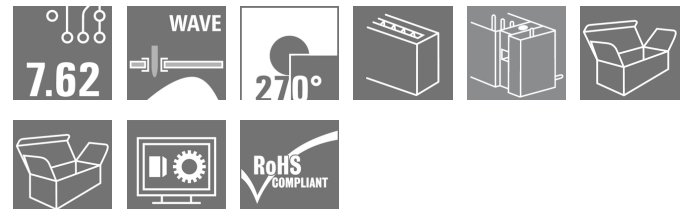


**OMNIMATE Power - series BV/SV 7.62IT  
SV 7.62IT/03/270MF3 3.5SN BK BX**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

**Product image**


270° male header with 7.62 pitch for 400 V IT power networks according to IEC 61800-5-1.

UL approval as per UL840 600 V.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth when combined with female header BVZ 7.62 IT... Without a female header, the mating profile guarantees minimum touch safety of >3 mm with 20 N pressure on the test finger.

**General ordering data**

|              |   |
|--------------|---|
| Type         | SV 7.62IT/03/270MF3 3.5SN BK BX   |
| Order No.    | <a href="#">1156510000</a>  |
| Version      | PCB plug-in connector, male header, closed side, Middle flange, THT solder connection, 7.62 mm, Number of poles: 3, 270°, Solder pin length (l): 3.5 mm, tinned, black, Box |
| GTIN (EAN)   | 4032248943364   |
| Qty.         | 60 pc(s).   |
| Product data | IEC: 1000 V / 41 A<br>UL: 300 V / 40.5 A  |
| Packaging    | Box   |

Creation date May 2, 2020 8:42:36 AM CEST

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

Net weight 6.672 g

**System specifications**

| Product family                               |  | Type of connection                         |                  |
|--|--|--|------------------|
| OMNIMATE Power - series BV/SV 7.62IT         |  |  | Board connection |
| Mounting onto the PCB                        | THT solder connection                      | Pitch in mm (P)                            | 7.62 mm          |
| Pitch in inches (P)                          | 0.3 inch                                   | Outgoing elbow                             | 270°             |
| Number of poles                              | 3  | 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 | Touch-safe 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   |  |                  |

**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                        | GWFI                                  | 960 °C                     |
| 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.             | 50 °C                      |
| Max. relative humidity during storage | 70 %                       | 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 |
| Clearance, min.   | 6.9 mm                 | Creepage distance, min.   | 9.6 mm            |

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**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) | 35 A  |

|                                   |       |
|-----------------------------------|-------|
| Rated voltage (Use group C / CSA) | 300 V |
| Rated current (Use group B / CSA) | 35 A  |
| Rated current (Use group D / CSA) | 5 A   |

Reference to approval values

Specifications are maximum values, details - see approval certificate.

**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) | 40.5 A |

|                                       |        |
|---------------------------------------|--------|
| Rated voltage (Use group C / UL 1059) | 300 V  |
| Rated current (Use group B / UL 1059) | 40.5 A |
| Rated current (Use group D / UL 1059) | 5 A    |
| Creepage distance, min.               | 9.6 mm |

Clearance distance, min.

6.9 mm

Reference to approval values

Specifications are maximum values, details - see approval certificate.

**Packing**

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 35 mm  |
| VPE width | 135 mm | VPE height | 350 mm |

**Classifications**

|             |             |            |             |
|-------------|-------------|------------|-------------|
| ETIM 6.0    | EC002637    | ETIM 7.0   | EC002637    |
| eClass 9.0  | 27-44-04-02 | eClass 9.1 | 27-44-04-02 |
| eClass 10.0 | 27-44-04-02 |            |             |

**Notes**

Notes

- Additional colours on request
- Rated current related to rated cross-section & min. No. of poles.
- P on drawing = pitch
- Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.
- MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3

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.

**Data sheet**

**OMNIMATE Power - series BV/SV 7.62IT  
SV 7.62IT/03/270MF3 3.5SN BK BX**

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**Technical data**

**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](#)

Engineering Data

[STEP](#)

White paper power electronics  
connected correctly

[Download Whitepaper](#)

White paper UL 600 V

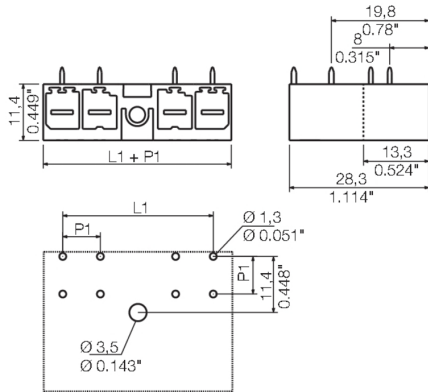
[Download Whitepaper](#)

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**Drawings**

**Dimensional drawing**



**OMNIMATE Power - series BV/SV 7.62IT  
SV 7.62IT/03/270MF3 3.5SN BK BX**

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**Mating connector (fully pluggable)**
**BVZ 7.62IT 180MF SN**


180° female plug with a 7.62 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SV 7.62 IT.. with leading contact.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth.

The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

On request also available without middle flange interlock.

**General ordering data**

| Type       | BVZ 7.62IT/03/180MF3 SN ... | Version   | Product data                                 | Packaging |
|------------|-----------------------------|---|--|-----------|
| Order No.  | <a href="#">1156730000</a>  | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 3,                | IEC: 1000 V / 41 A / 0.2 - 6 mm <sup>2</sup> | Box       |
| GTIN (EAN) | 4032248943937               | 180°, Clamping yoke connection, Clamping range, max. : 10 mm <sup>2</sup> , Box | UL: 600 V / 40.5 A / AWG 24 - AWG            |           |
| Qty.       | 40 pc(s).                   |   | 8  |           |

## Data sheet

### OMNIMATE Power - series BV/SV 7.62IT SV 7.62IT/03/270MF3 3.5SN BK BX

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## Accessories

### Coding elements



**Only connects what is supposed to be connected:  
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

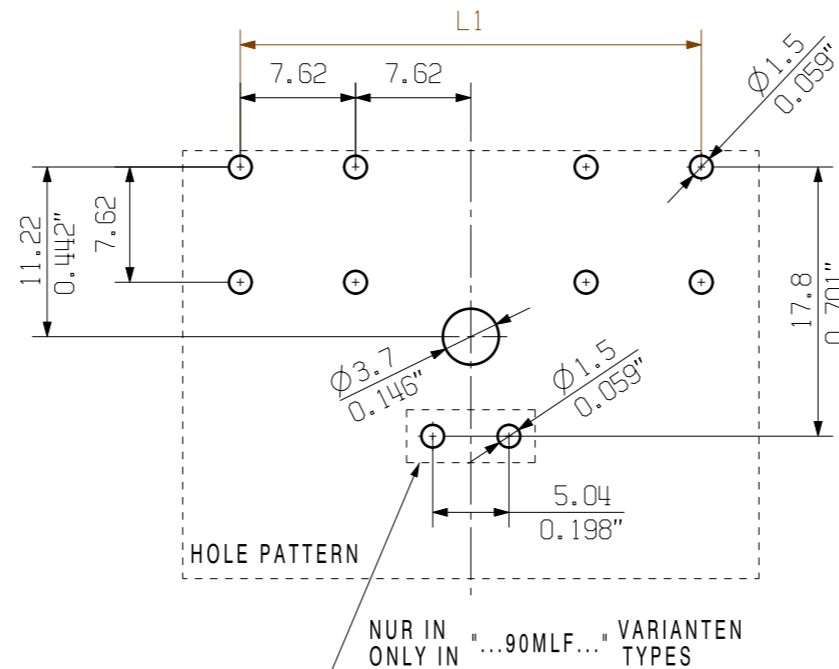
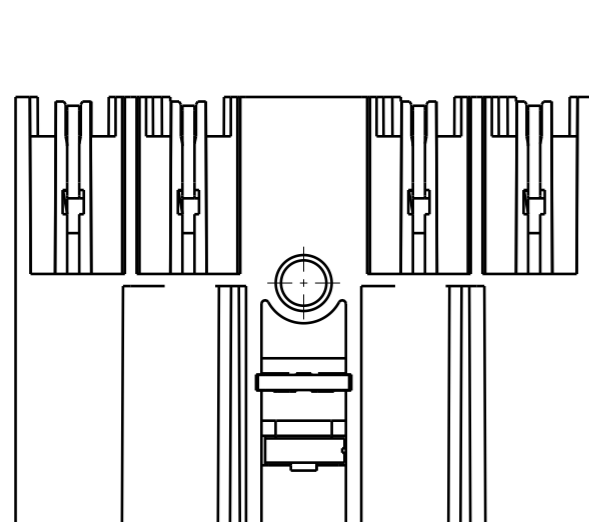
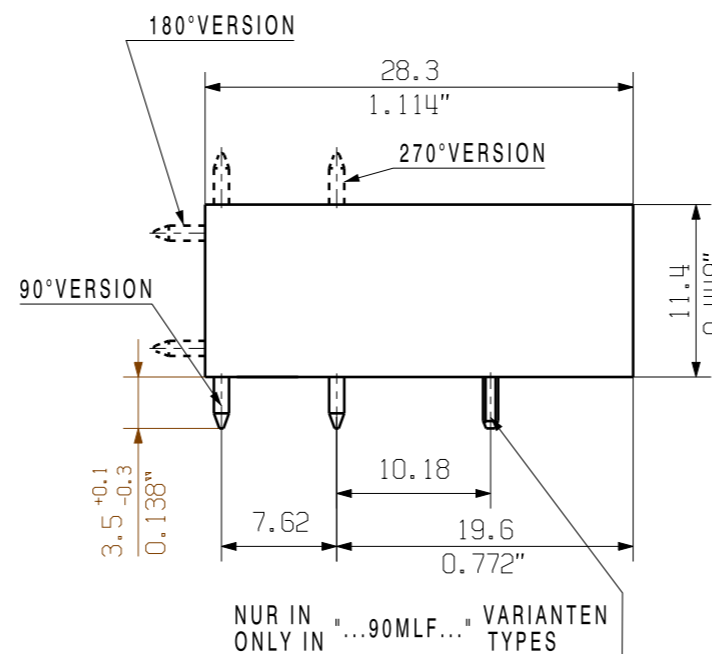
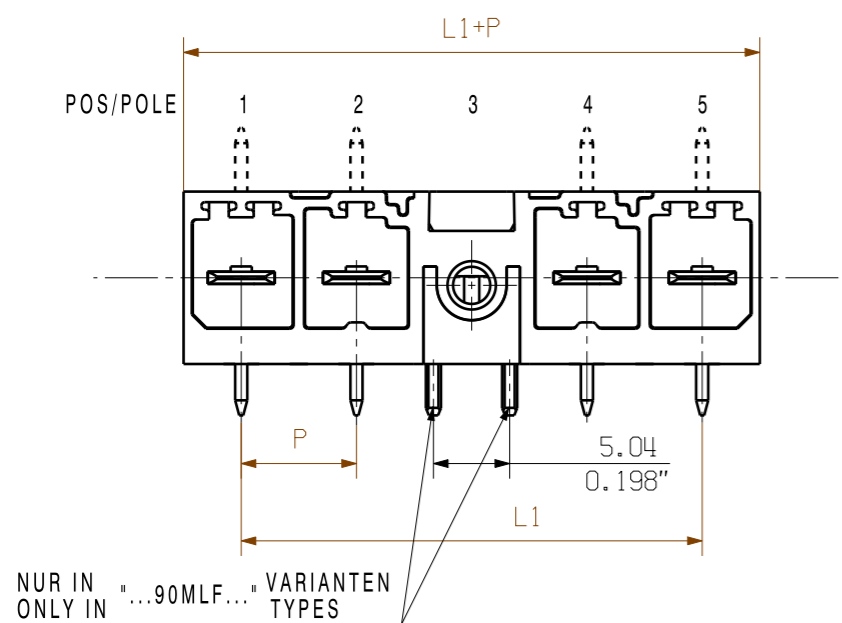
The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

### General ordering data

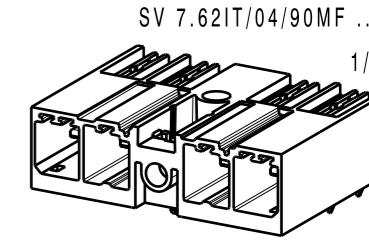
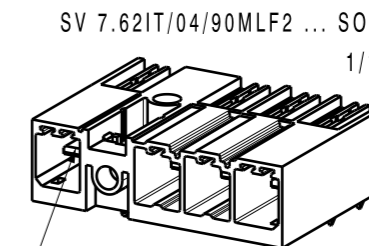
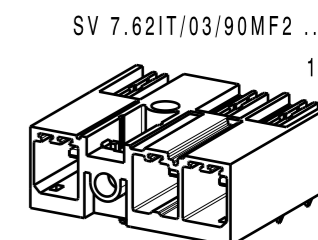
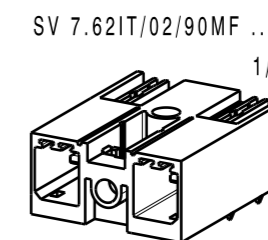
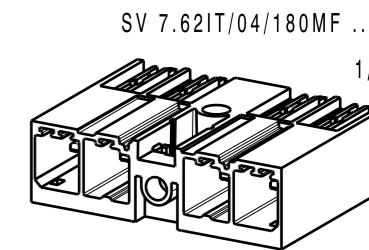
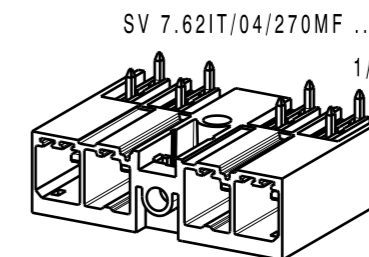
| Type       | BV/SV 7.62HP KO            | Version   | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No.  | <a href="#">1937590000</a> | PCB plug-in connector, Accessories, Coding element, black, Number |              | Box       |
| GTIN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

SV 7.62IT/04/...MF ...  
SHOWN: SV 7.62IT/04/90MSF



For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.  
The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.  
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.  
Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.



5 LEADING PIN 2mm  
ONLY 4POL MLF SEE TABLE (PE)

|                |       |      |            |    |    |    |    |   |   |
|----------------|-------|------|------------|----|----|----|----|---|---|
| 6 MF 4         | 45,72 | 1,8  | P          | P  | P  | MF | P  | P | P |
| 5 MF 4         | 38,1  | 1,5  | P          | P  | P  | MF | P  | P |   |
| 5 MF 3         | 38,1  | 1,5  | P          | P  | MF | P  | P  | P |   |
| 4 MLF 4        | 30,48 | 1,2  | P          | P  | P  | MF | PE |   |   |
| 4 MF 3         | 30,48 | 1,2  | P          | P  | MF | P  | P  |   |   |
| 4 MLF 2        | 30,48 | 1,2  | PE         | MF | P  | P  | P  |   |   |
| 3 MF 3         | 22,86 | 0,9  | P          | P  | MF | PE |    |   |   |
| 3 MLF 2 SO     | 22,86 | 0,9  | P          | MF | P  | P  |    |   |   |
| 3 MLF 2        | 22,86 | 0,9  | PE         | MF | P  | P  |    |   |   |
| 3 MF 2         | 22,86 | 0,9  | PE         | MF | P  | P  |    |   |   |
| 2 MLF 2 SO     | 15,24 | 0,6  | P          | MF | P  |    |    |   |   |
| 2 MF 2 SO      | 15,24 | 0,6  | P          | MF | P  |    |    |   |   |
|                | mm    | inch | 1          | 2  | 3  | 4  | 5  | 6 | 7 |
| NO OF MF POLES | L1    |      | POS / POLE |    |    |    |    |   |   |

P = POL/POLES  
MF = MITTELFLANSCH/MIDDLE FLANGE  
PE = VOREILENDER KONTAKT/LEADING PIN

|                |  |                                 |            |                             |                       |
|----------------|--|---------------------------------|------------|-----------------------------|-----------------------|
| DIN ISO 2768-m |  | 99860/5<br>22.11.17 HELIS_MA 00 |            | Cat.no.: .                  |                       |
| RoHS COMPLIANT |  | Modification                    |            | Weidmüller                  |                       |
| Scale: 2/1     |  | Date                            | Name       | 3 54268 06                  |                       |
| Supersedes: .  |  | Drawn                           | 31.05.2011 | KRUG_M                      | Drawing no. Issue no. |
|                |  | Responsible                     |            | KRUG_M                      | Sheet 01 of 03 sheets |
|                |  | Checked                         | 24.11.2017 | HELIS_MA                    |                       |
|                |  | Approved                        |            | LANG_T                      |                       |
|                |  |                                 |            | SV 7.62IT/.../90/270M(L)F   |                       |
|                |  |                                 |            | STIFTFLEISTE<br>MALE HEADER |                       |
|                |  |                                 |            | Product file: SV/BVZ 7.62HP |                       |
|                |  |                                 |            | 7340                        |                       |

ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE  
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED



## Recommended wave soldering profiles

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 Fax: +49 5231 14-292083  
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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.