

LM2H 5.08/46/90 3.5SN OR BX

Weidmüller Interface GmbH & Co. KG

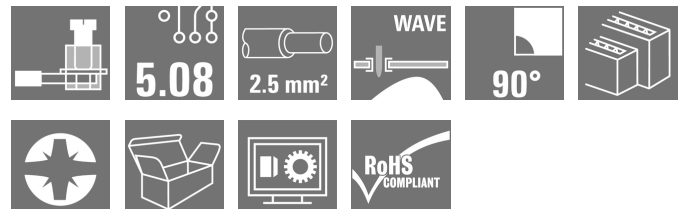
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Similar to illustration

Low and high 1-row PCB terminal with proven clamping yoke connection at 5.08 mm pitch, conductor outlet direction 90°. Suitable for conductor cross-sections up to 2.5 mm².

General ordering data

Version	Printed circuit board terminals, 5.08 mm, Number of poles: 46, 90°, Solder pin length (l): 3.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.5 mm², Box
Order No.	1769450000
Type	LM2H 5.08/46/90 3.5SN OR BX
GTIN (EAN)	4032248116508
Qty.	10 pc(s).
Product data	IEC: 630 V / 17.5 A / 0.2 - 2.5 mm² UL: 300 V / 15 A / AWG 24 - AWG 14
Packaging	Box

Creation date March 25, 2021 5:01:38 AM CET

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Technical data

Dimensions and weights

Depth	22.8 mm	Depth (inches)	0.898 inch
Height	40.1 mm	Height (inches)	1.579 inch
Height of lowest version	36.6 mm	Net weight	83.74 g
Width	120.38 mm	Width (inches)	4.739 inch

System parameters

Product family	OMNIMATE Signal - series LM	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	5.08 mm	Pitch in inches (P)	0.2 inch
Number of poles	46	Pin series quantity	2
Fitted by customer	Yes	Max. adjacent poles per row	48
Solder pin length (l)	3.5 mm	Solder pin dimensions	0.95 x 0.8 mm
Solder eyelet hole diameter (D)	1.3 mm	Solder eyelet hole diameter tolerance (D)+	0, 1 mm
Number of solder pins per pole	1	Screwdriver blade	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.5 Nm	Clamping screw	M 2.5
Stripping length	6 mm	L1 in mm	111.76 mm
L1 in inches	4.4 inch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Volume resistance	1.20 mΩ

Material data

Insulating material	Wemid (PA)	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
Coating	1-3 µm Ni, 4-6 µm SN	Tinning type	matt
Layer structure of solder connection	1...3 µm Ni / 4...6 µm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	120 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	120 °C		

Conductors suitable for connection

Clamping range, min.	0.2 mm ²
Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 24
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, 0.25 mm ² min.	

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w. wire end ferrule, DIN 46228 pt 1, max. 1.5 mm²

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm; 1.9mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm ²
wire end ferrule		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.5/12 OR
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H0.5/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.75 mm ²
wire end ferrule		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.75/12 W
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H0.75/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	1 mm ²
wire end ferrule		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H1.0/12 GE
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H1.0/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.25 mm ²
wire end ferrule		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.25/10 HBL
		Stripping length	nominal 5 mm
		Recommended wire-end ferrule	H0.25/5
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.34 mm ²
wire end ferrule		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.34/10 TK

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P)

Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. number of poles (Tu=20°C)	16 A
Rated current, max. number of poles (Tu=40°C)	14.2 A
Rated voltage for surge voltage class / pollution degree III/2	320 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV

Rated current, min. number of poles (Tu=20°C)	17.5 A
Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated voltage for surge voltage class / pollution degree II/2	630 V
Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Short-time withstand current resistance	3 x 1s with 120 A

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Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1815154

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 18 A

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 14

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) 300 V

Rated current (Use group B / UL 1059) 15 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 14

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

Packing

Packaging Box

VPE length 1 mm

VPE width 1 mm

VPE height 1 mm

Classifications

ETIM 6.0 EC002643

ETIM 7.0 EC002643

ECLASS 9.0 27-44-04-01

ECLASS 9.1 27-44-04-01

ECLASS 10.0 27-44-04-01

ECLASS 11.0 27-46-01-01

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

- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- Wire end ferrule with plastic collar to DIN 46228/4
- 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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Technical data

Approvals

Approvals



ROHS Conform

UL File Number Search E60693

Downloads

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

Engineering Data

[EPLAN, WSCAD](#)

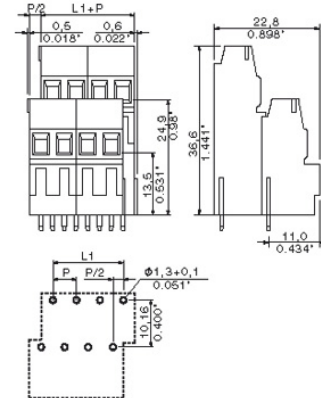
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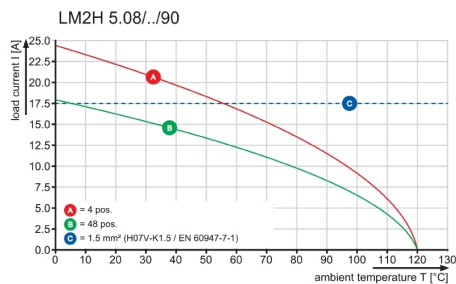
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Drawings

Dimensional drawing



Graph



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Technical Data 06

Rev.

Material data

Insulation material type	PA 66/6(WEMID)
Insulation material colours	orange,black,green,gre
Insulation material flammability class	UL94
Insulation resistance	MΩm
Conatct base material	Cu-alloy
Contact plating	Tin-plated

System characteristic values

Pitch P	mm/inch	5.08 / 0.200
Number of rows		2
Dielectric strength (r.m.s withstand voltage)	kV	>2.5
Through resistance (typical)	mΩm	1.7
Operating temperature range	°C	-55°...+120°
Degree of protection acc. to VDE 0106		finger safe
Degree of protection acc. to DIN EN 60529		IP20
Conductor connection method		clamping yoke
Screw size		M2.5
Screw torque max. acc. to EN 60999	Nm	0.4 - 0.5
Screwdriver type	⊖/⊕	SD 0.6X3.5 / SDK PZ0
Solder pin length L	mm/inch	3.5 / 0.138
PCB hole diameter D (wave soldering)	mm/inch	1.3+0.10/0.051+0.004
PCB hole diameter D (reflow soldering)	mm/inch	n.a.
Resistance to soldering heat acc. to DIN IEC 60512-6	°C/sec	260/10
Resistance to soldering heat acc. to EN 61760-1	°C/sec	n.a.
Solderability classification acc. to EN 61760-1		n.a.
Solder connection type		wave soldering
Solder pin diameter d (max.)	mm/inch	1.24/0.049

Application notes

Coding possibility	yes/no	no
Joinable without loss of pitch	yes/no	yes
Manual assembly of modules	yes/no	yes
Max. number of poles	n	48

Conductor

Clamping range	mm ²	0.20-2.5
"e" solid H05(07) V-U	mm ²	0.20-2.5
"f" flexible H05(07) V-K	mm ²	0.20-1.5
"f" with ferrule acc. to DIN 46228/1	mm ²	0.25-1.5
... with plastic collar acc. to DIN 46228/4	mm ²	0.25-1.5
Conductor insulation stripping length	mm/inch	6.0
Conductor insulation diameter max.	mm/inch	n.a.
Two wire clamping range	mm ²	n.a.
Gauge to EN 60999 (a x b ; Ø)	mm	2.4x1.5 (A1); Ø1.9

IEC 664-1 / VDE0110 (4.97) rated data

Rated cross section acc. to EN 60999	mm ²	1.5
Rated current @ 20°C ambient (min. pole , max. wire)	A	17.5
Rated current @ 40°C ambient (min. pole , max. wire)	A	17.5

Overvoltage category / Pollution degree

Rated voltage	V	250	320	630
Rated impulse voltage	kV	4.0	4.0	4.0

UL 1059 rated data

Rated voltage	V	300	n.a.	300
Rated current	A	15	n.a.	10
AWG wire range (field wiring / factory wiring)		24-14		

CSA C22.2 rated data

Rated voltage	V	300	n.a.	300
Rated current	A	18	n.a.	10
AWG wire range (field wiring / factory wiring)		24-14		

Packaging

	cardboard box
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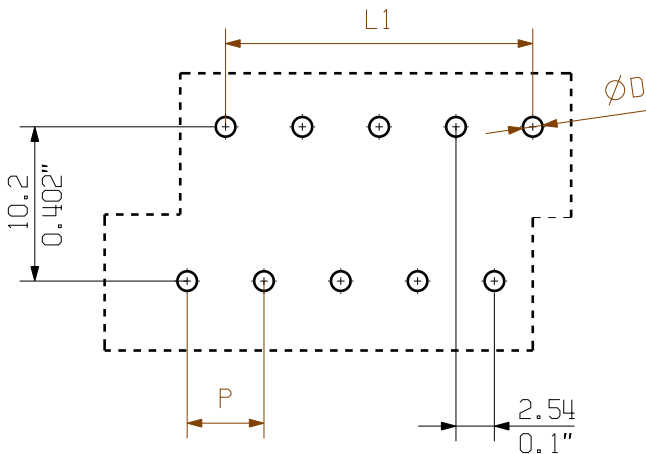
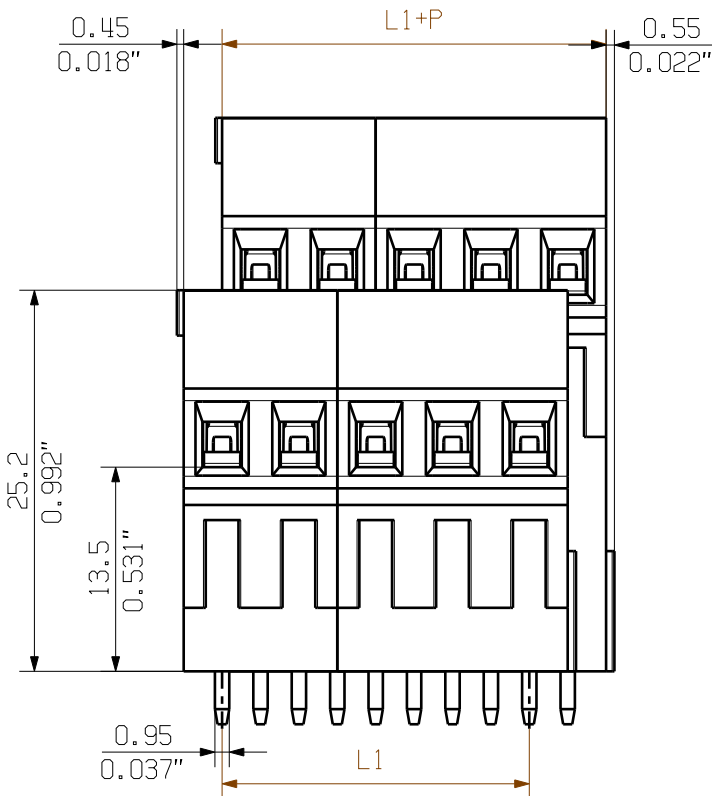
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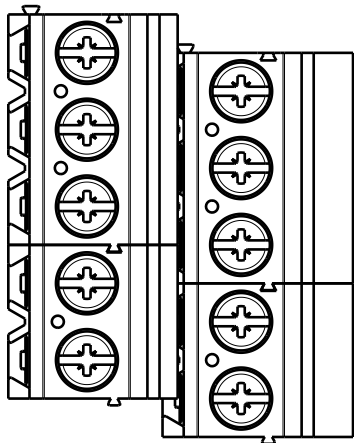
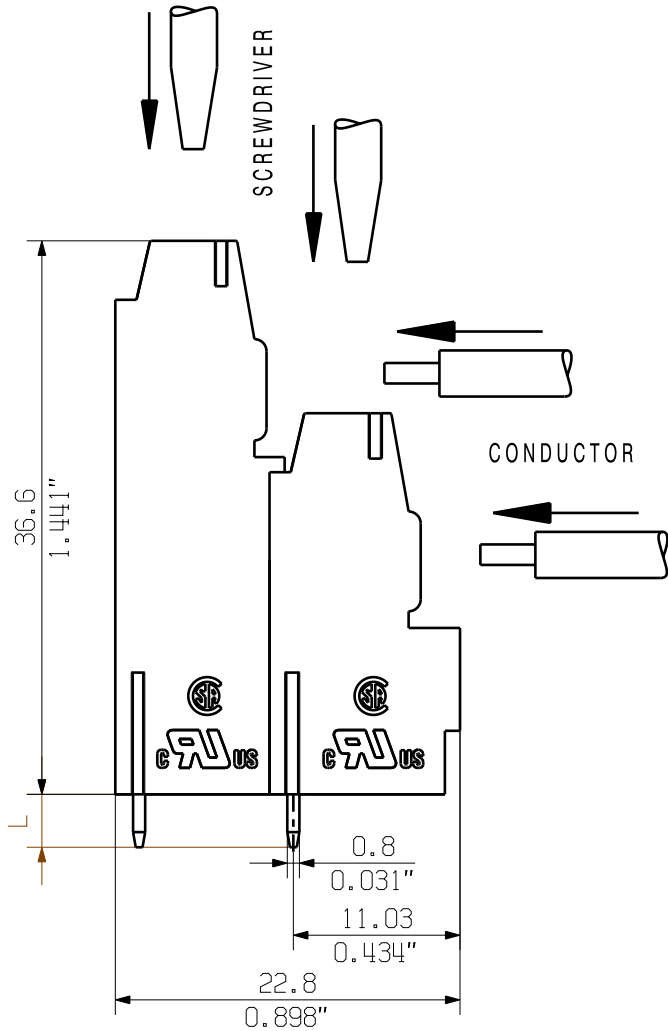
- 1) Sum of ambient temperature and temperature rise
- 2) Recommendation for manual assembly
- 3) Recommendation for automatic assembly
- 4) Recommendation for wave soldering
- 5) Recommendation for reflow soldering
- 6) Referred to rated cross section and minimum pole number

n.a. = not applicable

Subject to technical changes



PCB LAYOUT



KUNDENZEICHNUNG
CUSTOMER DRAWING

SHOWN: LM2H 5.08/10

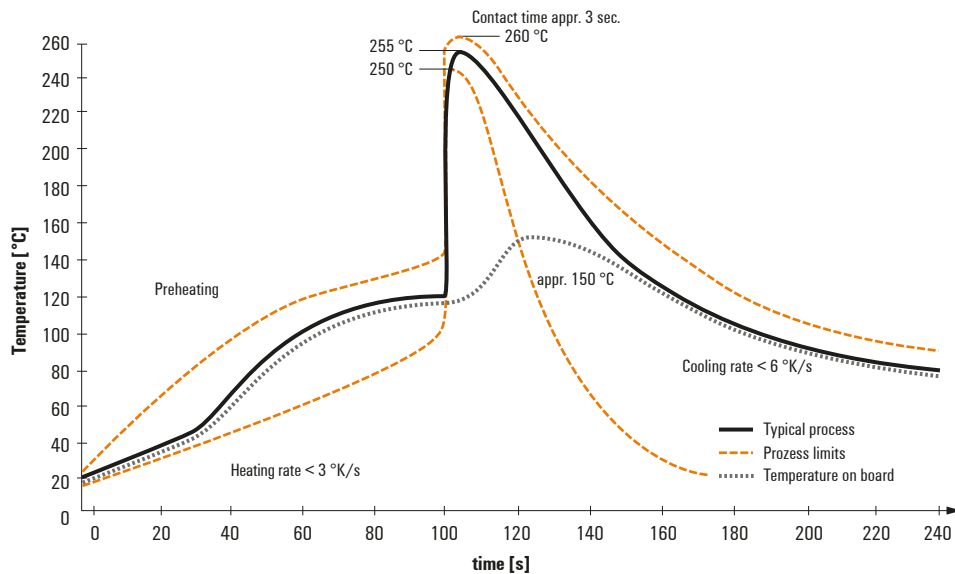
METRIC TOLERANCES X. = ±0.3 X.X = ±0.1 X.XX = ±0.05		37682/5 21.08.07 SHI_S	01	CAT.NO.: .	
MODIFICATION		Weidmüller		C 41738 06	
DRAWN		DATE	NAME	DRAWING NO.	
RESPONSIBLE		01.04.2005	XU_S	ISSUE NO.	
CHECKED		20.07.2007	LIU_ZH	LM2H 5.08/...	
APPROVED		DONG_H		LEITERPLATTENKLEMM PCB TERMINAL	
SCALE: 2/1		PRODUCT FILE: LM2H 5.08		7065	
SUPERSEDES: 4 29163/01					
SUPERSEDED BY: .					

48	116.84	4.600
46	111.76	4.400
44	106.68	4.200
42	101.60	4.000
40	96.52	3.800
38	91.44	3.600
36	86.36	3.400
34	81.28	3.200
32	76.20	3.000
30	71.12	2.800
28	66.04	2.600
26	60.96	2.400
24	55.88	2.200
22	50.80	2.000
20	45.72	1.800
18	40.64	1.600
16	35.56	1.400
14	30.48	1.200
12	25.40	1.000
10	20.32	0.800
8	15.24	0.600
6	10.16	0.400
4	5.08	0.200
N	L1 [mm]	L1 [inch]

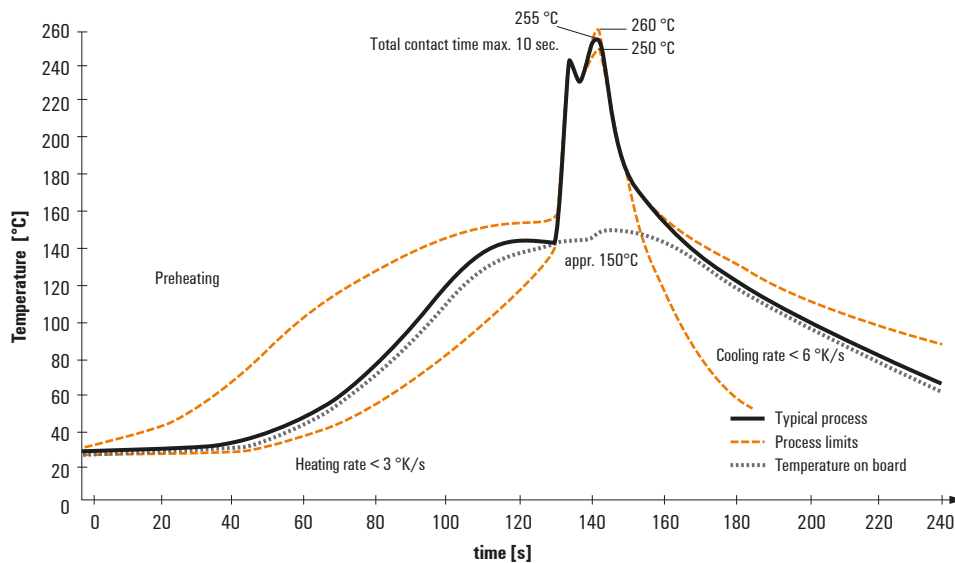
Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

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.

