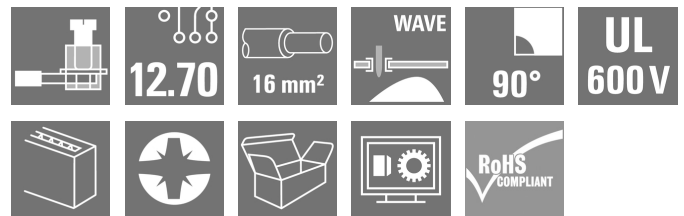


LUP 12.70/08/90 5.0SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image**

This PCB terminal provides connections for 1000 V, 76 A and 16 mm² conductor cross-section with proven clamping yoke connection at 12.7 mm pitch, conductor outlet direction in 90° design.

General ordering data

Version	Printed circuit board terminals, 12.70 mm, Number of poles: 8, 90°, Solder pin length (l): 5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 16 mm ² , Box
Order No.	2014760000
Type	LUP 12.70/08/90 5.0SN BK BX
GTIN (EAN)	4050118399950
Qty.	20 pc(s).
Product data	IEC: 1000 V / 76 A / 0.5 - 16 mm ² UL: 600 V / 65 A / AWG 22 - AWG 6
Packaging	Box

Creation date July 25, 2024 8:33:34 PM CEST

Catalogue status 13.07.2024 / We reserve the right to make technical changes.

LUP 12.70/08/90 5.0SN BK BX

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Technical data

Dimensions and weights

Depth	25.1 mm	Depth (inches)	0.988 inch
Height	36.5 mm	Height (inches)	1.437 inch
Height of lowest version	31.5 mm	Width	99.86 mm
Width (inches)	3.931 inch	Net weight	81.56 g

System parameters

Product family	OMNIMATE Power - series LUP	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	12.7 mm	Pitch in inches (P)	0.5 "
Number of poles	8	Pin series quantity	1
Fitted by customer	Yes	Number of rows	1
Max. adjacent poles per row	12	Solder pin length (l)	5 mm
Solder pin dimensions	1.2 x 1.2 mm	Solder eyelet hole diameter (D)	1.6 mm
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		Number of solder pins per pole	2
Screwdriver blade	1.0 x 5.5, PZ 2	Screwdriver blade standard	DIN 5264
Tightening torque, min.	1.2 Nm	Tightening torque, max.	1.5 Nm
Clamping screw	M 4	Stripping length	12 mm
L1 in mm	88.9 mm	L1 in inches	3.25 "
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Protection degree	IP20	Volume resistance	0.50 mΩ

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	Cu-alloy	Contact surface	tinned
Layer structure of solder connection	1.5...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.	0.13 mm ²
Clamping range, max.	16 mm ²
Wire connection cross section AWG, min.	AWG 22
Wire connection cross section AWG, max.	AWG 6
Solid, min. H05(07) V-U	0.5 mm ²
Solid, max. H05(07) V-U	16 mm ²
Stranded, min. H07V-R	6 mm ²
Stranded, max. H07V-R	16 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	16 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 10 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, 2.5 mm ² min.	

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Technical data

w. wire end ferrule, DIN 46228 pt 1, max. 10 mm²

Plug gauge in accordance with EN 60999 a x b; ø 5.4 mm x 5.1 mm; 5.3 mm

Clampable conductor

Cross-section for conductor connection	Type	fine-wired	
	nominal	2.5 mm ²	
wire end ferrule	Stripping length	nominal	12 mm
	Recommended wire-end ferrule	H2.5/12	
	Stripping length	nominal	14 mm
	Recommended wire-end ferrule	H2.5/19D BL	
Cross-section for conductor connection	Type	fine-wired	
	nominal	4 mm ²	
wire end ferrule	Stripping length	nominal	12 mm
	Recommended wire-end ferrule	H4.0/12	
	Stripping length	nominal	14 mm
	Recommended wire-end ferrule	H4.0/20D GR	
Cross-section for conductor connection	Type	fine-wired	
	nominal	6 mm ²	
wire end ferrule	Stripping length	nominal	12 mm
	Recommended wire-end ferrule	H6.0/12	
	Stripping length	nominal	14 mm
	Recommended wire-end ferrule	H6.0/20 SW	
Cross-section for conductor connection	Type	fine-wired	
	nominal	10 mm ²	
wire end ferrule	Stripping length	nominal	15 mm
	Recommended wire-end ferrule	H10.0/22 EB	
	Stripping length	nominal	12 mm
	Recommended wire-end ferrule	H10.0/12	

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)	76 A
Rated current, max. number of poles (Tu=20°C)	74 A	Rated current, min. number of poles (Tu=40°C)	76 A
Rated current, max. number of poles (Tu=40°C)	64 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	Short-time withstand current resistance	1 x 1s with 700 A

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	600 V	Rated voltage (Use group C / CSA)	600 V
Rated current (Use group B / CSA)	65 A	Rated current (Use group C / CSA)	65 A
Wire cross-section, AWG, min.	AWG 22	Wire cross-section, AWG, max.	AWG 6

LUP 12.70/08/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

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Technical data

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 current (Use group B / UL 1059) 65 A

Rated current (Use group C / UL 1059) 65 A

Wire cross-section, AWG, min. AWG 22

Wire cross-section, AWG, max. AWG 6

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

Packing

Packaging	Box	VPE length	222 mm
VPE width	178 mm	VPE height	66 mm

Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96
	Test	mark of origin, type identification, type of material, approval marking UL, durability
	Evaluation	available
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section
		Type of conductor and stranded 0.5 mm ² conductor cross-section
		Type of conductor and solid 16 mm ² conductor cross-section
		Type of conductor and stranded 16 mm ² conductor cross-section
		Type of conductor and AWG 22/1 conductor cross-section
		Type of conductor and AWG 22/19 conductor cross-section
		Type of conductor and AWG 6/7 conductor cross-section
		Type of conductor and AWG 6/19 conductor cross-section
	Evaluation	passed

LUP 12.70/08/90 5.0SN BK BX

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Technical data

Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg
	Conductor type	Type of conductor and AWG 22/1 conductor cross-section
		Type of conductor and AWG 22/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and solid 0.5 mm ² conductor cross-section
		Type of conductor and stranded 0.5 mm ² conductor cross-section
	Evaluation	passed
	Requirement	2.9 kg
Pull-out test	Conductor type	Type of conductor and solid 16 mm ² conductor cross-section
		Type of conductor and stranded 16 mm ² conductor cross-section
	Conductor type	Type of conductor and AWG 6/7 conductor cross-section
	Evaluation	passed
	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥15 N
	Conductor type	Type of conductor and AWG 22/1 conductor cross-section
		Type of conductor and AWG 22/19 conductor cross-section
	Evaluation	passed
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥100 N
	Conductor type	Type of conductor and H07V-K16 conductor cross-section
		Type of conductor and H07V-U16 conductor cross-section
	Conductor type	Type of conductor and AWG 6/7 conductor cross-section
	Evaluation	passed

LUP 12.70/08/90 5.0SN BK BX

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Technical data

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	EC002643	ETIM 9.0	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
ECLASS 12.0	27-46-01-01	ECLASS 13.0	27-46-01-01

Environmental Product Compliance

REACH SVHC	/
RoHS Compliance Status	Compliant without exemption

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"> • Additional variants on request • 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 • The data given under CSA relates to a cUL approval - E60693 • 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 maximum humidity 70%, 36 months

Approvals

Approvals	
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cULus)	E60693

LUP 12.70/08/90 5.0SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
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Germany

www.weidmueller.com

Technical data

Downloads

Approval/Certificate/Document of Conformity

[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Product Change Notification

[20220201 Visual change OMNIMATE® Power PCB terminal blocks and connectors](#)

[20220201 Visuelle Änderung OMNIMATE® Power Leiterplattenklemmen und -steckverbinder](#)

User Documentation

[QR-Code product handling video](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

[FL DRIVES EN](#)

[MB DEVICE MANUF. EN](#)

[FL DRIVES DE](#)

[FL APPL. INVERTER EN](#)

[FL BASE STATION EN](#)

[FL ELEVATOR EN](#)

[FL POWER SUPPLY EN](#)

[FL 72H SAMPLE SER EN](#)

[PO OMNIMATE EN](#)

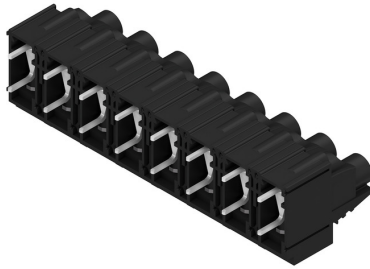
LUP 12.70/08/90 5.0SN BK BX

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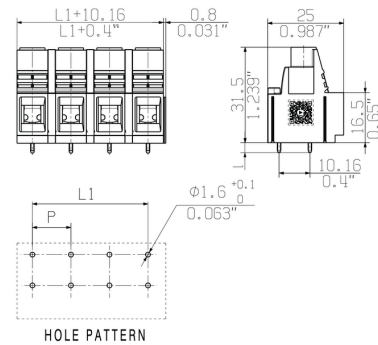
www.weidmueller.com

Drawings

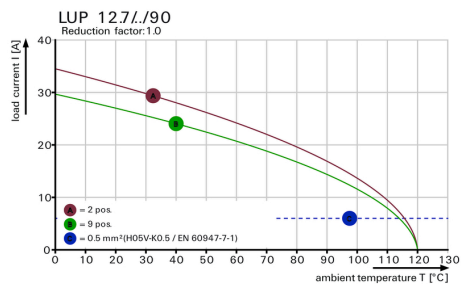
Product image



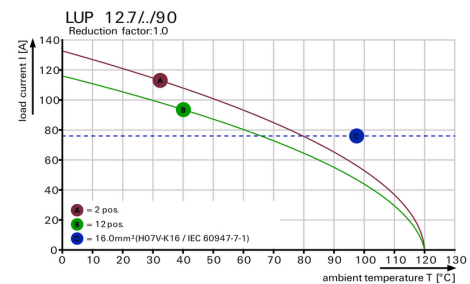
Dimensional drawing



Graph



Graph



LUP 12.70/08/90 5.0SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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 1.0X5.5X125	Version
Order No.	9008410000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056378	
Qty.	1 pc(s).	

Crosshead screwdriver Pozidriv

VDE insulated crosshead screwdriver type Pozidriv SDIK PZ DIN 7438, ISO 8764/2-PZ, output to ISO 8764-PZ, SoftFinish grip

General ordering data

Type	SDIK PZ2	Version
Order No.	9008890000	Screwdriver, Screwdriver
GTIN (EAN)	4032248266661	
Qty.	1 pc(s).	

LUP 12.70/08/90 5.0SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

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www.weidmueller.com**Accessories****Crosshead screwdriver Pozidriv**

Crosshead screwdriver, Pozidriv, SDK PZ DIN 5262, ISO 8764/2-PZ, output to ISO 8764/1-PZ, ChromTop tip, SoftFinish grip

General ordering data

Type	SDK PZ2	Version
Order No.	9008540000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056538	
Qty.	1 pc(s).	

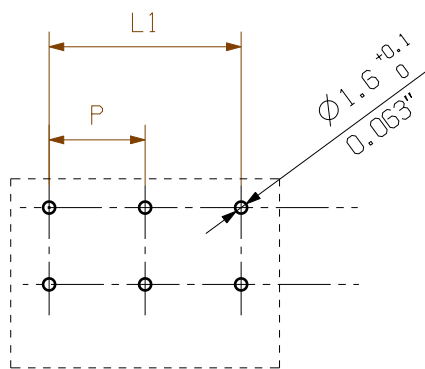
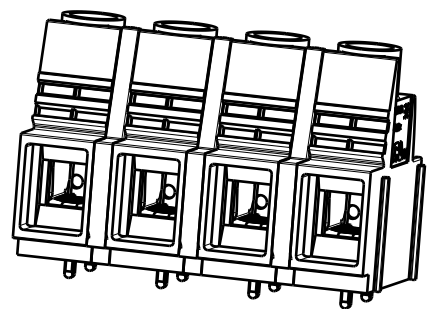
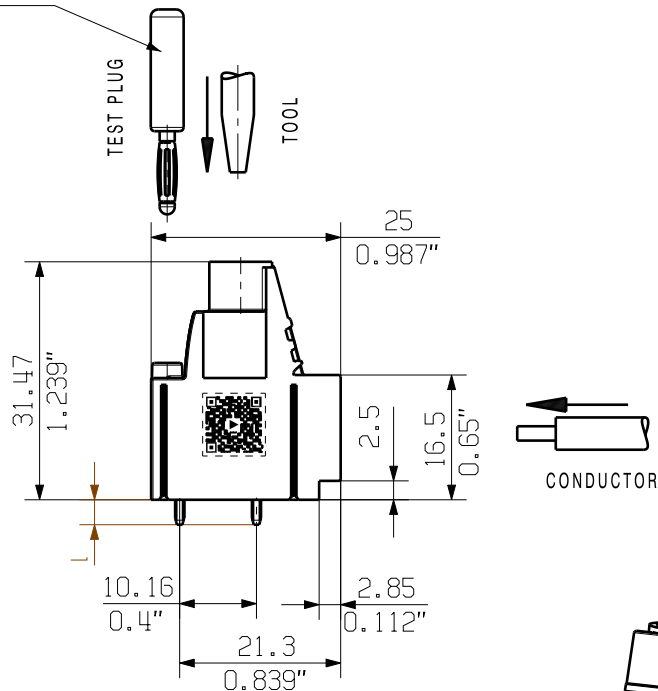
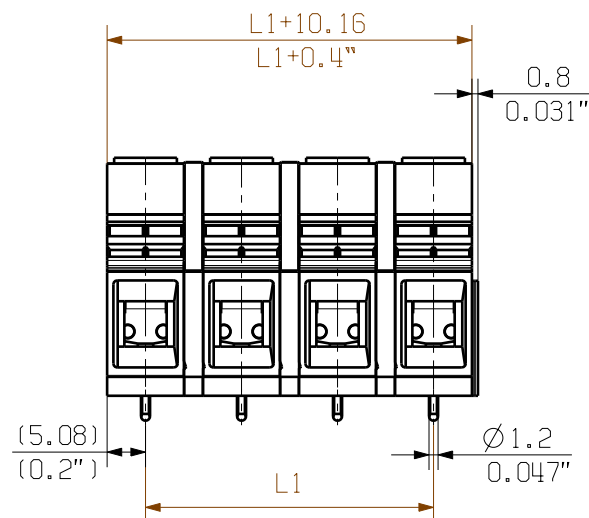
Slotted screwdriver

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

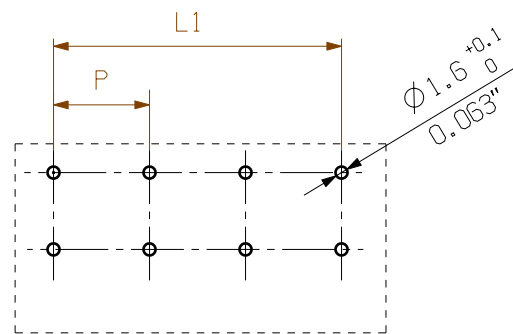
General ordering data

Type	SDS 1.0X5.5X150	Version
Order No.	9008350000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056316	
Qty.	1 pc(s).	

PS 2.0 / ORDER NO.
031000 0000



HOLE PATTERN (BLOCK)



HOLE PATTERN

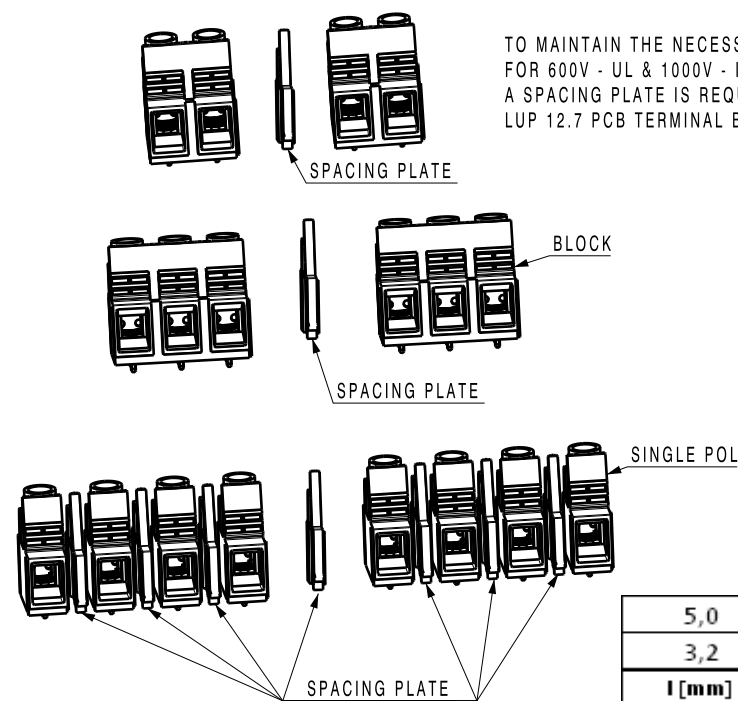
n=NO OF POLES
P= PITCH=12.70
l= STIFTLAENGE/ 5.0mm/0.197"
PIN LENGTH 3.2mm/0.126"

SHOWN: LUP 12.70/02/90...SO (BLOCK)
LUP 12.70/03/90...SO (BLOCK)
LUP 12.7/04/90... (SINGLE POL)

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance with VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.




Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE:
DIN ISO 2768-mK



SINGLE POL	12	139,70	5,500
	11	127,00	5,000
	10	114,30	4,500
	9	101,60	4,000
	8	88,90	3,500
	7	76,20	3,000
	6	63,50	2,500
	5	50,80	2,000
	4	38,10	1,500
5,0	3	25,40	1,000
3,2	2	12,70	0,500
l [mm]	n	L1 [mm]	L1 [Inch]

TO MAINTAIN THE NECESSARY VOLTAGE DISTANCES
FOR 600V - UL & 1000V - IEC,
A SPACING PLATE IS REQUIRED BETWEEN ASSEMBLED
LUP 12.7 PCB TERMINAL BLOCKS

	102479		Prim PLM Part No.: 411688		Prim ERP Part No.: 1160810000		
	First Issue Date 03.03.2018		Modification	Weidmüller 		34163 Drawing no. Issue no.	
		Date	Name	LUP12.70/./90 <i>not released</i>			
	Drawn	03.03.2018	Administrator				
	Responsible		Amann, Alexand				
	Approved						
Scale: 2:1 Size: A3			Product file: 7233 LUP 10.16/12.7				
Drawings Assembly							

Recommended wave soldering profiles

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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.