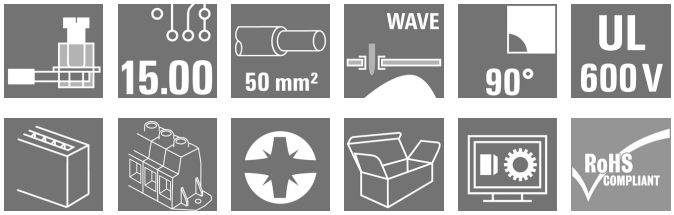
LXXX 15.00/03/90FL 4.5SN BK BX

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

www.weidmueller.com

Product image





The high-current PCB connection for more power on board: 150 A /1000 V with wires up to 50 mm², transmitted right to the PCB!

The LXXX 15.0 – with its proven steel clamping-yoke technology in a compact standard housing – integrates the latest market requirements for security, power density and miniaturization in power electronics. It connects these requirements into an efficient solution for the entire value-creation chain – including development, production, installation and maintenance.

The function and form of the application's connection method plays a key role. It influences the application's design, reliability, usability and costs. With the Substitution of
For example, with the replacement of complex constructions involving bolts or bus bars, the PCB can be transformed into a system platform that is both consistent and sustainable into the future – even for high-current applications.

The LXXX 15.0 reduces size and complexity while at the same time improving application integration. In so doing, it fulfils the requirements of power electronics better than the established mechanisms and connection elements.

General ordering data

Version	Printed circuit board terminals, 15.00 mm, Number of poles: 3, 90°, Solder pin length (l): 4.5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 50 mm², Box
Order No.	1047460000
Type	LXXX 15.00/03/90FL 4.5SN BK BX
GTIN (EAN)	4032248783694
Qty.	10 pc(s).
Product data	IEC: 1000 V / 150 A / 0.5 - 50 mm² UL: 600 V / 126 A / AWG 20 - AWG 1
Packaging	Box

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Technical data

Dimensions and weights

Depth	31 mm	Depth (inches)	1.22 inch
Height	56 mm	Height (inches)	2.205 inch
Height of lowest version	51.5 mm	Width	60.5 mm
Width (inches)	2.382 inch	Net weight	90 g

System parameters

Product family	OMNIMATE Power - series LXXX	Wire connection method	Clamping yoke connection
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	3	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Solder pin length (l)	4.5 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	4	Screwdriver blade	1.2 x 6.5
Screwdriver blade standard	DIN 5264	Tightening torque, min.	2.5 Nm
Tightening torque, max.	4 Nm	Clamping screw	M 6
Stripping length	18 mm	L1 in mm	30 mm
L1 in inches	1.181 inch	Touch-safe protection acc. to DIN VDE 0470	IP 20
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	Cu-alloy	Contact surface	tinned
Coating	4-6 µm SN	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.	0.5 mm²
Clamping range, max.	50 mm²
Wire connection cross section AWG, min.	AWG 20
Wire connection cross section AWG, max.	AWG 1
Solid, min. H05(07) V-U	0.5 mm²
Solid, max. H05(07) V-U	16 mm²
Stranded, min. H07V-R	6 mm²
Stranded, max. H07V-R	50 mm²
Flexible, min. H05(07) V-K	0.5 mm²
Flexible, max. H05(07) V-K	35 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	35 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm²

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Technical data

w. wire end ferrule, DIN 46228 pt 1, max.	35 mm²

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Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	2.5 mm²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H2,5/25D BL
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H2,5/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	4 mm²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H4,0/26D GR
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H4,0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	6 mm²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H6,0/26 SW
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H6,0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	10 mm²
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	H10,0/28 EB
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H10,0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	16 mm²
	wire end ferrule	Stripping length	nominal 21 mm
		Recommended wire-end ferrule	H16,0/28 GN
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H16,0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	1.5 mm²
	wire end ferrule	Stripping length	nominal 20 mm
		Recommended wire-end ferrule	H1,5/24 R
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H1,5/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	35 mm²
	wire end ferrule	Stripping length	nominal 19 mm
		Recommended wire-end ferrule	H35,0/32D R
		Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H35,0/18
	Cross-section for conductor connection	Type	fine-wired
		nominal	50 mm²
	wire end ferrule	Stripping length	nominal 18 mm
		Recommended wire-end ferrule	H50,0/18

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Technical data

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)	150 A
Rated current, min. number of poles (Tu=40°C)	150 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	8 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

Institute (CSA)		Certificate No. (CSA)	200039-1198743
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)	127 A
Rated current (Use group C / CSA)	127 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 1
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)	600 V	Rated voltage (Use group C / UL 1059)	600 V
Rated current (Use group B / UL 1059)	126 A	Rated current (Use group C / UL 1059)	126 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 1
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	255 mm
VPE width	99 mm	VPE height	62 mm

Type tests

Test: Durability of markings	Test	mark of origin, type identification, type of material, pitch, date clock, approval marking CSA, approval marking UL, durability
	Evaluation	available

Weidmüller

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Technical data

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 conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
		Type of conductor and conductor cross-section	solid 16 mm²
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
		Type of conductor and conductor cross-section	AWG 10/1
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	Evaluation	passed	
	Requirement	1.4 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 10/1
	Evaluation	passed	
	Requirement	2.0 kg	
	Conductor type	Type of conductor and conductor cross-section	stranded 10 mm²
	Evaluation	passed	

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Technical data

Pull-out test	Standard	DIN EN 60999 section 8.5 / 04.94	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	Evaluation	passed	
	Requirement	≥80 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 10/1
	Evaluation	passed	
	Requirement	≥ 90N	
	Conductor type	Type of conductor and conductor cross-section	stranded 10 mm²
	Evaluation	passed	

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	27460101

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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	• 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 • 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. • IP 20 from 16 mm² to 50 mm² • The test point can only be used as potential-pickup point. • Wire-end ferrules are mandatory for stranded wires with more than 19 strands. • 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. (UR)	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
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 PO OMNIMATE EN

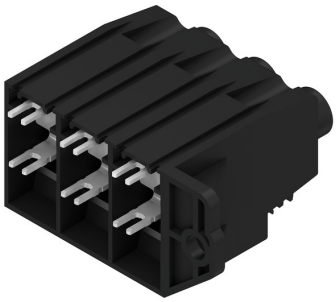
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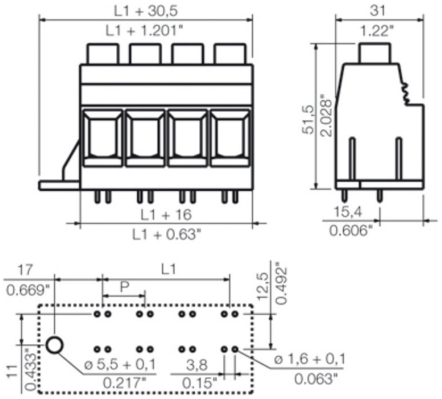
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Drawings

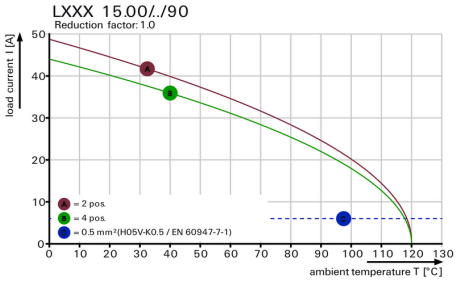
Product image



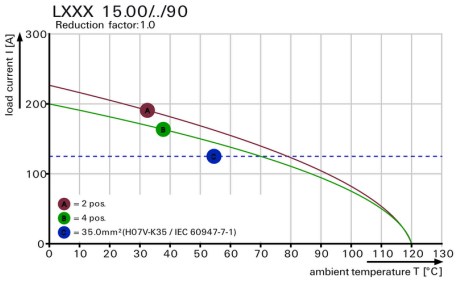
Dimensional drawing



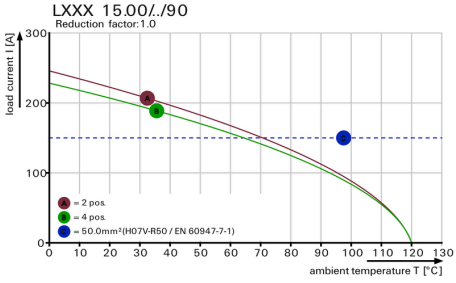
Graph



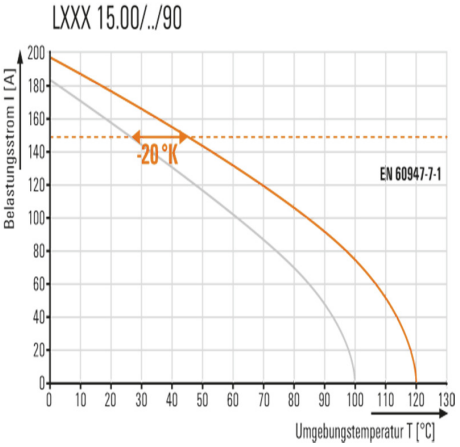
Graph



Graph



Product benefits



Increased power reserves
Optimised application safety

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Drawings



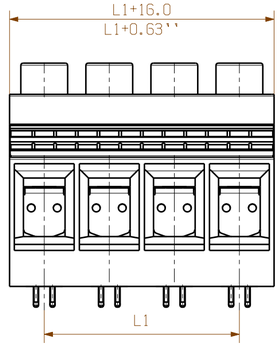
Standard-compliant integration

Dimensions without tolerances are no check dimensions

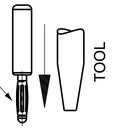
The English version is binding

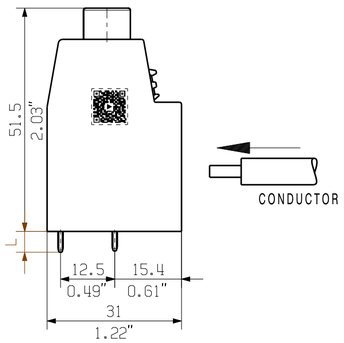
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LXXX 15.00/04/90...



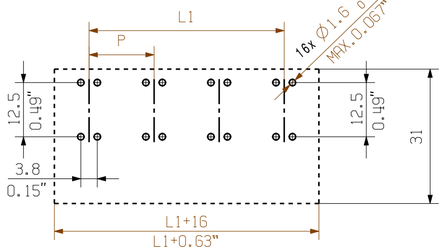
TEST PLUG PS 2.0
ORDER NO. 031000 0000



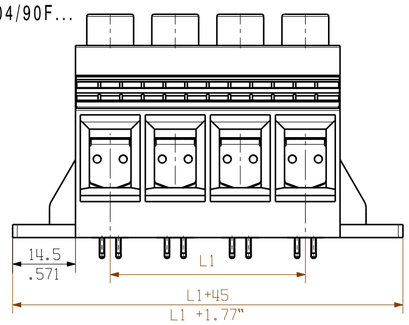


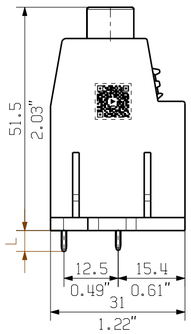
CONDUCTOR

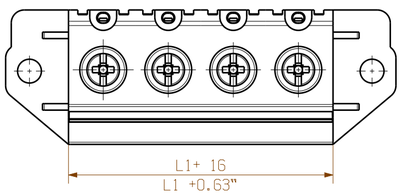
HOLE PATTERN



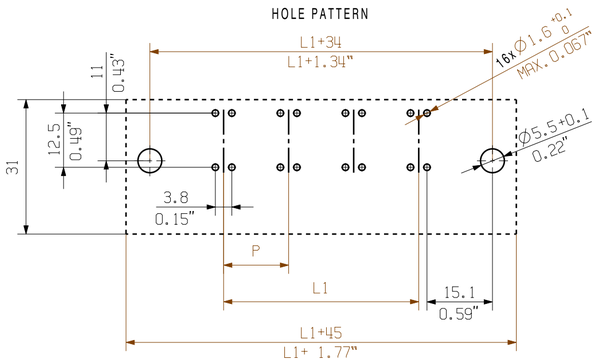
LXXX 15.00/04/90F...



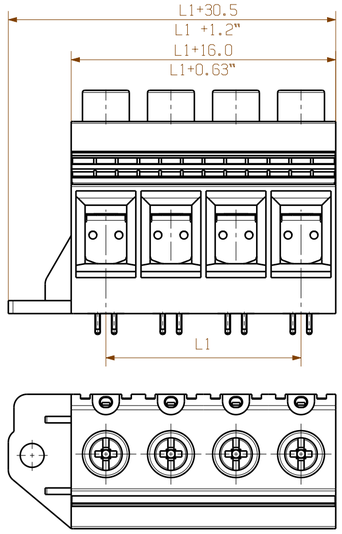


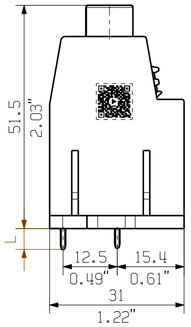


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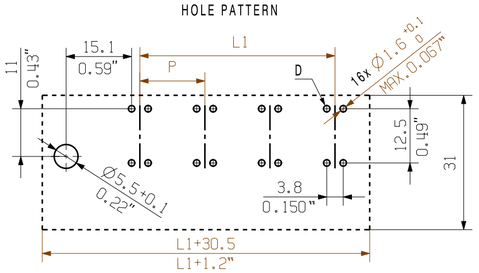


LXXX 15.00/04/90FL...

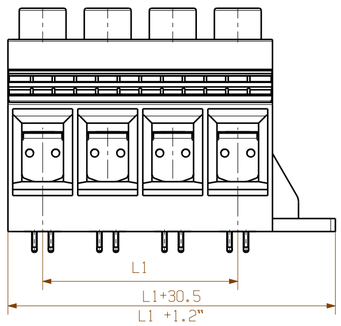


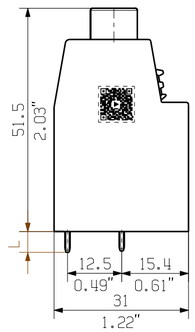


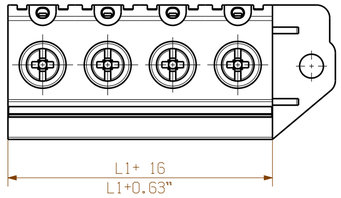
HOLE PATTERN



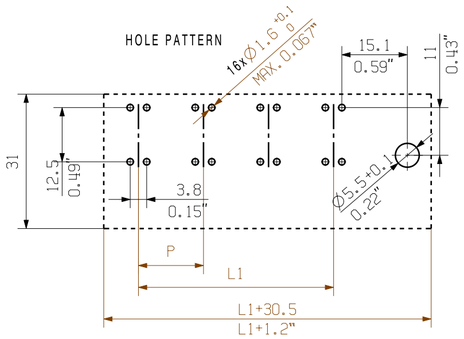
LXXX 15.00/04/90FR...





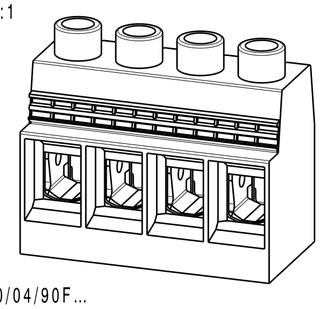


HOLE PATTERN

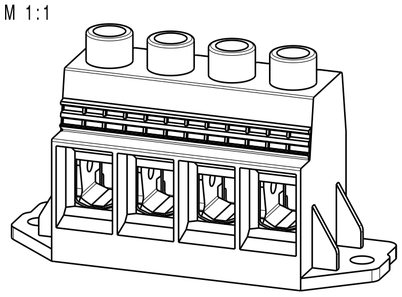


Customer drawing

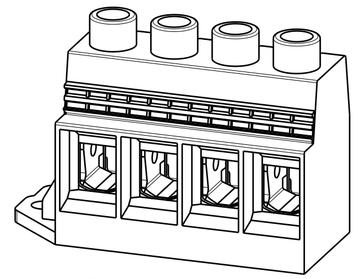
LXXX 15.00/04/90...
M 1:1



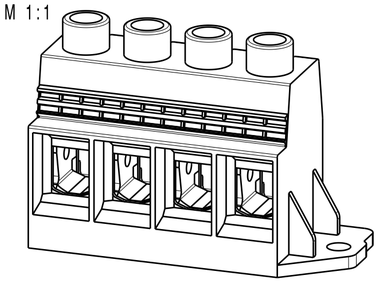
LXXX 15.00/04/90F...
M 1:1



LXXX 15.00/04/90FL...
M 1:1



LXXX 15.00/04/90FR...
M 1:1



n= No. of poles
L= 4.8 $^{0}_{-0.35}$
P= Pitch

For the mounting of PCBs, it should be noted that the rated data 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 60664-1 (VDE 0110).
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 60326-3 very fine.

Weidmüller PCB components are tested to the IEC 60947-7-4 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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

n	L1[mm]	L1[inch]
9	120	1.372
8	105	1.313
7	90	1.254
6	75	1.195
5	60	1.136
4	45	1.77
3	30	1.18
2	15	0.59

GENERAL TOLERANCE:
DIN ISO 2768-m

RoHS COMPLIANT

EC00000683 00
.
First Issue Date
14.05.2018

Max. nos.
Modification

Prim PLM Part No.: 004587
Prim ERP Part No.: 1047150000

Weidmüller

46279 Drawing no. 5 Issue no.
Sheet 01 of 01 sheets

	Date	Name
Drawn	03.12.2018	Xiang, Keqin
Responsible		Xiang, Keqin
Approved	04.12.2018	Xu, Shary

Scale: 1/1 Size: A2
Drawings Assembly

LXXX 15.00/.../90...
LEITERPLATTENKLEMME
PCB TERMINAL

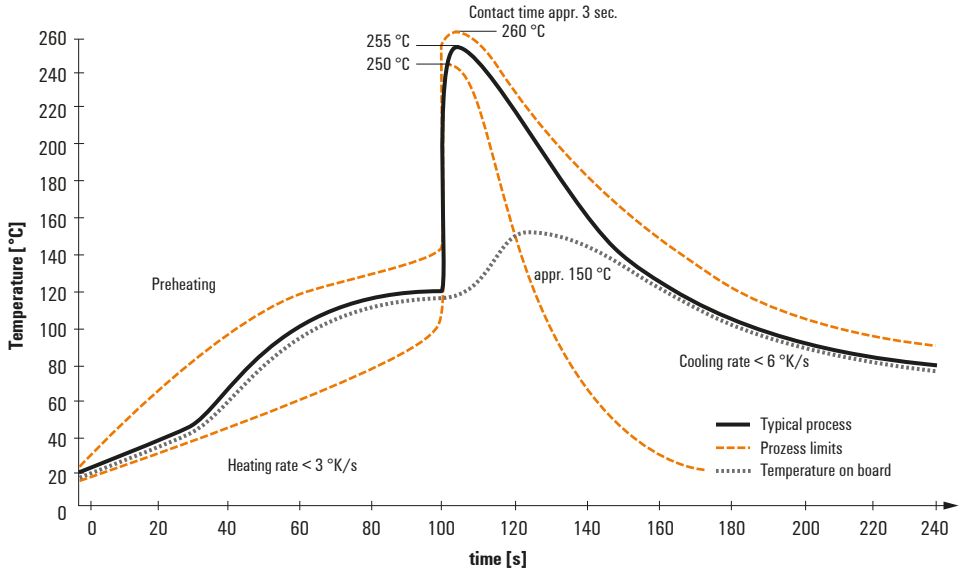
Product file: 7082 LXXX 15.00

Wave Solder Profile

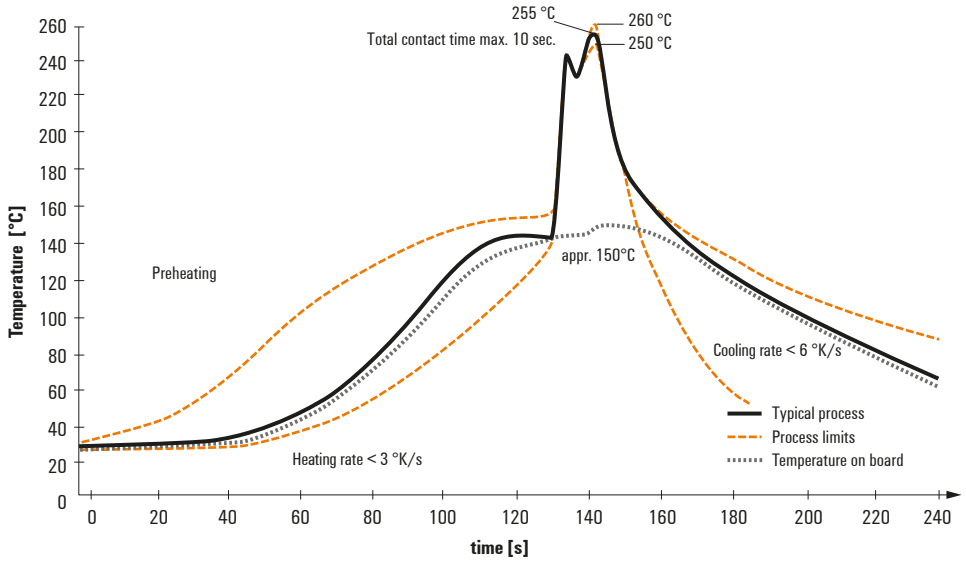
Recommended wave solderding profiles

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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.

We reserve the right to make technical changes.