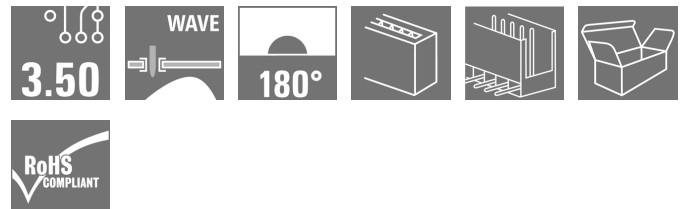


OMNIMATE Signal - series BL/SL 3.50 SL 3.50/11/180 3.2SN OR BX

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Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/11/180 3.2SN OR BX
Order No.	1604860000
Version	PCB plug-in connector, male header, open side, THT solder connection, 3.50 mm, No. of poles: 11, 180°, Solder pin length (l): 3.2 mm, tinned, Orange, Box
GTIN (EAN)	4008190062507
Qty.	50 pc(s).
Product data	IEC: 320 V / 17 A UL: 300 V / 10 A
Packaging	Box

**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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Technical data
Dimensions and weights

Net weight 3.18 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Solder connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	180°
No. of poles	11	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	± 0.15 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0.03 mm	Solder eyelet hole diameter (D)	1.4 mm
Solder eyelet hole diameter tolerance (D)	+ 0,1 mm	L1 in mm	35 mm
L1 in inches	1.378 inch	Number of rows	1
Pin series quantity	1	Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch
Touch-safe protection acc. to DIN VDE 0470	IP 10	Volume resistance	6.00 mΩ
Can be coded	Yes	Plugging cycles	25
push-in force/pole	4 N	Withdrawal force per pole	4 N
Packaging	Box		

Material data

Insulating material	PBT	Colour	Orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
CTI	≥ 200	Insulation resistance	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	Contact material	CuSn
Contact surface	tinned	Layer structure of solder connection	5-7 μm Sn glossy
Layer structure of plug contact	5-7 μm Sn glossy	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.	-30 °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)	17 A
Rated current, max. no. of poles (Ta = 20°C)	12 A	Rated current, min. no. of poles (Ta = 40°C)	14.5 A
Rated current, max. no. of poles (Ta = 40°C)	10 A	Rated voltage for surge voltage class / pollution degree II/2	320 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	160 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 100 A

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Technical data

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	10 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)	10 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"> • Additional colours on request • Gold-plated contact surfaces 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.
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

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Technical data**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 BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY 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	SL.zip STEP

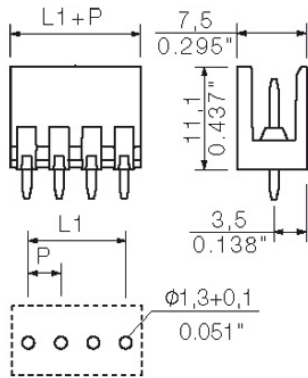
Data sheet

**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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Drawings

Dimensional drawing



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Mating connector (conditionally pluggable)
BL 3.50/180LH


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/180LH SN OR BX	1687740000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190853297 36 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
Discontinued	2014-05-20T00:00:00+02:00	BL 3.50/11/180LH SN BK BX	1687970000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190853525	50 pc(s).

BL 3.50/180F


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/180F SN OR BX	1606730000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190159030 36 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/11/180F SN BK BX	1615870000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°	4008190063573 36 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box

Creation date February 9, 2018 5:25:48 AM CET

OMNIMATE Signal - series BL/SL 3.50 SL 3.50/11/180 3.2SN OR BX

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Mating connector (conditionally pluggable)

Clamping yoke connection,
Clamping range, max. : 1.5
mm², Box

BL 3.50/90F



Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Delivery status Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued 2014-05-20T00:00:00+02:00	BL 3.50/11/90F SN BK BX	1639330000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190276874	50 pc(s).
BL 3.50/11/90F SN OR BX	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	1639100000	4008190276645 36 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

BL 3.50/270F



Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/270F SN OR BX	1640020000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190277574	36 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box

Creation date February 9, 2018 5:25:48 AM CET

Catalogue status 26.01.2018 / We reserve the right to make technical changes.

**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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Mating connector (conditionally pluggable)

Discontinued	2016-04-08T00:00:00+02:00	BL 3.50/11/270F SN BK BX	1640250000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 270°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box	4008190277833	36 pc(s)
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BLZF 3.5/180LH


Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

General ordering data

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BLZF 3.50/11/180LH SN OR BX	1691660000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm², Box	4008190373627	50 pc(s)
Discontinued	2014-05-20T00:00:00+02:00	BLZF 3.50/11/180LH SN BK BX	1691890000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm², Box	4008190373863	50 pc(s)

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Mating connector (conditionally pluggable)
BLZF 3.5/180F

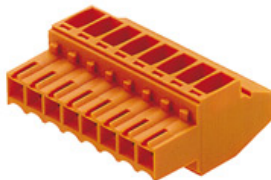

Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZF 3.50/11/180F SN OR BX	1690970000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm ² , Box	4008190329488	50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box
BLZF 3.50/11/180F SN BK BX	1691200000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm ² , Box	4008190329747	50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box

**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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Mating connector (fully pluggable)
BL 3.50/90


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/90 SN OR BX	1638640000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190276188 48 pc(s).		IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
Discontinued	2014-05-20T00:00:00+02:00	BL 3.50/11/90 SN BK BX	1638870000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190276416	50 pc(s).

BL 3.50/180


Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/180 SN OR BX	1597450000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190192020 48 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box
BL 3.50/11/180 SN BK BX	1615720000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Clamping yoke connection,	4008190060763 48 pc(s).		IEC: 320 V / 17 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14	Box

OMNIMATE Signal - series BL/SL 3.50 SL 3.50/11/180 3.2SN OR BX

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Mating connector (fully pluggable)

Clamping range, max. : 1.5
mm², Box

BLZF 3.5/180



Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZF 3.50/11/180 SN BK BX	1690510000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm ² , Box	4008190329020	50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box
BLZF 3.50/11/180 SN OR BX	1690280000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 180°, Tension clamp connection, Clamping range, max. : 1.5 mm ² , Box	4008190328771	50 pc(s).	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm ² UL: 300 V / 10 A / AWG 26 - AWG 14	Box

BL 3.50/270



Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BL 3.50/11/270 SN OR BX	1639560000	PCB plug-in connector, female plug, 3.50 mm, No. of poles: 11, 270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	4008190277116	48 pc(s).	IEC: 320 V / 12 A / 0.2 - 1.5 mm ² UL: 300 V / 8 A / AWG 28 - AWG 14	Box
Discontinued	2016-04-08T00:00:00+02:00	BL 3.50/11/270 SN BK BX	1639790000	PCB plug-in connector, female plug, 3.50 mm,	4008190277345	48 pc(s).

Creation date February 9, 2018 5:25:48 AM CET

Catalogue status 26.01.2018 / We reserve the right to make technical changes.

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**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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Mating connector (fully pluggable)

No. of poles: 11,
270°, Clamping
yoke connection,
Clamping range,
max. : 1.5 mm²,
Box

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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
BL SL 3.5 KO OR	1693430000	PCB plug-in connector, Accessories, Coding element, Orange, No. of poles: 1	4008190867447	100 pc(s).	UL:	Box
BL SL 3.5 KO SW	1610100000	PCB plug-in connector, Accessories, Coding element, Black, No. of poles: 1	4008190187637	100 pc(s).	UL:	Box

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
BL/SL 3.50 VR OR BX	1669310000	PCB plug-in connector, Accessories, Latches, Orange, No. of poles: 1	4008190428488	100 pc(s).	UL:

Data sheet**OMNIMATE Signal - series BL/SL 3.50
SL 3.50/11/180 3.2SN OR BX**

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AccessoriesBL/SL 3.50 [1669300000](#)

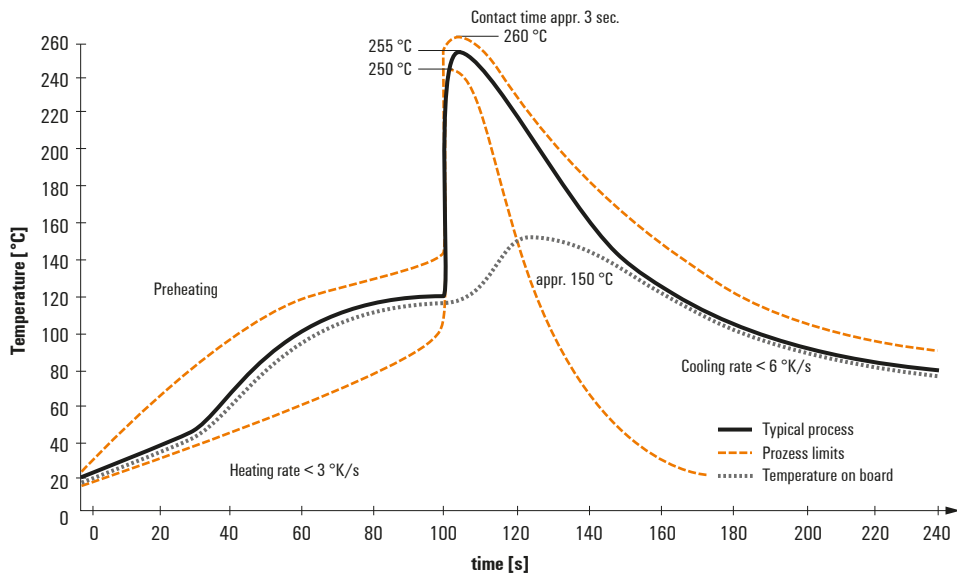
VR BK BX

PCB plug-in connector, 4008190428471 100 pc(s). UL:
Accessories, Latches, Black,
No. of poles: 1

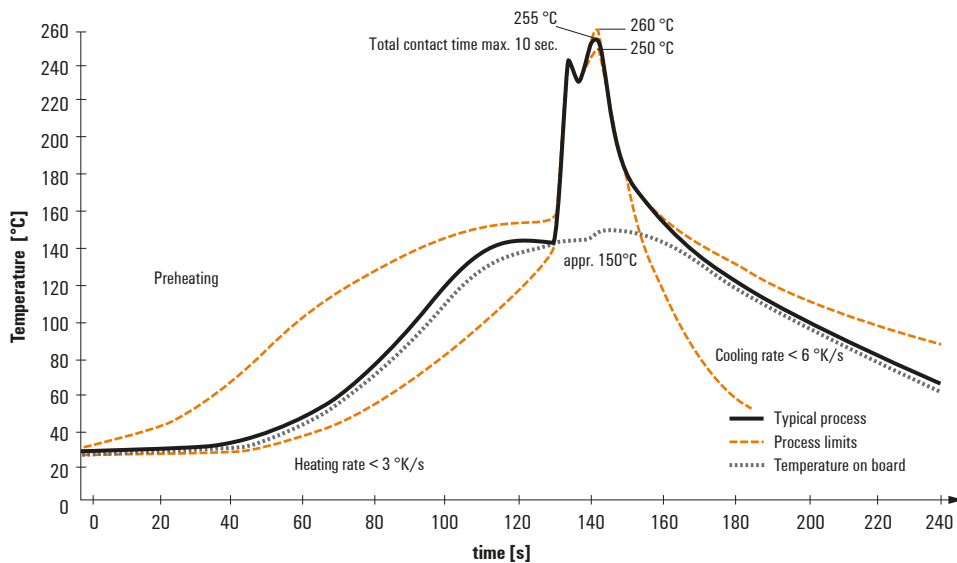
Recommended wave soldering profiles

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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.

