

## LL2N 9.52/16/90 5.0SN OR BX

**Weidmüller Interface GmbH & Co. KG**

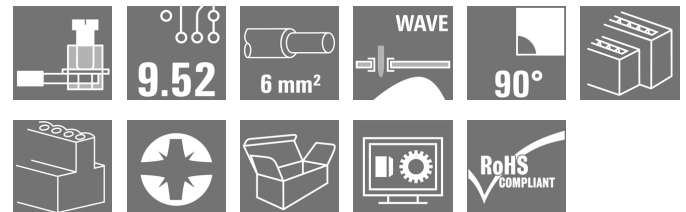
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

### Product image



Similar to illustration

2-row PCB terminal with proven clamping yoke connection at 9.52 mm pitch. Conductor outlet direction 90°. 1000 V and 6 mm<sup>2</sup> conductor cross-section for 32 A.

### General ordering data

Version	Printed circuit board terminals, 9.52 mm, Number of poles: 16, 90°, Solder pin length (l): 5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box
Order No.	<a href="#">1926380000</a>
Type	LL2N 9.52/16/90 5.0SN OR BX
GTIN (EAN)	4032248660063
Qty.	5 pc(s).
Product data	IEC: 1000 V / 32 A / 0.18 - 6 mm <sup>2</sup> UL: 300 V / 30 A / AWG 26 - AWG 10
Packaging	Box

Creation date March 26, 2021 8:49:16 AM CET

## LL2N 9.52/16/90 5.0SN OR BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

Depth	28 mm	Depth (inches)	1.102 inch
Height	33.9 mm	Height (inches)	1.335 inch
Height of lowest version	28.9 mm	Net weight	28.6 g
Width	76.76 mm	Width (inches)	3.022 inch

## System parameters

Product family	OMNIMATE Signal - series LL	Wire connection method	Clamping yoke connection
Property, clamping point	WireReady	Mounting onto the PCB	THT solder connection
Conductor outlet direction	90°	Pitch in mm (P)	9.52 mm
Pitch in inches (P)	0.375 inch	Number of poles	16
Pin series quantity	2	Fitted by customer	Yes
Max. adjacent poles per row	24	Solder pin length (l)	5 mm
Solder pin dimensions	0.5 x 1.0 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	0.8 x 4.0	Screwdriver blade standard	DIN 5264
Tightening torque, min.	0.5 Nm	Tightening torque, max.	0.6 Nm
Clamping screw	M 3	Stripping length	7 mm
L1 in mm	66.64 mm	L1 in inches	26.25 inch
Touch-safe protection acc. to DIN VDE 0470	IP 20	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch

## 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	4-6 µm SN	Tinning type	matt
Layer structure of solder connection	2...4 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.	0.18 mm <sup>2</sup>
Clamping range, max.	6 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 10
Solid, min. H05(07) V-U	0.18 mm <sup>2</sup>
Solid, max. H05(07) V-U	6 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.22 mm <sup>2</sup>
Flexible, max. H05(07) V-K	4 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>

Creation date March 26, 2021 8:49:16 AM CET

**LL2N 9.52/16/90 5.0SN OR BX**
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Technical data**

Plug gauge in accordance with EN 60999 a x b; ø 3.6 mm x 3.1 mm; 2.7 mm


Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 6 mm
		Recommended wire-end ferrule	<a href="#">H0.5/6</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 6 mm
		Recommended wire-end ferrule	<a href="#">H1.0/6</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 7 mm
		Recommended wire-end ferrule	<a href="#">H1.5/7</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	2.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 7 mm
		Recommended wire-end ferrule	<a href="#">H2.5/7</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.75 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 6 mm
		Recommended wire-end ferrule	<a href="#">H0.75/6</a>

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, min. number of poles (Tu=20°C)	32 A
Rated current, max. number of poles (Tu=20°C)	32 A	Rated current, min. number of poles (Tu=40°C)	32 A
Rated current, max. number of poles (Tu=40°C)	32 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	690 V	Rated voltage for surge voltage class / pollution degree III/3	690 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 120 A

**Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	200039-1815154
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	300 V
Rated current (Use group B / CSA)	30 A	Rated current (Use group C / CSA)	30 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 10
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Creation date March 26, 2021 8:49:16 AM CET

## LL2N 9.52/16/90 5.0SN OR BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## 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 C / UL 1059) 300 V

Rated current (Use group B / UL 1059) 30 A

Rated current (Use group C / UL 1059) 30 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 10

Reference to approval values

Specifications are maximum values, details - see approval certificate.

## Packing

Packaging Box

VPE length 45 mm

VPE width 90 mm

VPE height 150 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

## Approvals

Approvals



ROHS Conform

UL File Number Search E60693

## Downloads

Approval/Certificate/Document of Conformity

[Declaration of the Manufacturer](#)

Engineering Data

[EPLAN, WSCAD](#)

User Documentation

[QR-Code product handling video](#)

Creation date March 26, 2021 8:49:16 AM CET

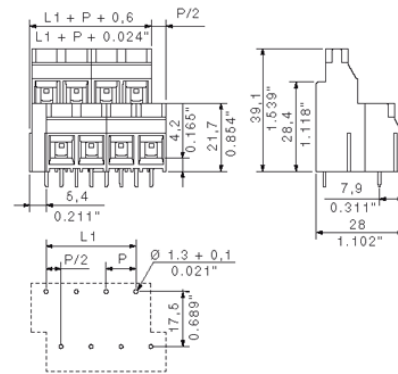
**LL2N 9.52/16/90 5.0SN OR BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

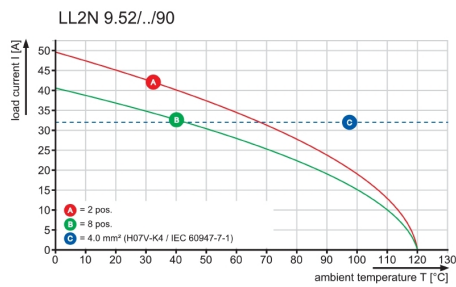
www.weidmueller.com

**Drawings**

**Dimensional drawing**



**Graph**



**Technical Data**

Rev.

**Material data**

Insulation material type	PA66/6(WEMID)
Insulation material colours	grey,orange,black,green
Insulation material flammability class	UL94 V-0
Insulation resistance	MOhm 10 <sup>3</sup>
Contact base material	Cu-alloy
Contact plating	tin-plated

**System characteristic values**

Pitch <b>P</b>	mm/inch	9.52 / 0.375
Number of rows		2
Dielectric strength (r.m.s withstand voltage)	kV	>5
Through resistance (typical)	mOhm	0.5
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		M3
Screw torque max. acc. to EN 60999	Nm	0.5
Screw driver type		SD 0.8x4.0 / SDK PZ1
Solder pin length <b>L</b>	mm/inch	5.0 / 0.197
PCB hole diameter <b>D</b> (wave soldering)	mm/inch	1.3 +0.10/0.051+0.004
PCB hole diameter <b>D</b> (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 <b>d</b> (max.)	mm/inch	1.28/0.05

**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		24

**Conductor**

Clamping range	mm <sup>2</sup>	0.18...6.0
"e" solid H05(07) V-U	mm <sup>2</sup>	0.18...6.0
"f" flexible H05(07) V-K	mm <sup>2</sup>	0.22...4.0
"f" with ferrule acc. to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
... with plastic collar acc. to DIN 46228/4	mm <sup>2</sup>	0.5...2.5
Conductor insulation stripping length	mm/inch	7.0 / 0.267
Conductor insulation diameter max.	mm/inch	n.a.
Two wire clamping range	mm <sup>2</sup>	n.a.
Gauge to EN 60999 (a x b ; Ø)	mm	3.6 x 3.1(A4); Ø2.7(B3)

**IEC 664-1 / VDE0110 (4.97) rated data**

Rated cross section acc. to EN 60999	mm <sup>2</sup>	4.0
Rated current @ 20°C ambient (min. pole, max. wire)	A	32
Rated current @ 40°C ambient (min. pole, max. wire)	A	32

**Overvoltage category / Pollution degree**

Rated voltage	V	690	1000	1000
Rated impulse voltage	kV	8.0	8.0	6.0

**UL 1059 rated data**

File No.: 60693

Rated voltage	V	300	300	300
Rated current	A	30	30	10
AWG wire range (field wiring / factory wiring)		26...10		

**CSA C22.2 rated data**

File No.: LR12400

Rated voltage	V	300	300	300
Rated current	A	30	30	10
AWG wire range (field wiring / factory wiring)		26....10		

**Packaging**

carton

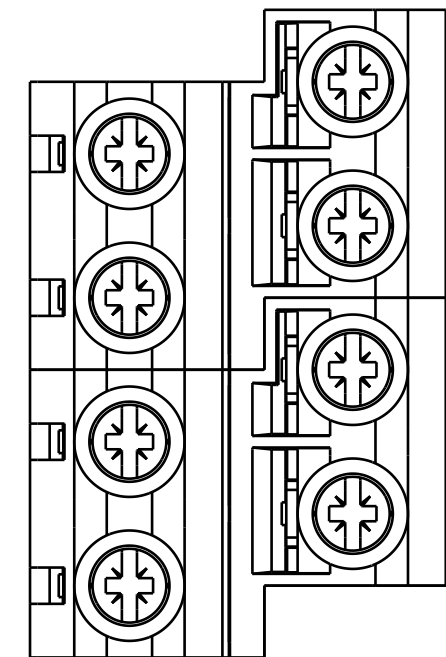
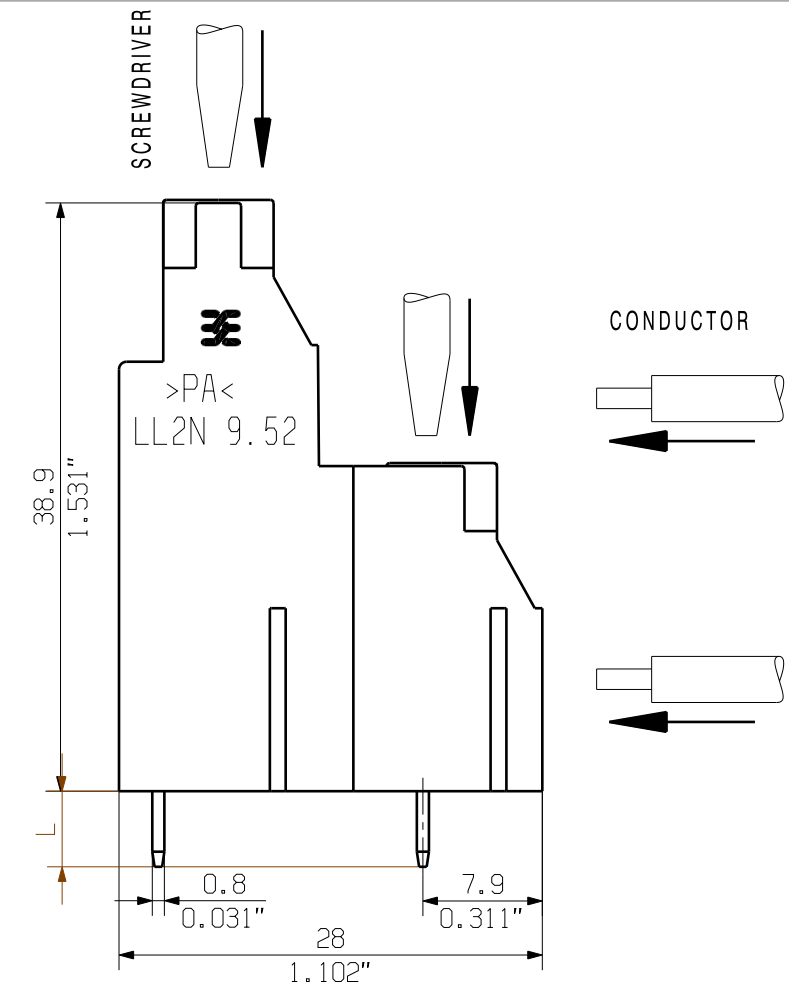
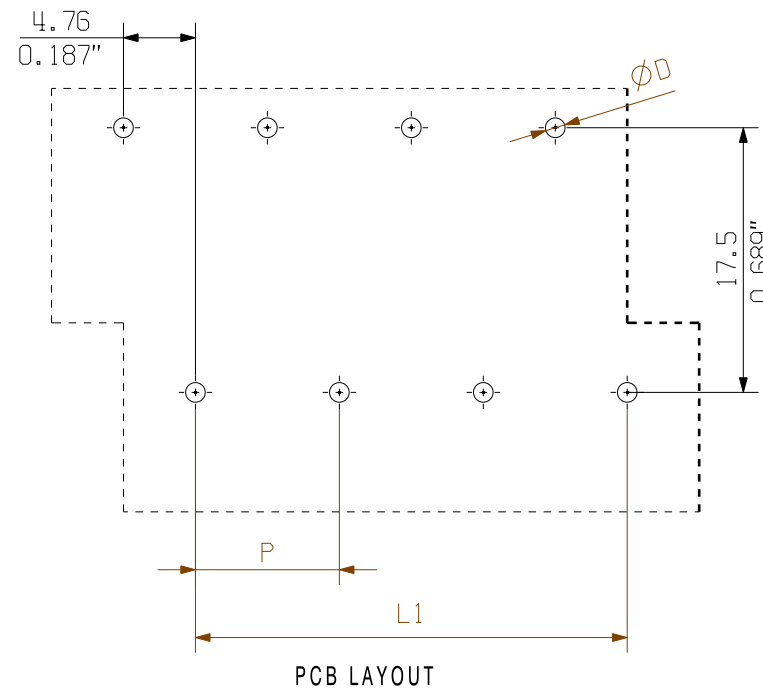
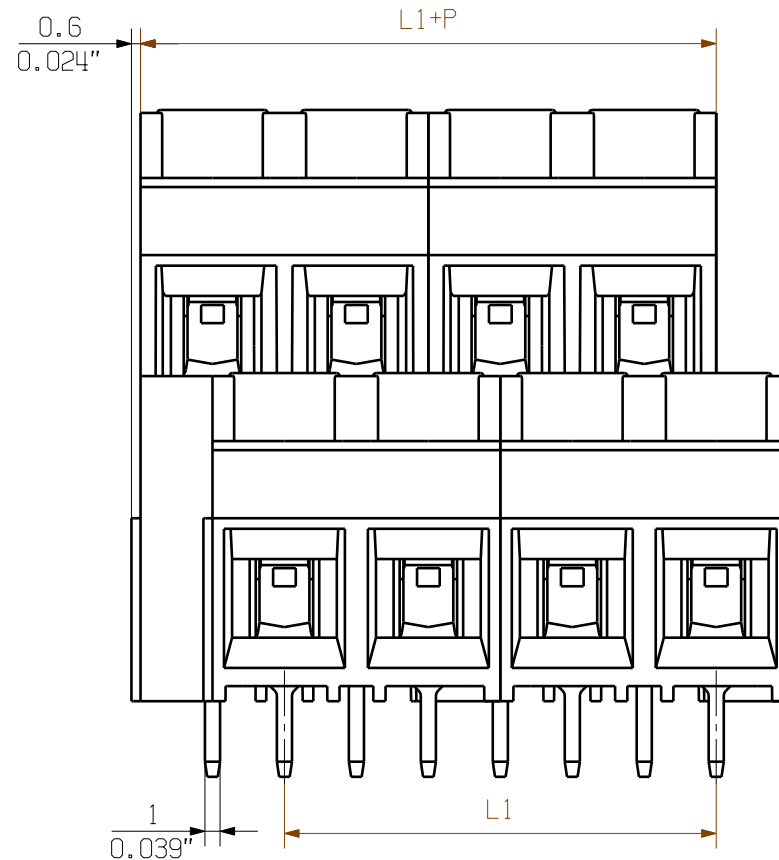
**Downloads**

www.weidmueller.de

- 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



24	104.72	4.123
20	85.68	3.373
16	66.64	2.624
12	47.60	1.874
8	28.56	1.124
4	9.52	0.375
N	L1 [mm]	L1 [inch]

**KUNDENZEICHUNG  
CUSTOMER DRAWING**

For the mounting of PCBs, it should be noted that the rated data stated here 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.

**METRIC TOLERANCES**

- X. = ±0.3
- X.X = ±0.1
- X.XX = ±0.05

37333/5	01
13.08.07 SHI_S	
MODIFICATION	

**Weidmüller**

CAT.NO.:

**C 39474 01**

DRAWING NO. ISSUE NO.

	DATE	NAME
DRAWN	16.08.2005	GU_D
RESPONSIBLE		GU_D
CHECKED	20.07.2007	LIU_ZH
APPROVED		DONG_H

**LL2N 9.52/.../90 ...**  
LEITERPLATTENKLEMME  
PCB TERMINAL

PRODUCT FILE: LL2N 9.52

None

WEITERGABE SOWIE Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet. Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte für den Fall der Patent-, Gebrauchsmuster- oder Geschmacksmusterertrags vorbehalten. THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED. OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. ALL RIGHTS RESERVED IN THE EVENT OF A PATENT, UTILITY MODEL OR DESIGN.

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
 Klängenbergstraße 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.