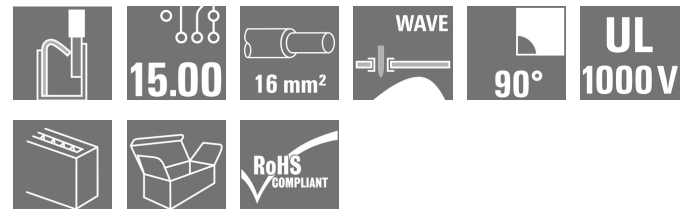


## LUFS 15.00/05/90V 5.0SN BK BX

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

www.weidmueller.com

### Product image



**The sturdy, direct connection for extreme current and voltage requirements in all power electronics applications such as solar inverters, frequency converters, servo-controllers and power supplies.**

### General ordering data

Version	Printed circuit board terminals, 15.00 mm, Number of poles: 5, 90°, Solder pin length (l): 5 mm, black, PUSH IN without actuator, Clamping range, max. : 16 mm <sup>2</sup> , Box
Order No.	<a href="#">2500590000</a>
Type	LUFS 15.00/05/90V 5.0SN BK BX
GTIN (EAN)	4050118604498
Qty.	20 pc(s).
Product data	IEC: 1000 V / 101 A / 0.5 - 25 mm <sup>2</sup> UL: 600 V / 53 A / AWG 18 - AWG 4
Packaging	Box

Creation date January 30, 2022 9:33:10 PM CET

## LUF5 15.00/05/90V 5.0SN BK BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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## Technical data

## Dimensions and weights

Depth	28.55 mm	Depth (inches)	1.124 inch
Height	35 mm	Height (inches)	1.378 inch
Height of lowest version	30 mm	Width	71.8 mm
Width (inches)	2.827 inch	Net weight	58.71 g

## System parameters

Product family	OMNIMATE Power - series LU	Wire connection method	PUSH IN without actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	15 mm	Pitch in inches (P)	0.591 inch
Number of poles	5	Pin series quantity	1
Fitted by customer	No	Solder pin length (l)	5 mm
Solder pin dimensions	d = 1.2 mm, Octagonal	Solder eyelet hole diameter (D)	1.7 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	Number of solder pins per pole	2
Screwdriver blade	0.8 x 4.0	Stripping length	18 mm
L1 in mm	60 mm	L1 in inches	2.362 inch
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged	Touch-safe protection acc. to DIN VDE 57 106	touch-safe with connected connectors from 6 mm <sup>2</sup>
Protection degree	IP20		

## Material data

Insulating material	Wemid (PA)	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-0
Contact material	E-Cu	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-40 °C
Operating temperature, max.	120 °C		

## Conductors suitable for connection

Clamping range, min.	0.5 mm <sup>2</sup>
Clamping range, max.	16 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 18
Wire connection cross section AWG, max.	AWG 4
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>
Solid, max. H05(07) V-U	16 mm <sup>2</sup>
Stranded, min. H07V-R	10 mm <sup>2</sup>
Stranded, max. H07V-R	25 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	25 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 16 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, 0.5 mm <sup>2</sup> min.	
w. wire end ferrule, DIN 46228 pt 1, 16 mm <sup>2</sup> max.	

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## Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	20 mm
		Recommended wire-end ferrule	<a href="#">H2.5/25D BL</a>	
		Stripping length	nominal	18 mm
		Recommended wire-end ferrule	<a href="#">H2.5/18</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	4 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	20 mm
		Recommended wire-end ferrule	<a href="#">H4.0/26D GR</a>	
		Stripping length	nominal	18 mm
		Recommended wire-end ferrule	<a href="#">H4.0/18</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	6 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	20 mm
		Recommended wire-end ferrule	<a href="#">H6.0/26 SW</a>	
		Stripping length	nominal	18 mm
		Recommended wire-end ferrule	<a href="#">H6.0/18</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	10 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	21 mm
		Recommended wire-end ferrule	<a href="#">H10.0/28 EB</a>	
		Stripping length	nominal	18 mm
		Recommended wire-end ferrule	<a href="#">H10.0/18</a>	
Cross-section for conductor connection	Type	fine-wired		
	nominal	16 mm <sup>2</sup>		
wire end ferrule	Stripping length	nominal	21 mm	
	Recommended wire-end ferrule	<a href="#">H16.0/28 GN</a>		
	Stripping length	nominal	18 mm	
	Recommended wire-end ferrule	<a href="#">H16.0/18</a>		
Cross-section for conductor connection	Type	fine-wired		
	nominal	1.5 mm <sup>2</sup>		
wire end ferrule	Stripping length	nominal	20 mm	
	Recommended wire-end ferrule	<a href="#">H1.5/24 R</a>		
	Stripping length	nominal	18 mm	
	Recommended wire-end ferrule	<a href="#">H1.5/18</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)

## LUF5 15.00/05/90V 5.0SN BK BX

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## Technical data


## Rated data acc. to IEC

Rated current, min. number of poles (Tu=20°C)	101 A	Rated current, max. number of poles (Tu=20°C)	76 A
Rated current, min. number of poles (Tu=40°C)	76 A	Rated current, max. number of poles (Tu=40°C)	86 A
Rated voltage for surge voltage class / pollution degree II/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/3	1,000 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	8 kV	Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV

## Rated data acc. to CSA

Rated voltage (Use group B / CSA)	600 V	Rated voltage (Use group C / CSA)	600 V
Rated voltage (Use group D / CSA)	600 V	Rated current (Use group B / CSA)	53 A
Rated current (Use group C / CSA)	53 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 4

## Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	600 V	Rated voltage (Use group C / UL 1059)	600 V
Rated voltage (Use group D / UL 1059)	600 V	Rated voltage (Use group E / UL 1059)	1,000 V
Rated current (Use group B / UL 1059)	53 A	Rated current (Use group C / UL 1059)	53 A
Rated current (Use group D / UL 1059)	5 A	Rated current (Use group E / UL 1059)	53 A
Wire cross-section, AWG, min.	AWG 18	Wire cross-section, AWG, max.	AWG 4
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

Packaging	Box	VPE length	314 mm
VPE width	170 mm	VPE height	55 mm

## Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	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		

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**Technical data**
**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	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</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> <li>• The test point can only be used as potential-pickup point.</li> <li>• The single-position PCB terminal block can be used for voltages up to 1500 V (DC) and 1000 V (AC). The relevant device standard and the appropriate required clearances and creepage distances should be observed in the application</li> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul>

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E60693

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">20210909 Color Change of Actuator to LLF(S) and LUF(S) Family</a> <a href="#">20210909 LLF(S) und LUF(S) Familie - Farbänderung des Betätigungselementes</a>
User Documentation	<a href="#">QR-Code product handling video</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

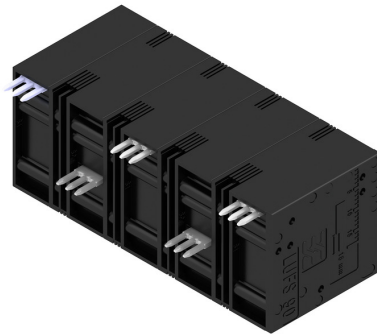
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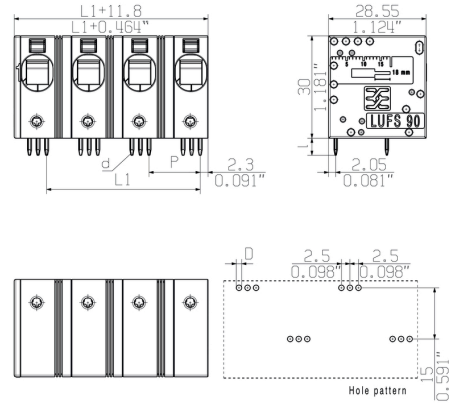
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**Drawings**

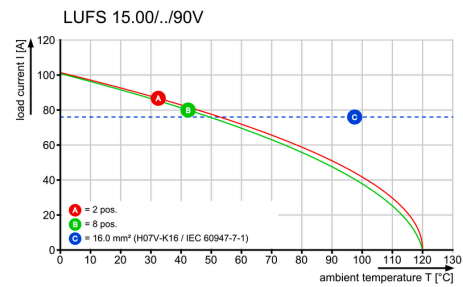
**Product image**



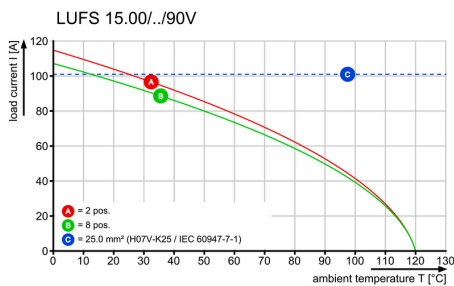
**Dimensional drawing**



**Derating curve**



**Derating curve**



**Product benefits**



Power up to UL 600 V  
 Offset solder pins

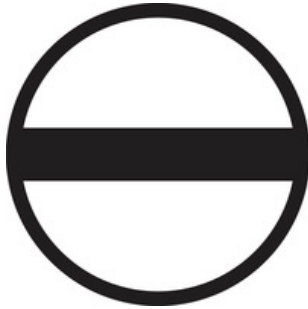
**LUFS 15.00/05/90V 5.0SN BK BX**

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**Accessories**

**Slotted screwdriver**



Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

**General ordering data**

Type	SDS 0.8X4.0X100	Version	
Order No.	<a href="#">9008340000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056293		
Qty.	1 pc(s).		

**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 essential details:

- Test plugs ensure reliable pick-up from diagnostic sockets

In tandem with the manufacturing process and application.

**General ordering data**

Type	PS 2.0 MC	Version	Product data	Packaging
Order No.	<a href="#">0310000000</a>	PCB plug-in connector, Accessories, Test plug, red, Number of poles: 1		Box
GTIN (EAN)	4008190000059			
Qty.	20 pc(s).			

**LUFS 15.00/05/90V 5.0SN BK BX**

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Klingenbergstraße 26  
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Germany

[www.weidmueller.com](http://www.weidmueller.com)

**Accessories****Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

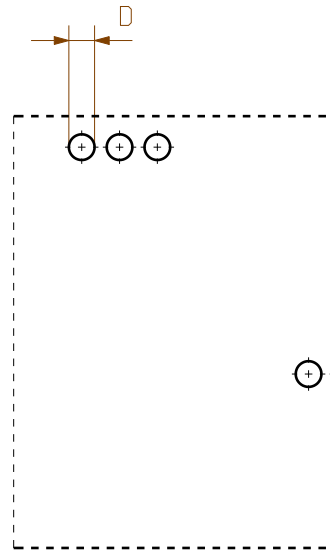
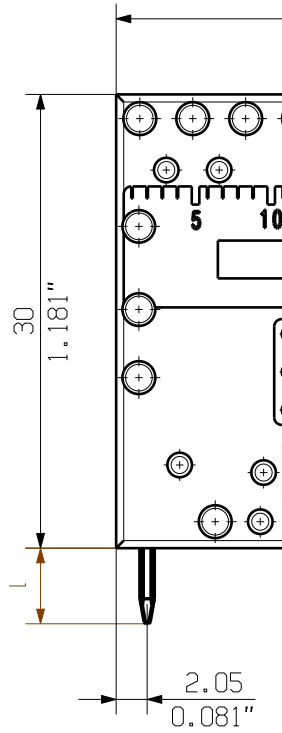
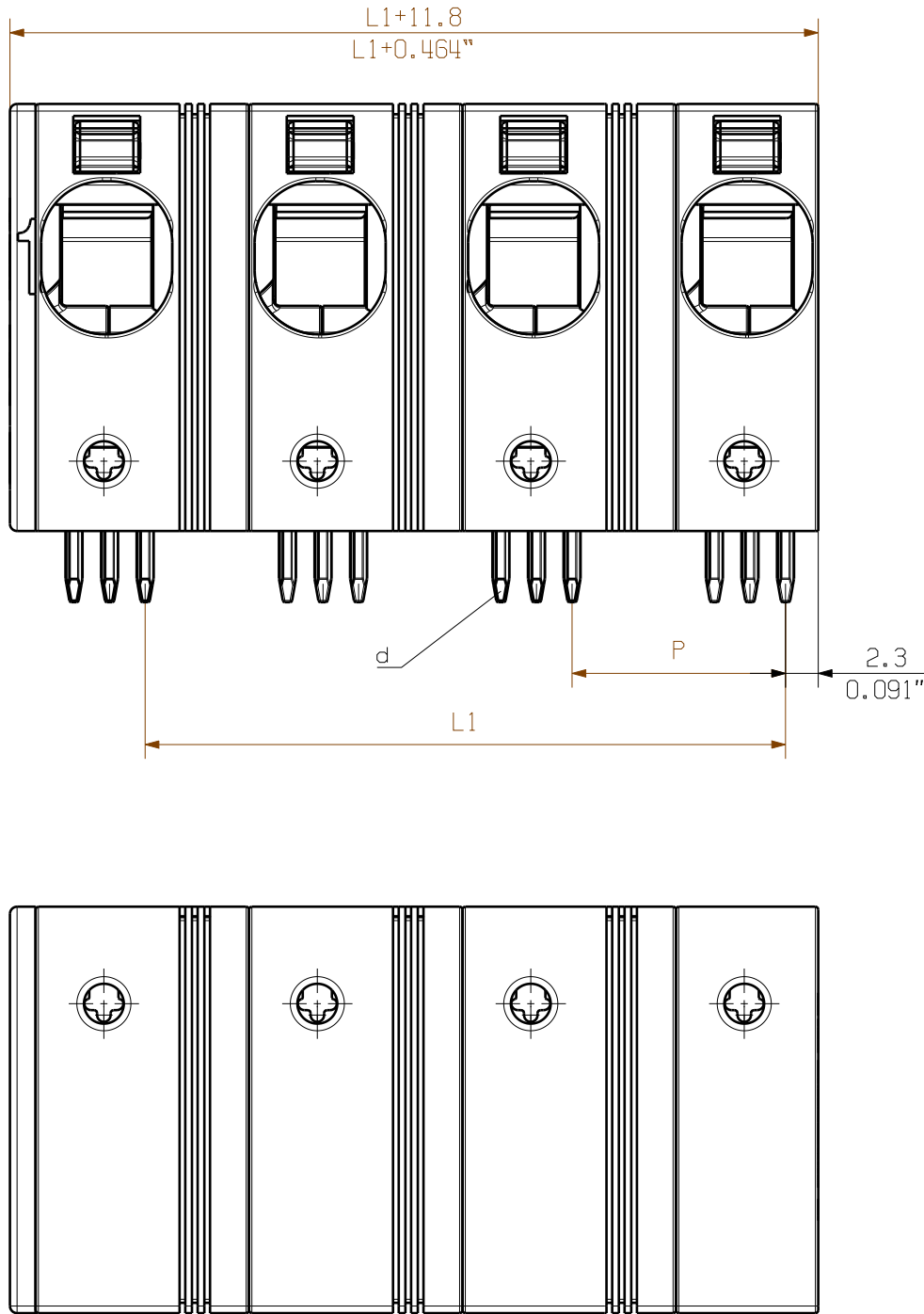
**General ordering data**

Type	SDIS 0.8X4.0X100	Version
Order No.	<a href="#">9008400000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248056361	
Qty.	1 pc(s).	



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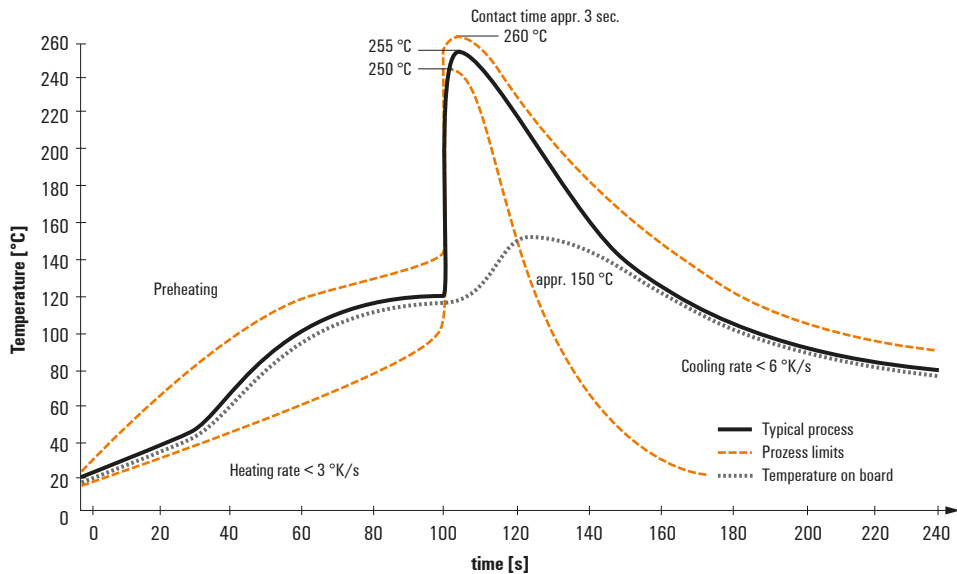
For the mounting of PCBs, it should be noted that the data relates only to the PCB component and not the terminal alone. The necessary creepage and clearance path must be observed in connection with the respective voltage according to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance must be determined according to DIN IEC 326 part 1.

Weidmüller PCB components are tested to the IEC 60684 standard, and are valid for its field of application. Provided that the components are used for their intended purpose, all requirements with respect to the occurrence of electrical, mechanical, thermal and corrosive stress will be satisfied.

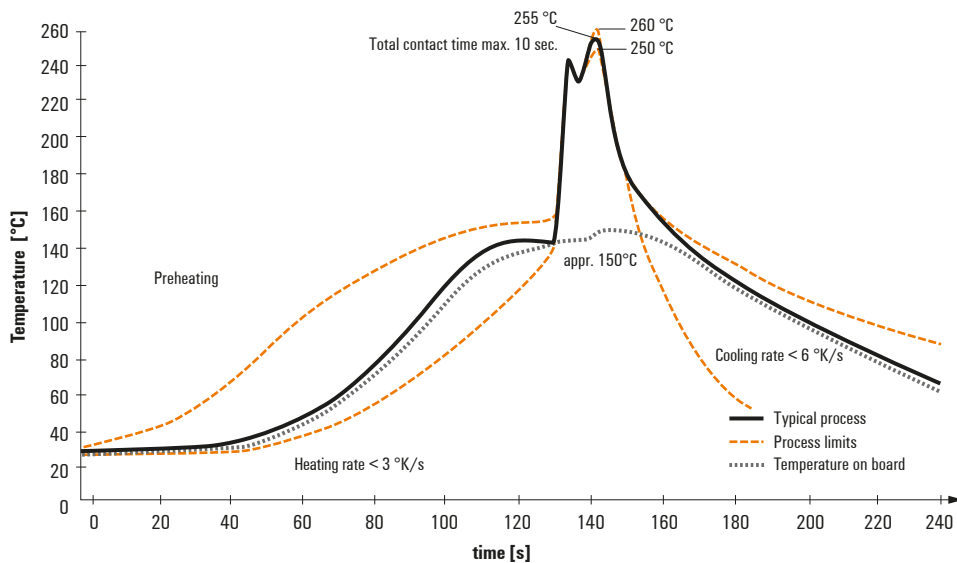
## Recommended wave soldering profiles

**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.

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