                                |
| Pulling force/pole, max.                      | 4 N                                     |                                                 |                                    |

**Material data**

|                                       |                  |                                       |                     |
|---------------------------------------|------------------|---------------------------------------|---------------------|
| Insulating material                   | PA GF            | Colour                                | black               |
| Colour chart (similar)                | RAL 9011         | Insulating material group             | II                  |
| Comparative Tracking Index (CTI)      | ≥ 500            | Insulation strength                   | ≥ 10 <sup>8</sup> Ω |
| UL 94 flammability rating             | V-0              | Contact material                      | Cu-alloy            |
| Contact surface                       | tinned           | Layer structure of solder connection  | 4...6 µm Sn matt    |
| Layer structure of plug contact       | 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<br>(Tu=20°C)                         | 56.8 A            |
| Rated current, max. number of poles<br>(Tu=20°C)                             | 41 A                   | Rated current, min. number of poles<br>(Tu=40°C)                         | 41 A              |
| Rated current, max. number of poles<br>(Tu=40°C)                             | 41 A                   | Rated voltage for surge voltage class /<br>pollution degree II/2         | 1,000 V           |
| Rated voltage for surge voltage class /<br>pollution degree III/2            | 630 V                  | Rated voltage for surge voltage class /<br>pollution degree III/3        | 630 V             |
| Rated impulse voltage for surge voltage<br>class/ pollution degree II/2      | 6 kV                   | Rated impulse voltage for surge voltage<br>class/ pollution degree III/2 | 6 kV              |
| Rated impulse voltage for surge voltage<br>class/ contamination degree III/3 | 6 kV                   | Short-time withstand current resistance                                  | 3 x 1s with 420 A |
| Clearance, min.                                                              | 6.9 mm                 | Creepage distance, min.                                                  | 9.66 mm           |

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

Institute (CSA)



Certificate No. (CSA)

200039-1534443

|                                   |                                                                        |
|-----------------------------------|------------------------------------------------------------------------|
| Rated voltage (Use group B / CSA) | 300 V                                                                  |
| Rated voltage (Use group D / CSA) | 600 V                                                                  |
| Rated current (Use group C / CSA) | 35 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) | 35 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) | 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 / 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.               | 9.66 mm |

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 292 mm |
| VPE width | 101 mm | VPE height | 105 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, type of material                     |
|                                              | Evaluation | available                                                                        |
|                                              | Test       | durability                                                                       |
|                                              | Evaluation | passed                                                                           |
| Test: Misengagement (Non-interchangeability) | Standard   | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN IEC 60512-7 section 5 / 05.94    |
|                                              | Test       | 180° turned with coding elements                                                 |
|                                              | Evaluation | passed                                                                           |
|                                              | Test       | 180° turned without coding elements                                              |
|                                              | Evaluation | passed                                                                           |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002637    | ETIM 7.0    | EC002637    |
| ETIM 8.0    | EC002637    | ETIM 9.0    | EC002637    |
| ETIM 10.0   | 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 | 27-46-02-01 |
| ECLASS 13.0 | 27-46-02-01 | ECLASS 14.0 | 27-46-02-01 |
| ECLASS 15.0 | 27-46-02-01 |             |             |

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Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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**Technical data****Environmental Product Compliance**

|                        |                             |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC             | No SVHC above 0.1 wt%       |

**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          | <ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• 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</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                         |                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID         | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/</a> |
| ROHS                    | Conform                                                                                                                                                                                                                                                                                                                                                 |
| UL File Number Search   | UL Website                                                                                                                                                                                                                                                                                                                                              |
| Certificate No. (cURus) | E60693                                                                                                                                                                                                                                                                                                                                                  |

**Downloads**

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>                                                                                                                                                                                                                                                                                                                                                              |
| Engineering Data                            | <a href="#">CAD data – STEP</a>                                                                                                                                                                                                                                                                                                                                                                              |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                                                                                                                                                                                                                                                                                                     |
| Brochures                                   | <a href="#">FL DRIVES EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL BASE STATION EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a><br><a href="#">PO OMNIMATE EN</a> |

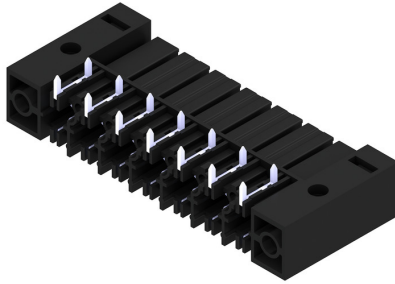
## BVL 7.62HP/07/90FI 3.5SN BK BX

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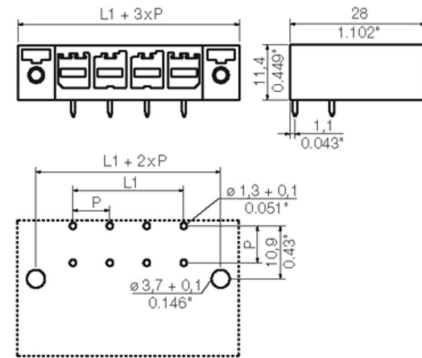
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## Drawings

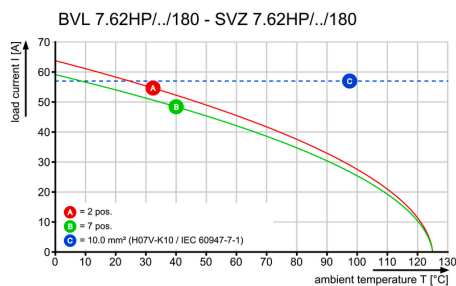
## Product image



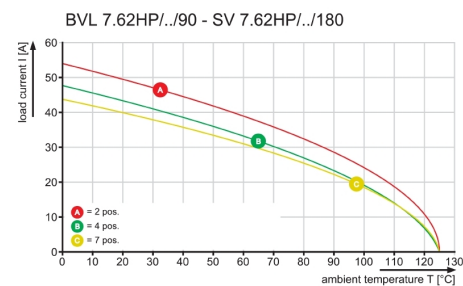
## Dimensional drawing



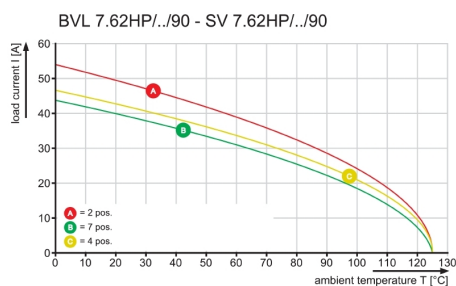
## Graph



## Graph



## Graph



## BVL 7.62HP/07/90FI 3.5SN BK BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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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

## General ordering data

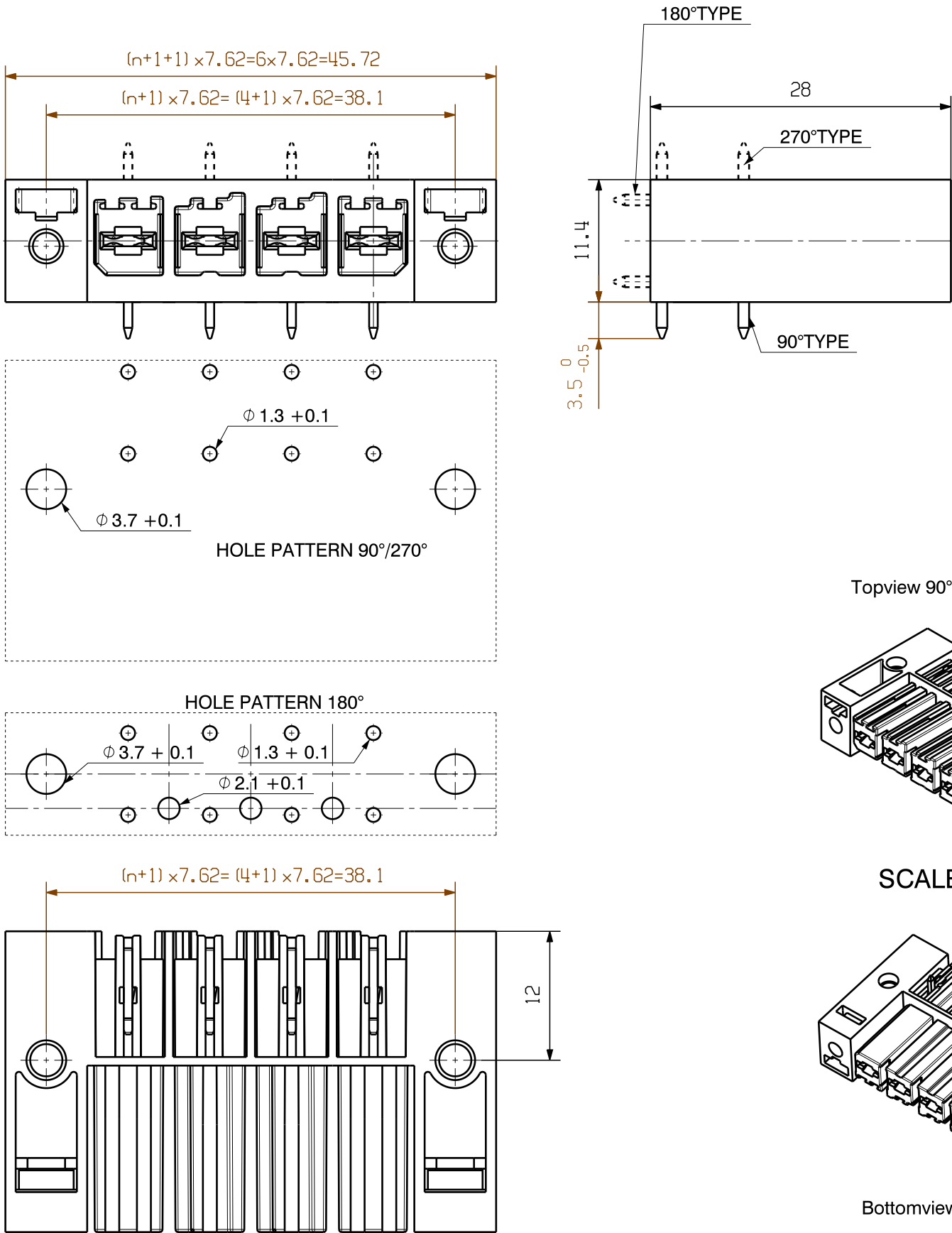
| Type       | BV/SV 7.62HP KO            | Version                                                           | Product data | Packaging |
|------------|----------------------------|-------------------------------------------------------------------|--------------|-----------|
| Order No.  | <a href="#">1937590000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

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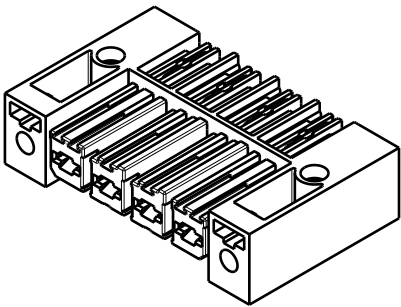
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Dimensions without tolerances are no check dimensions

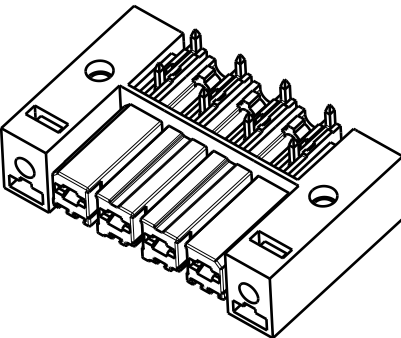
The English version is binding



Topview 90° type



SCALE: 1:1



Bottomview 90° type

shown: BVL7.62HP/04/90/(270/180) FI

P = 7.62 Raster Pitch  
D = Ø1.3+0.01  
0.051+0.004  
d = 1.28  
0.05"

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to IEC 60326 part 3 very fine.

Weidmueller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

|                                                                                                                                           |                                                                                       |            |                                                                                                                    |                                                                                                  |                       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------|--|
| General tolerance:<br>DIN ISO 2768-mK<br><div></div> | 103219/5<br>29.03.18 HELIS_MA 01                                                      |            | <div><b>Weidmüller</b> </div> |                                                                                                  | Cat.no.: .            |  |
|                                                                                                                                           | Modification                                                                          |            |                                                                                                                    |                                                                                                  | 4 39739 03            |  |
|                                                                                                                                           |  |            | Date                                                                                                               | Name                                                                                             | Drawing no. Issue no. |  |
|                                                                                                                                           | Drawn                                                                                 | 08.12.2006 | HECKERT_M                                                                                                          | Sheet 01 of 02 sheets                                                                            |                       |  |
|                                                                                                                                           | Responsible                                                                           |            | KRUG_M                                                                                                             |                                                                                                  |                       |  |
| Scale: 2:1                                                                                                                                | Checked                                                                               | 23.04.2018 | HELIS_MA                                                                                                           |                                                                                                  |                       |  |
| Supersedes: .                                                                                                                             | Approved                                                                              |            | LANG_T                                                                                                             |                                                                                                  |                       |  |
|                                                                                                                                           |                                                                                       |            |                                                                                                                    | BVL7.62HP/02..07/...FI<br>BUCHSENLEISTE-LOETANSCHLUSS<br>SOCKET CONNECTOR WITH SOLDER CONNECTION |                       |  |
|                                                                                                                                           |                                                                                       |            |                                                                                                                    | Product file: BVL 7.62 7167                                                                      |                       |  |

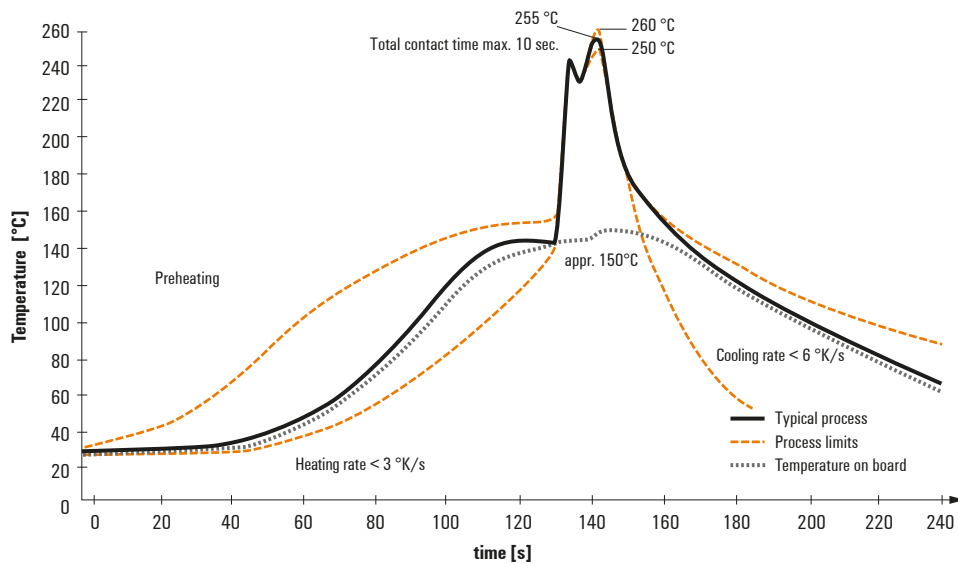
## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
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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.