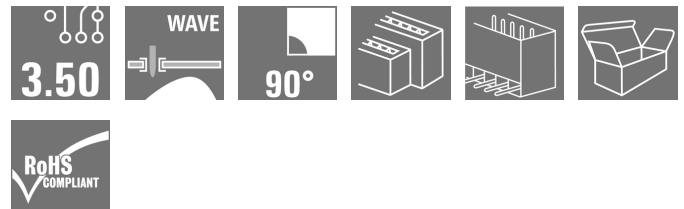
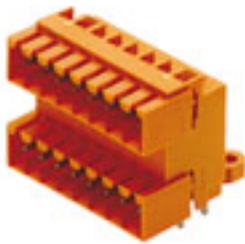


OMNIMATE Signal - series BL/SL 3.50 SLD 3.50/40/90G 3.2SN OR BX

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Product image



Similar to illustration

Two-tier pin header for wave soldering in 3.50 mm pitch. The connector is available in open, closed and flange versions. The male connectors provide space for labelling and can be coded. Packed in a cardboard box.

General ordering data

Type	SLD 3.50/40/90G 3.2SN OR BX
Order No.	1633760000
Version	PCB plug-in connector, male header, closed side, THT solder connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 1902582 14
Qty.	10 pc(s).
Product data	IEC: 200 V / 10.5 A UL: 300 V / 8 A
Packaging	Box

Creation date May 3, 2020 6:31:07 PM CEST

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50/40/90G 3.2SN OR BX**

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Technical data**Dimensions and weights**

Width	71.4 mm	Width (inches)	2.811 inch
Height	26.5 mm	Height (inches)	1.043 inch
Height of lowest version	23.3 mm	Depth	24.7 mm
Depth (inches)	0.972 inch	Net weight	26 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	90°
Number of poles	40	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	0 / -0.3 mm
Tolerance of solder pin position	± 0.20 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	66.5 mm
L1 in inches	2.618 inch	Number of rows	2
Pin series quantity	2	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	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	8 N

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuSn	Contact surface	tinned
Layer structure of solder connection	2-3 μm Ni / 5-7 μm Sn glossy	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
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. number of poles (Tu=20°C)	10.5 A
Rated current, max. number of poles (Tu=20°C)	8 A	Rated current, min. number of poles (Tu=40°C)	9 A
Rated current, max. number of poles (Tu=40°C)	7 A	Rated voltage for surge voltage class / pollution degree II/2	200 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	125 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 80 A


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

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	8 A	Rated current (Use group D / CSA)	8 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 / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	8 A	Rated current (Use group D / UL 1059)	8 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	82 mm
VPE width	88 mm	VPE height	104 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	UNSPSC	30-21-18-10

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	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 Signal - series BL/SL 3.50
SLD 3.50/40/90G 3.2SN OR BX**

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Technical data**Approvals**

Approvals



ROHS

Conform

DownloadsApproval/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](#)
[FLIndustr.CONTROLS EN](#)
[FL MACHINE SAFETY EN](#)
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[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

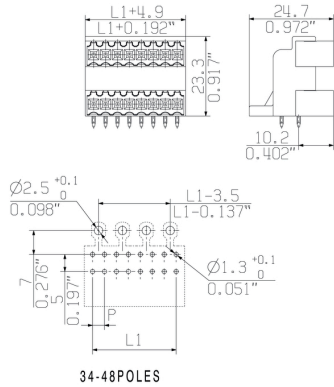
[SLD.zip](#)

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50/40/90G 3.2SN OR BX**

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Drawings

Dimensional drawing



OMNIMATE Signal - series BL/SL 3.50 SLD 3.50/40/90G 3.2SN OR BX

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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	BL 3.50/20/180LH SN DKG ...	Version	Product data	Packaging
Order No.	1752900000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4032248007516	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/20/180LH SN BK ...	Version	Product data	Packaging
Order No.	1688060000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853617	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/180LH SN OR ...	Version	Product data	Packaging
Order No.	1687830000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190853389	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

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	BL 3.50/20/180F SN OR BX	Version	Product data	Packaging
Order No.	1620790000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190163730	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/180F SN OR B ...	Version	Product data	Packaging
Order No.	1740771001	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190961817	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/20/180F SN BK BX	Version	Product data	Packaging
Order No.	1620870000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190164775	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50/40/90G 3.2SN OR BX**

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Mating connector (conditionally pluggable)

Type	BL 3.50/20/180F SN GY BX	Version	Product data	Packaging
Order No.	1621100000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190168735	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		

Type	BL 3.50/20/180F SN DKGN ...	Version	Product data	Packaging
Order No.	1621310000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190171155	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	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

Type	BL 3.50/20/90F SN BK BX	Version	Product data	Packaging
Order No.	1639420000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276966	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			

Type	BL 3.50/20/90F SN OR BX	Version	Product data	Packaging
Order No.	1639190000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276737	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			

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	BL 3.50/20/270F SN OR BX	Version	Product data	Packaging
Order No.	1640110000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277666	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

Data sheet

OMNIMATE Signal - series BL/SL 3.50 SLD 3.50/40/90G 3.2SN OR BX

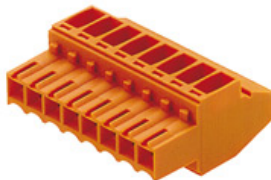
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Mating connector (conditionally pluggable)

Type	BL 3.50/20/270F SN BK BX	Version	Product data	Packaging
Order No.	1640340000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277925	270°, Clamping yoke connection, Clamping range, max.: 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50/40/90G 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	BL 3.50/20/90 SN OR BX	Version	Product data	Packaging
Order No.	1638730000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276270	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			
Type	BL 3.50/20/90 SN BK BX	Version	Product data	Packaging
Order No.	1638960000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190276508	90°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , Box	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).			

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	BL 3.50/20/270 SN OR BX	Version	Product data	Packaging
Order No.	1639650000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277208	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/270 SN BK BX	Version	Product data	Packaging
Order No.	1639880000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 12 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190277437	270°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 8 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 3.50
SLD 3.50/40/90G 3.2SN OR BX**

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Mating connector (fully pluggable)
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	BL 3.50/20/180 SN BK BX	Version	Product data	Packaging
Order No.	1620400000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190155841	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/180 SN OR BX	Version	Product data	Packaging
Order No.	1620320000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190154455	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/180 SN OR BX ...	Version	Product data	Packaging
Order No.	1740701001	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190961671	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		
Type	BL 3.50/20/180 SN GY BX	Version	Product data	Packaging
Order No.	1620630000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190159955	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	20 pc(s).	Box		
Type	BL 3.50/20/180 SN DKGN ...	Version	Product data	Packaging
Order No.	1620710000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17 A / 0.2 - 1.5 mm ²	Box
GTIN (EAN)	4008190160685	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / 10 A / AWG 28 - AWG 14	
Qty.	24 pc(s).	Box		

BLF 3.50/180


Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

General ordering data

Type	BLF 3.50/20/180 SN OR BX	Version	Product data	Packaging
Order No.	2459230000	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20,	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm ²	Box
GTIN (EAN)	4050118474589	180°, PUSH IN, Spring connection, Clamping range, max. : 1.5 mm ² ,	UL: 300 V / AWG 26 - AWG 16	
Qty.	24 pc(s).	Box		

OMNIMATE Signal - series BL/SL 3.50 SLD 3.50/40/90G 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	BL SL 3.5 KO SW	Version	Product data	Packaging
Order No.	1610100000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190187637	of poles: 1		
Qty.	100 pc(s).			
Type	BL SL 3.5 KO OR	Version	Product data	Packaging
Order No.	1693430000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190867447	of poles: 1		
Qty.	100 pc(s).			

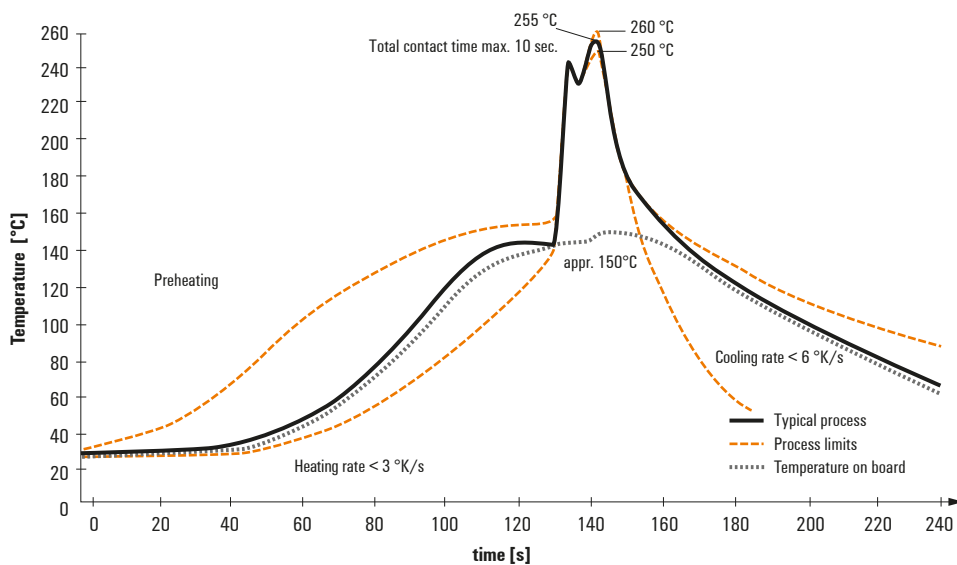
Recommended wave soldering profiles

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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.