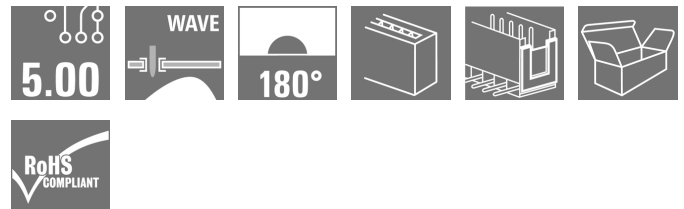


**OMNIMATE Signal - series BL/SL 5.00**  
**SL 5.00/03/180B 3.2SN OR BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
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 www.weidmueller.com



Male connectors with straight outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

**General ordering data**

Type	SL 5.00/03/180B 3.2SN OR BX
Order No.	<a href="#">1581790000</a>
Version	PCB plug-in connector, male header, Dovetails for fixing blocks, THT solder connection, 5.00 mm, No. of poles: 3, 180°, Solder pin length (l): 3.2 mm, tinned, Orange, Box
GTIN (EAN)	4008190185169
Qty.	100 pc(s).
Product data	IEC: 400 V / 18 A UL: 300 V / 15 A
Packaging	Box

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

Net weight 1.02 g

**System specifications**

Product family		Mounting onto the PCB	
Product family	OMNIMATE Signal - series BL/SL 5.00		THT solder connection
Pitch in mm (P)	5 mm	Pitch in inches (P)	0.197 inch
Outgoing elbow	180°	No. of poles	3
Number of solder pins per pole	1	Solder pin length (l)	3.2 mm
Solder pin length tolerance	+0.1 / -0.3 mm	Tolerance of solder pin position	± 0.1 mm
Solder pin dimensions	d = 1.2 mm, Octagonal	Solder pin dimensions = d tolerance	0 / -0,03 mm
Solder eyelet hole diameter (D)	1.3 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
L1 in mm	10 mm	L1 in inches	0.394 inch
Number of rows	1	Pin series quantity	1
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch, plugged	Touch-safe protection acc. to DIN VDE 0470	IP20 plugged
Volume resistance	4.50 mΩ	Can be coded	Yes
Plugging cycles	25	Withdrawal force per pole	2 N
Packaging	Box		

**Material data**

Insulating material	PBT	Colour	Orange
Colour chart (similar)	RAL 2000	Insulating material group	Illa
CTI	≥ 200	Insulation resistance	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	CuSn
Contact surface	tinned	Layer structure of solder connection	1-3 μm Ni / 2-4 μm Sn matt
Layer structure of plug contact	1-3 μm Ni / 2-4 μm Sn matt	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Max. relative humidity during storage	80 %
Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	100 °C

**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Ta = 20°C)	18 A
Rated current, max. no. of poles (Ta = 20°C)	14.5 A	Rated current, min. no. of poles (Ta = 40°C)	15 A
Rated current, max. no. of poles (Ta = 40°C)	12 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A


**Data sheet**

**OMNIMATE Signal - series BL/SL 5.00  
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**Technical data**

**Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	
			
		200039-1121690	
Rated voltage (Use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	15 A	Rated current (use group D)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Rated data acc. to UL 1059**

Institute (UR)		Certificate No. (UR)	
			
		E60693	
Rated voltage (use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	15 A	Rated current (use group D)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Classifications**

ETIM 3.0	EC001284	ETIM 4.0	EC002637
ETIM 5.0	EC002637	ETIM 6.0	EC002637
UNSPSC	30-21-18-10	eClass 5.1	27-26-07-04
eClass 6.2	27-26-07-04	eClass 7.1	27-44-04-02
eClass 8.1	27-44-04-02	eClass 9.0	27-44-04-02
eClass 9.1	27-44-04-02		

**Notes**

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces 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> </ul>
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IPC conformity The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

**Approvals**

Approvals	
ROHS	Conform

**Data sheet****OMNIMATE Signal - series BL/SL 5.00  
SL 5.00/03/180B 3.2SN OR BX**

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**Technical data****Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">CAT 2 PORTFOLIOGUIDE EN</a> <a href="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FL INDUSTR.CONTROLS EN</a> <a href="#">FL MACHINE SAFETY EN</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL INVERTER EN</a> <a href="#">FL BASE STATION EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a>
Engineering Data	<a href="#">SL.zip</a>

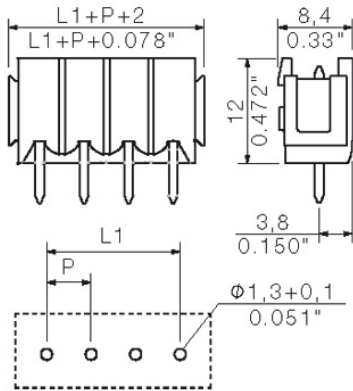
**Data sheet**

**OMNIMATE Signal - series BL/SL 5.00  
SL 5.00/03/180B 3.2SN OR BX**

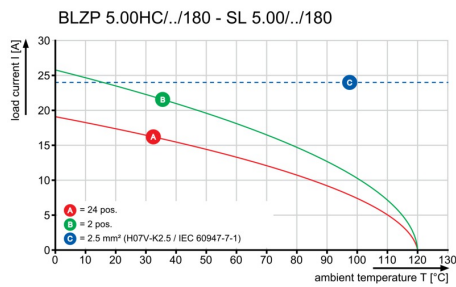
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**Drawings**

**Dimensional drawing**



**Graph**



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**Mating connector (fully pluggable)**
**BLZP 5.00HC/270 SN**


Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZP 5.00HC/03/270 SN OR BX	<a href="#">1958860000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	4032248637690	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box
BLZP 5.00HC/03/270 SN BK BX	<a href="#">1959090000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	4032248638024	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box

**BLZP 5.00HC/90 SN**


Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZP 5.00HC/03/90 SN OR BX	<a href="#">1958290000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	4032248637157	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box
BLZP 5.00HC/03/90 SN BK BX	<a href="#">1958640000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	4032248637379	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box

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**Mating connector (fully pluggable)**
**BLZP 5.00HC/180 SN**


Female plug with clamping-yoke screw system for connecting wires with straight (180°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZP 5.00HC/03/180 SN OR BX	<a href="#">1954480000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 180°, Clamping yoke connection, Clamping range, max.: 4 mm <sup>2</sup> , Box	4032248633197	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box
BLZP 5.00HC/03/180 SN BK BX	<a href="#">1955560000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 180°, Clamping yoke connection, Clamping range, max.: 4 mm <sup>2</sup> , Box	4032248634057	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12	Box

**BLF 5.00HC/180 SN**


Just as reliable as the millionfold proven original and featuring innovative details:  
The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current. In terms of versatility, the BLF 5.00HC offers just as much as the older versions:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLF 5.00HC/03/180 SN OR BX	<a href="#">1017870000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 180°, PUSH IN, Clamping range, max.: 3.31 mm <sup>2</sup> , Box	4032248728664	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 18.5 A / AWG 26 - AWG 12	Box
BLF 5.00HC/03/180 SN BK BX	<a href="#">1017680000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 180°, PUSH	4032248728831	120 pc(s).	IEC: 400 V / 23 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 18.5 A / AWG 26 - AWG 12	Box

**OMNIMATE Signal - series BL/SL 5.00  
SL 5.00/03/180B 3.2SN OR BX**

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

**Mating connector (fully pluggable)**

IN, Clamping range, max. :  
3.31 mm<sup>2</sup>, Box

**BLF 5.00HC/90 SN**


Just as reliable as the millionfold proven original and featuring innovative details:

The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current.

In terms of versatility, the BLF 5.00HC offers just as much as the older versions:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLF 5.00HC/03/90 SN BK BX	<a href="#">1979280000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, PUSH IN, Clamping range, max. : 3.31 mm <sup>2</sup> , Box	4032248674459	120 pc(s).	IEC: 400 V / 24 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 18.5 A / AWG 26 - AWG 12	Box
BLF 5.00HC/03/90 SN OR BX	<a href="#">1980180000</a>	PCB plug-in connector, female plug, 5.00 mm, No. of poles: 3, 90°, PUSH IN, Clamping range, max. : 3.31 mm <sup>2</sup> , Box	4032248675265	120 pc(s).	IEC: 400 V / 24 A / 0.2 - 2.5 mm <sup>2</sup> UL: 300 V / 18.5 A / AWG 26 - AWG 12	Box

## OMNIMATE Signal - series BL/SL 5.00 SL 5.00/03/180B 3.2SN OR 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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZ/SL KO OR BX	<a href="#">1573010000</a>	PCB plug-in connector, Accessories, Coding element, Orange, No. of poles: 1	4008190048396	100 pc(s).	UL:	Box
BLZ/SL KO BK BX 1885	<a href="#">1545710000</a>	PCB plug-in connector, Accessories, Coding element, Black, No. of poles: 1	4008190087142	50 pc(s).	UL:	Box

## Blocks for PCB mounting



### Minor component, major effect:

Clip-on attachment elements increase the mechanical resilience of the whole plug connection by

- securing the male connectors to the circuit board
- providing a vibration-proof connection between the sockets and the male connectors

Clip-on or pre-assembled - always the right solution:

- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- Suitable for all outlet directions

Maximum stability, minimum effort:

- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

## General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
SLA BB12R SW	<a href="#">1626880000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190198213	100 pc(s).	UL:	Box

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**Accessories**

SLA BB6R SW <a href="#">1723520000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366070 20 pc(s).	UL:	Box
SLA BB5R SW <a href="#">1723510000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366063 20 pc(s).	UL:	Box
SLA BB2R OR <a href="#">1723440000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190365998 20 pc(s).	UL:	Box
SLA BB5R OR <a href="#">1723460000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190366018 20 pc(s).	UL:	Box
SLA BB11R <a href="#">1692340000</a> SW	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190864965 20 pc(s).	UL:	Box
SLA BB1R SW <a href="#">1723480000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366032 20 pc(s).	UL:	Box
SLA BB11R <a href="#">1604120000</a> OR	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190182977 20 pc(s).	UL:	Box
SLA BB6R OR <a href="#">1723470000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190366025 20 pc(s).	UL:	Box
SLA BB1R OR <a href="#">1723430000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190365981 20 pc(s).	UL:	Box
SLA BB12R <a href="#">1593450000</a> OR	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190122164 100 pc(s).	UL:	Box
SLA BB2R SW <a href="#">1723490000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366049 20 pc(s).	UL:	Box

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# Accessories

### Additional accessories



#### No task is too small when creating the perfect solution.

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload

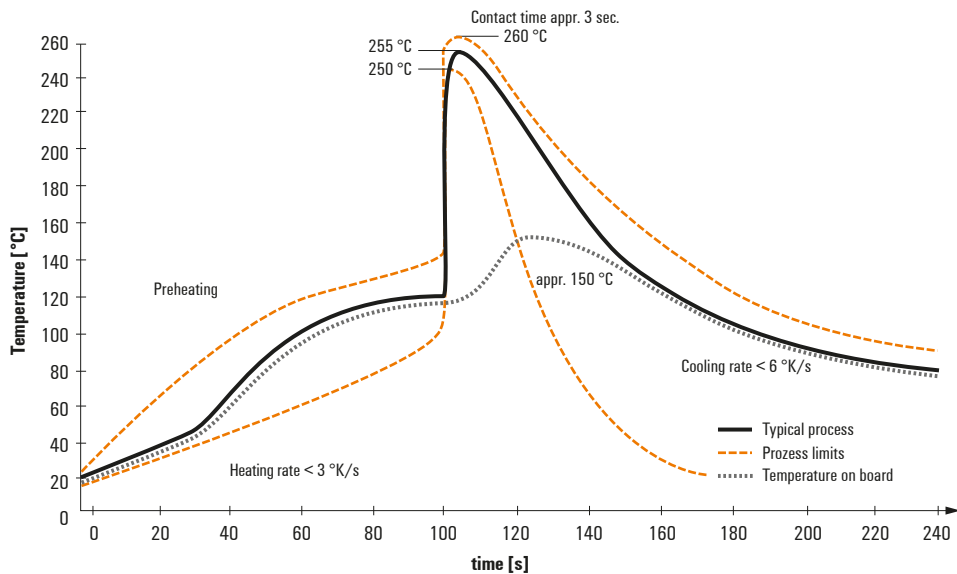
### General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
SL AT SW	<a href="#">1770240000</a>	PCB plug-in connector, Accessories, Partition element, Black, No. of poles: 1	4032248117710	100 pc(s).	UL:	Box
SL RH4L OR	<a href="#">1338760000</a>	PCB plug-in connector, Accessories, Latches, Orange, No. of poles: 1	4008190170073	100 pc(s).	UL:	Box
SL AT OR	<a href="#">1598300000</a>	PCB plug-in connector, Accessories, Partition element, Orange, No. of poles: 1	4008190189266	100 pc(s).	UL:	Box
SL RH4R OR	<a href="#">1338860000</a>	PCB plug-in connector, Accessories, Latches, Orange, No. of poles: 1	4008190126681	100 pc(s).	UL:	Box

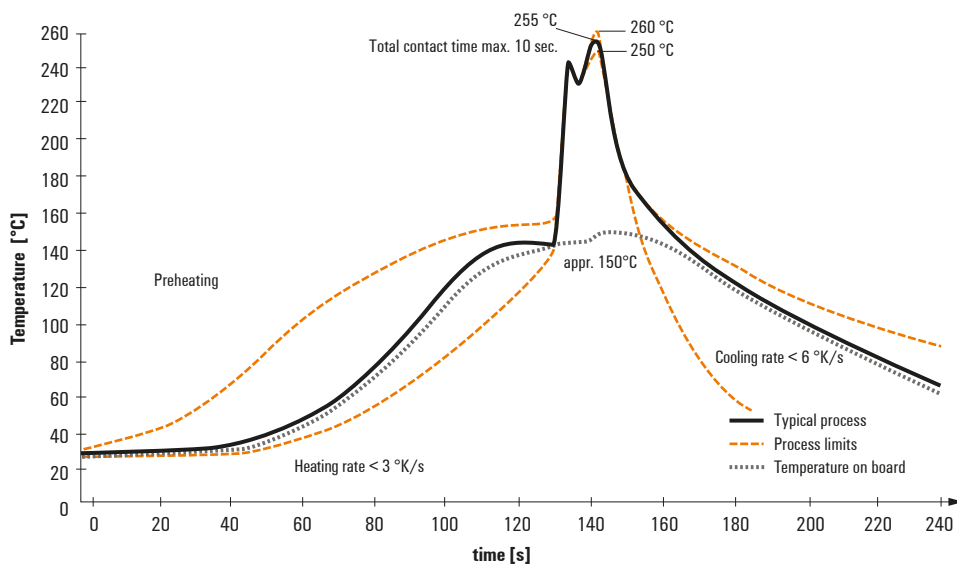
## Recommended wave soldering profiles

**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.

