

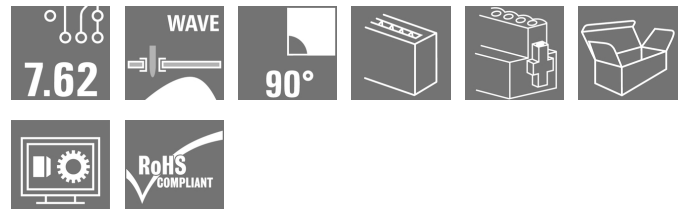
**BVL 7.62HP/07/90FI 3.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

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 March 26, 2021 9:07:37 AM CET

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

|            |         |
|------------|---------|
| Net weight | 20.84 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 inch                           |
| Number of poles                               | 7                                       | L1 in mm                                        | 45.72 mm                           |
| L1 in inches                                  | 1.8 inch                                | 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                                   | 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                      | Copper 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 |

**Rated data acc. to CSA**

|                                   |                                                                                     |                                   |                |
|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|----------------|
| Institute (CSA)                   |  | Certificate No. (CSA)             | 200039-1534443 |
| Rated voltage (Use group B / CSA) | 300 V                                                                               | Rated voltage (Use group C / CSA) | 300 V          |
| Rated voltage (Use group D / CSA) | 600 V                                                                               | Rated current (Use group B / CSA) | 35 A           |
| Rated current (Use group C / CSA) | 35 A                                                                                | Rated current (Use group D / CSA) | 5 A            |
| Reference to approval values      | Specifications are maximum values, details - see approval certificate.              |                                   |                |

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**Technical data****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 C / UL 1059) 300 V

Rated voltage (Use group D / UL 1059) 600 V

Rated current (Use group B / UL 1059) 35 A

Rated current (Use group C / UL 1059) 35 A

Rated current (Use group D / UL 1059) 5 A

Clearance distance, min. 6.9 mm

Creepage distance, min. 9.66 mm

Reference to approval values  
Specifications are maximum values, details - see approval certificate.**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 100 mm |
| VPE width | 100 mm | VPE height | 300 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                                                                           |

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**Technical data**

|                                                           |                |                                                                                    |                              |
|-----------------------------------------------------------|----------------|------------------------------------------------------------------------------------|------------------------------|
| 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 / 12.02 |                              |
|                                                           | 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 10/1                     |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 10/19                    |
|                                                           | Evaluation     | passed                                                                             |                              |
| Test for damage to and accidental loosening of conductors | Standard       | DIN EN 60999-1 section 9.4 / 12.00                                                 |                              |
|                                                           | Requirement    | 0.2 kg                                                                             |                              |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | AWG 24/1                     |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 24/19                    |
|                                                           | Evaluation     | passed                                                                             |                              |
|                                                           | Requirement    | 0.3 kg                                                                             |                              |
|                                                           | 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> |
|                                                           | Evaluation     | passed                                                                             |                              |
|                                                           | Requirement    | 1.4 kg                                                                             |                              |
|                                                           | Conductor type | Type of conductor and conductor cross-section                                      | AWG 10/1                     |
|                                                           |                | Type of conductor and conductor cross-section                                      | AWG 10/19                    |
|                                                           | Evaluation     | passed                                                                             |                              |

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**Technical data**

|               |                |                                               |           |
|---------------|----------------|-----------------------------------------------|-----------|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00            |           |
|               | Requirement    | ≥10 N                                         |           |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 24/1  |
|               |                | Type of conductor and conductor cross-section | AWG 24/19 |
|               | Evaluation     | passed                                        |           |
|               | Requirement    | ≥20 N                                         |           |
|               | Conductor type | Type of conductor and conductor cross-section | H05V-U0.5 |
|               |                | Type of conductor and conductor cross-section | H05V-K0.5 |
|               | 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                                        |           |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | EC002638    |
| ECLASS 9.0  | 27-44-03-09 | ECLASS 9.1  | 27-44-03-09 |
| ECLASS 10.0 | 27-44-03-09 | ECLASS 11.0 | 27-46-02-02 |

**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 colours 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>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Approvals**

Approvals



ROHS Conform

UL File Number Search E60693

**Downloads**Approval/Certificate/Document of  
Conformity[Declaration of the Manufacturer](#)

Engineering Data

[STEP](#)

Engineering Data

[EPLAN, WSCAD](#)

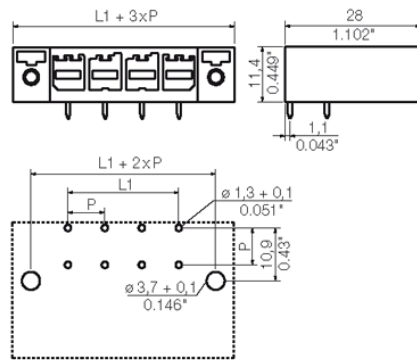
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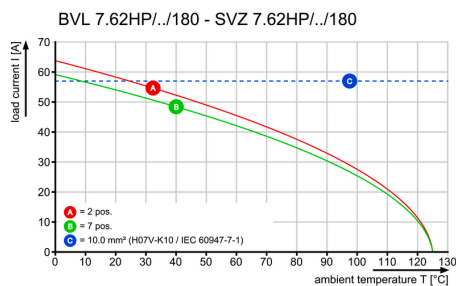
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## Drawings

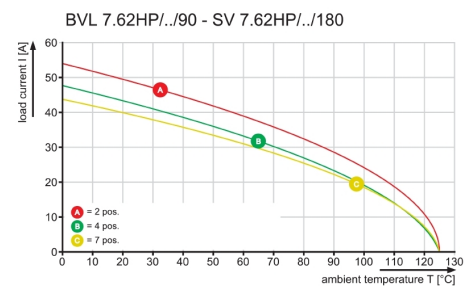
### Dimensional drawing



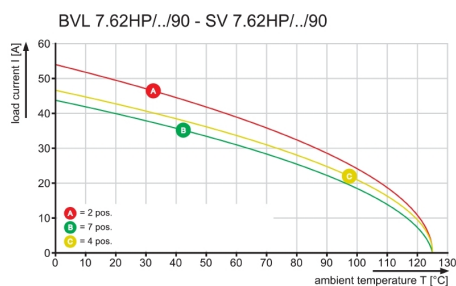
### Graph



### Graph



### Graph

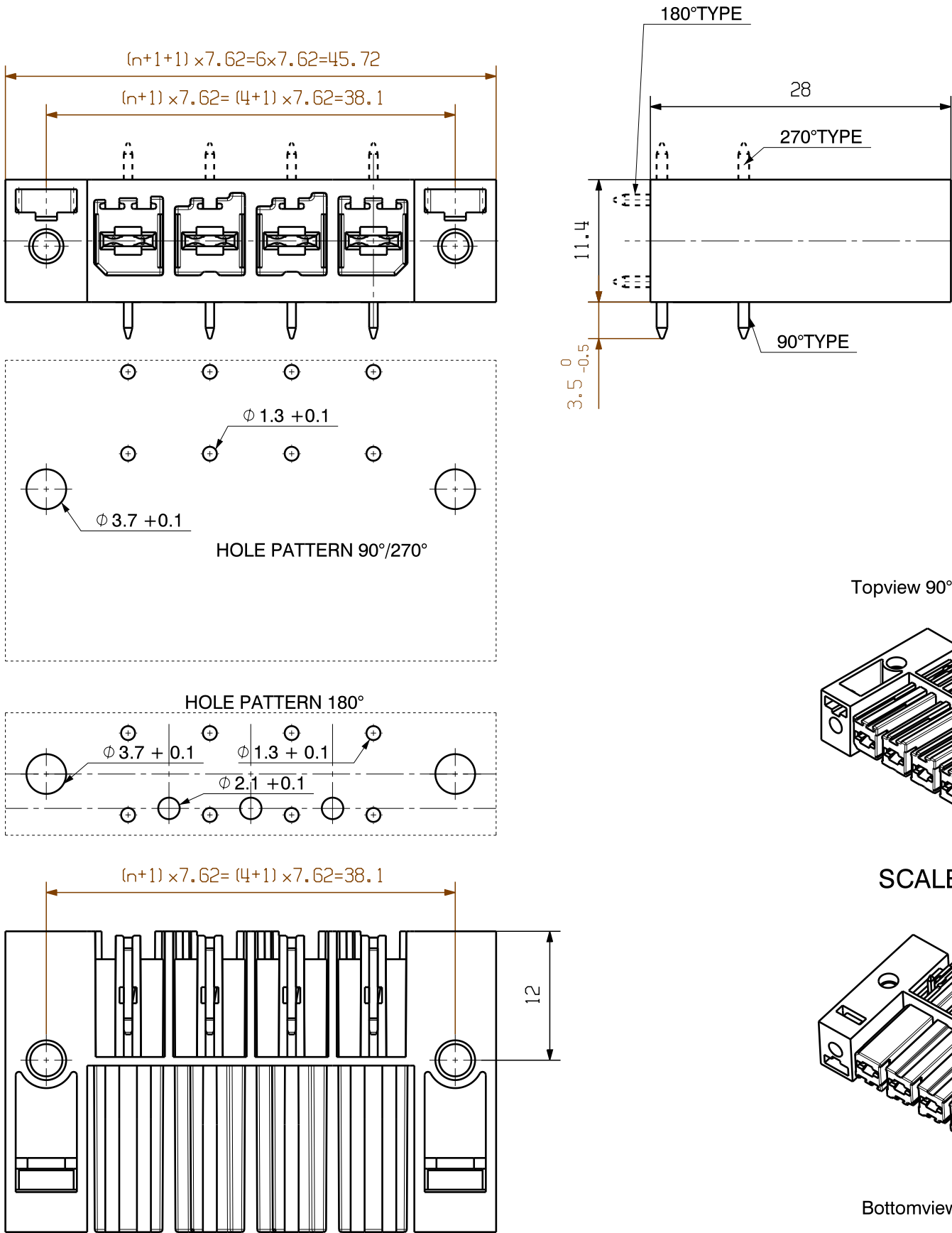


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Dimensions without tolerances are no check dimensions

The English version is binding



Topview 90° type

SCALE: 1:1

Bottomview 90° type

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.

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



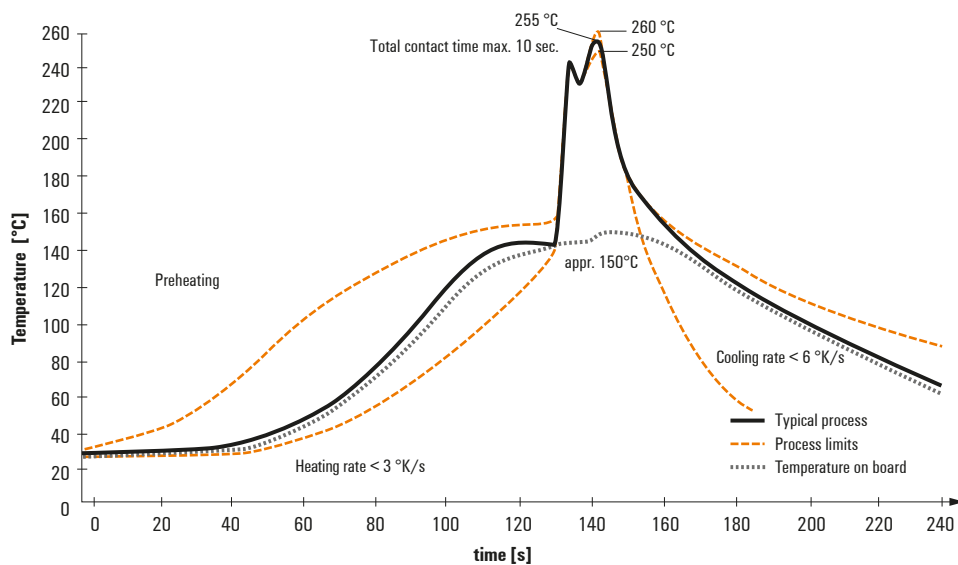
## Recommended wave soldering profiles

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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.