

## LXXX 15.00/07/90 4.5SN BK BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

### Product image



Similar to illustration

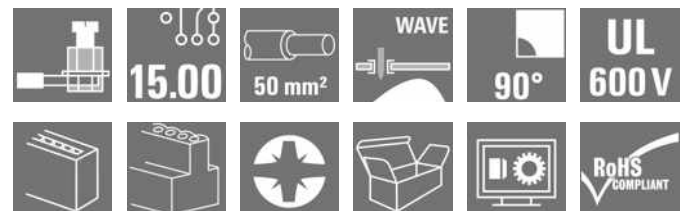
The high-current PCB connection for more power on board: 150 A / 1000 V with wires up to 50 mm<sup>2</sup>, transmitted right to the PCB!

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: 7, 90°, Solder pin length (l): 4.5 mm, tinned, black, Clamping yoke connection, Clamping range, max.: 50 mm <sup>2</sup> , Box
Order No.	<a href="#">1386550000</a>
Type	LXXX 15.00/07/90 4.5SN BK BX
GTIN (EAN)	4050118186727
Qty.	12 pc(s).
Product data	IEC: 1000 V / 150 A / 0.5 - 50 mm <sup>2</sup> UL: 600 V / 126 A / AWG 20 - AWG 1
Packaging	Box

**LXXX 15.00/07/90 4.5SN BK BX**

Weidmüller Interfaces GmbH &amp; Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

**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	106 mm
Width (inches)	4.173 inch	Net weight	209.145 g

**Temperatures**

Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
-----------------------------	--------	-----------------------------	--------

**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	7	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	90 mm
L1 in inches	3.545 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	Copper 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 mm <sup>2</sup>
Clamping range, max.	50 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 20
Wire connection cross section AWG, max.	AWG 1
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	6 mm <sup>2</sup>
Stranded, max. H07V-R	50 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>
Flexible, max. H05(07) V-K	35 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min.	

Creation date January 25, 2023 12:01:15 PM CET

Catalogue status 24.01.2023 / We reserve the right to make technical changes.

2

**Data sheet****LXXX 15.00/07/90 4.5SN BK BX****Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

[info@weidmueller.com](mailto:info@weidmueller.com)[www.weidmueller.com](http://www.weidmueller.com)**Technical data**w. plastic collar ferrule, DIN 46228 pt 4, 35 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, 35 mm<sup>2</sup>  
max.

**LXXX 15.00/07/90 4.5SN BK BX**

**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

**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>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	35 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	19 mm
	Recommended wire-end ferrule	<a href="#">H35.0/32D R</a>	
	Stripping length	nominal	18 mm
	Recommended wire-end ferrule	<a href="#">H35.0/18</a>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	50 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	18 mm
	Recommended wire-end ferrule	<a href="#">H50.0/18</a>	

## LXXX 15.00/07/90 4.5SN BK BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

The outside diameter of the plastic collar should not be larger than the pitch (P).  
[info@weidmueller.com](mailto:info@weidmueller.com)

## Technical data

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

### 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

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

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

### 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	338 mm
VPE width	130 mm	VPE height	54 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	ECLASS 12.0	27-46-01-01

**LXXX 15.00/07/90 4.5SN BK BX**

Weidmüller Interfaces GmbH &amp; Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmuller.com

www.weidmuller.com

**Technical data****Important note**

IPC conformity	Conformity: The products are developed, manufactured and delivered according to 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 variants 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>• IP 20 from 16 mm<sup>2</sup> to 50 mm<sup>2</sup></li> <li>• The test point can only be used as potential-pickup point.</li> <li>• Wire-end ferrules are mandatory for stranded wires with more than 19 strands.</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	UL Website
Certificate No. (UR)	E60693

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">WSCAD</a>
User Documentation	<a href="#">QR-Code product handling video</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">FL APPL_INVERTER EN</a> <a href="#">FL_BASE_STATION EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a> <a href="#">PO OMNIMATE EN</a>

Creation date January 25, 2023 12:01:15 PM CET

Catalogue status 24.01.2023 / We reserve the right to make technical changes.

**LXXX 15.00/07/90 4.5SN BK BX**

**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

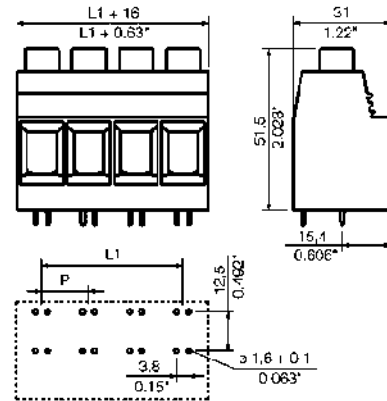
32760 Detmold

Tel. +49 5231 14-0

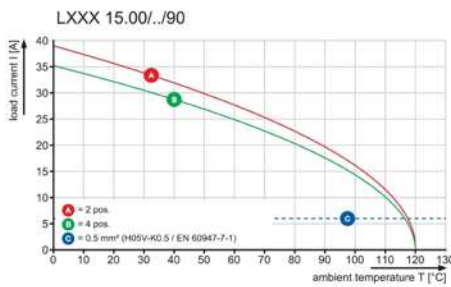
Fax. +49 5231 14-2083

**Drawings**

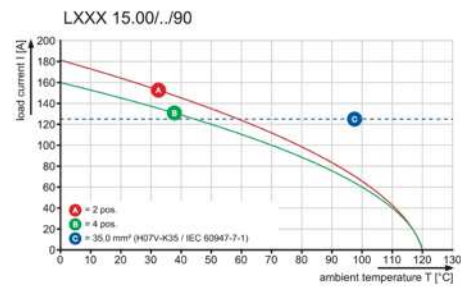
**Dimensional drawing** [info@weidmueller.com](mailto:info@weidmueller.com)



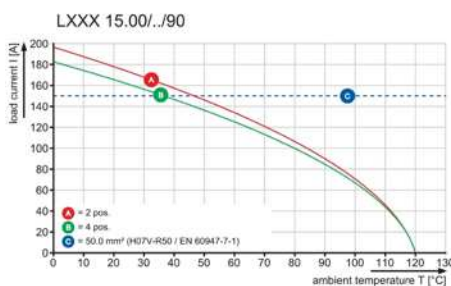
**Graph**



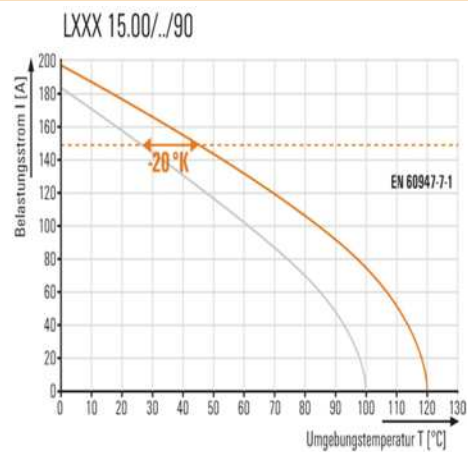
**Graph**



**Graph**



**Product benefits**



Increased power reserves  
Optimised application safety

**LXXX 15.00/07/90 4.5SN BK BX****Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

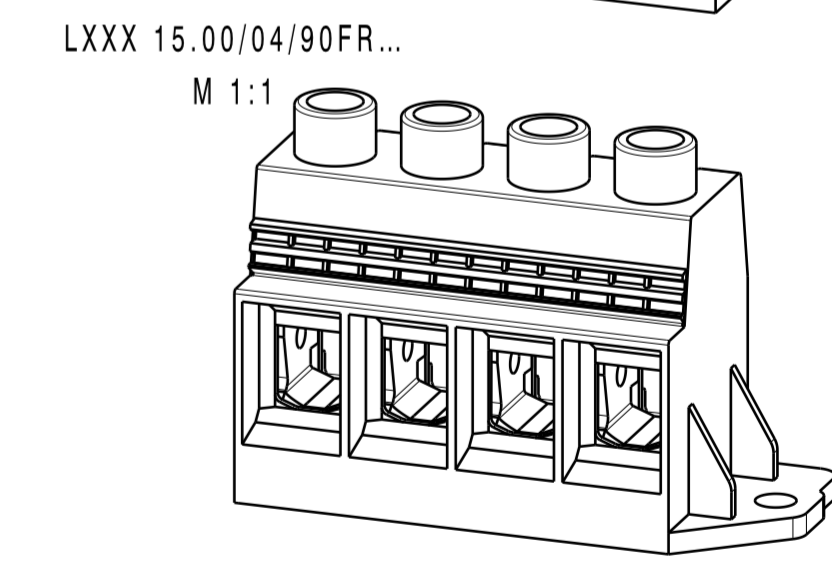
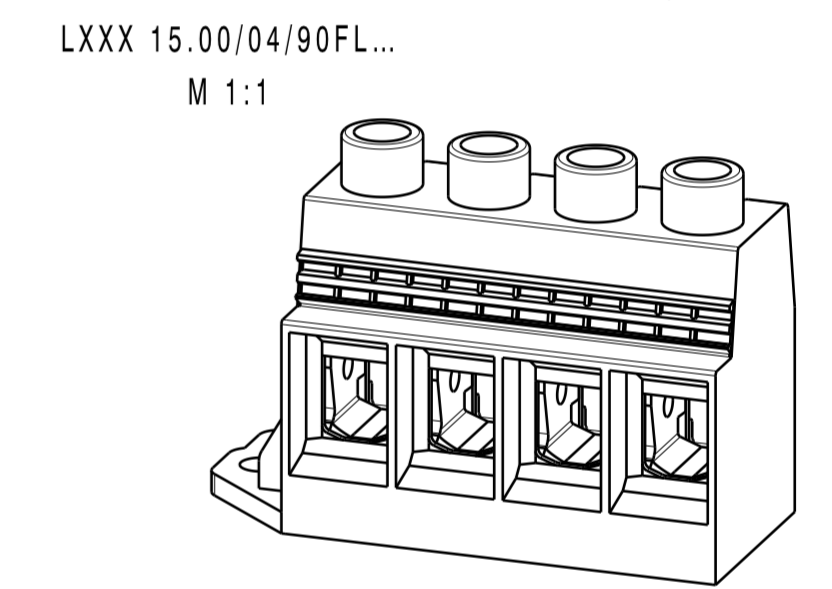
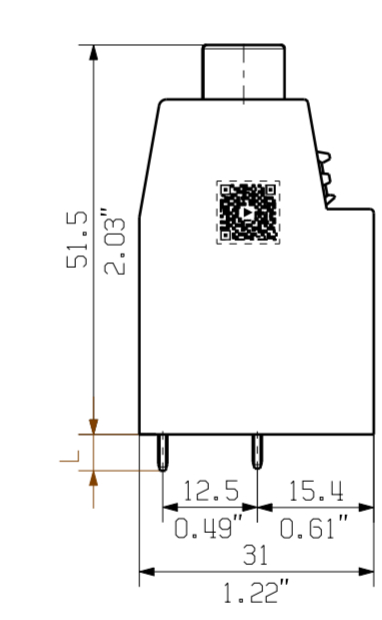
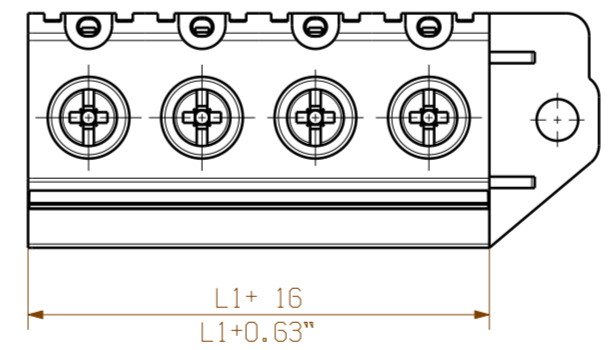
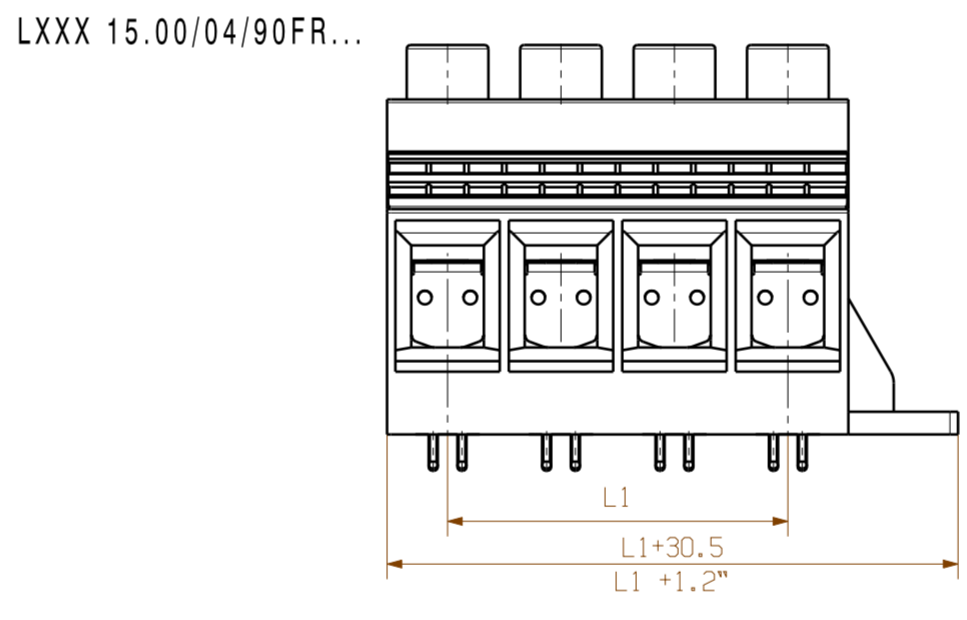
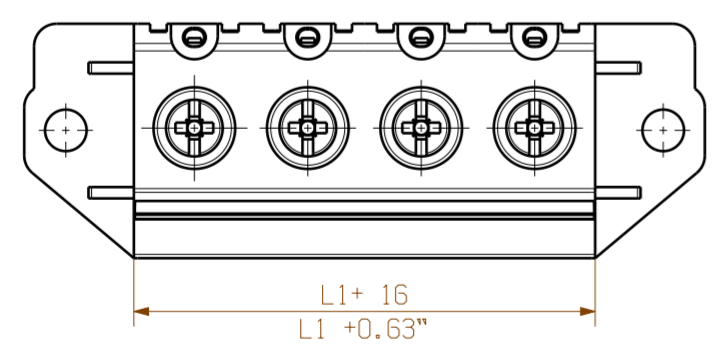
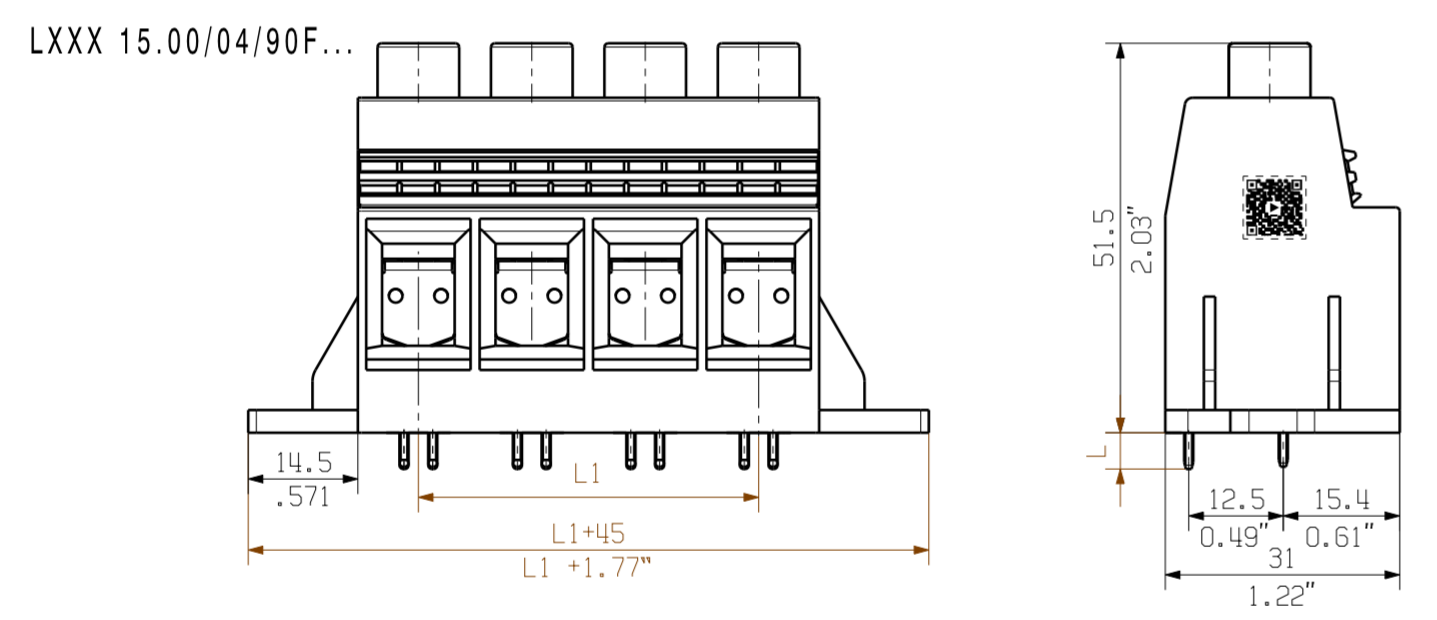
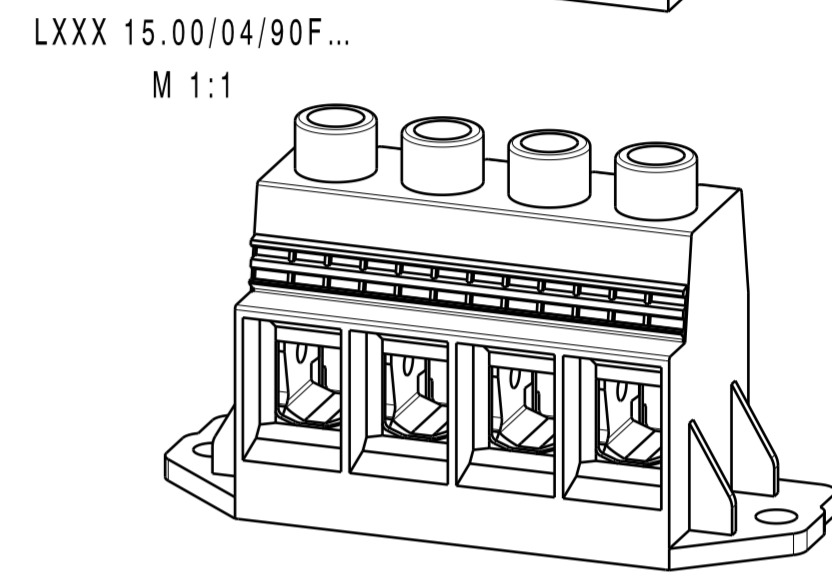
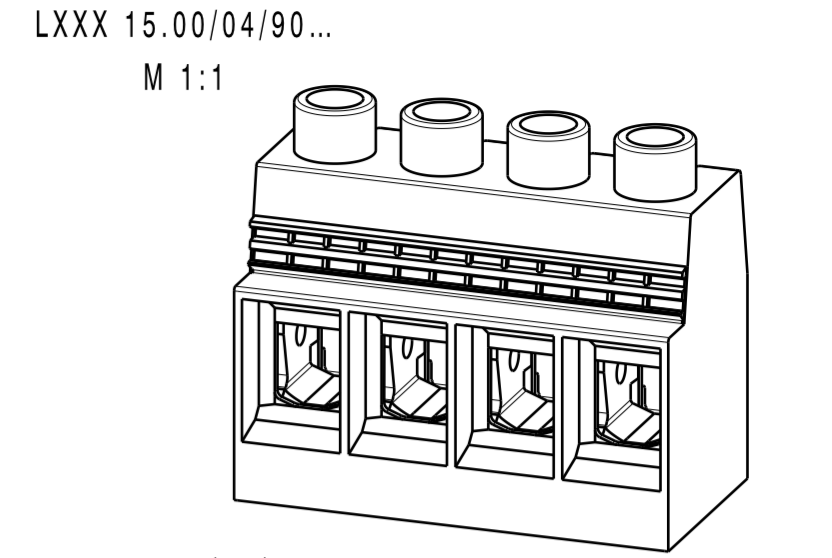
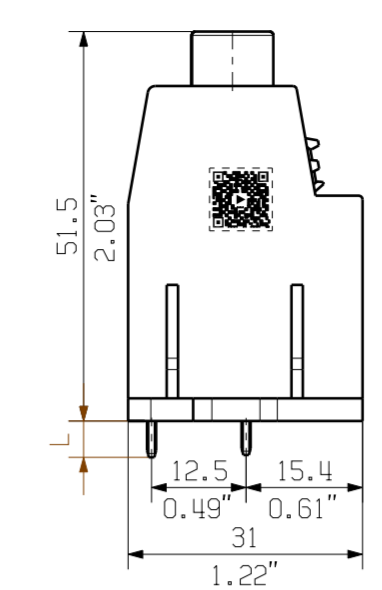
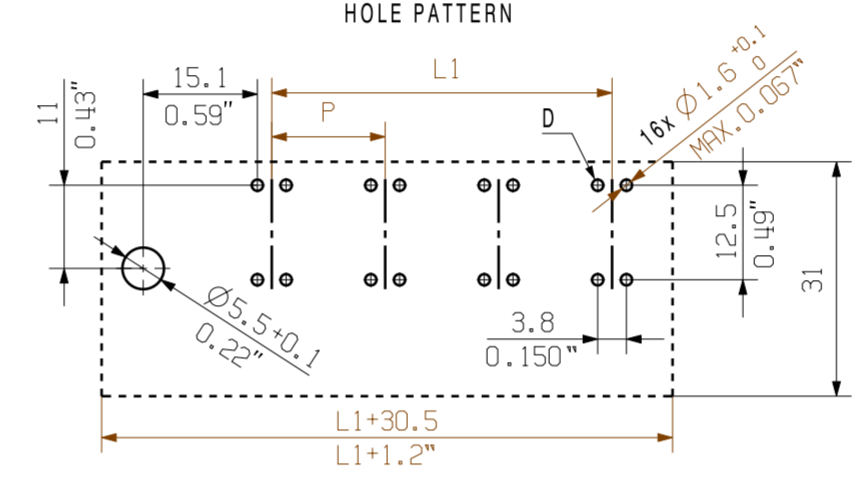
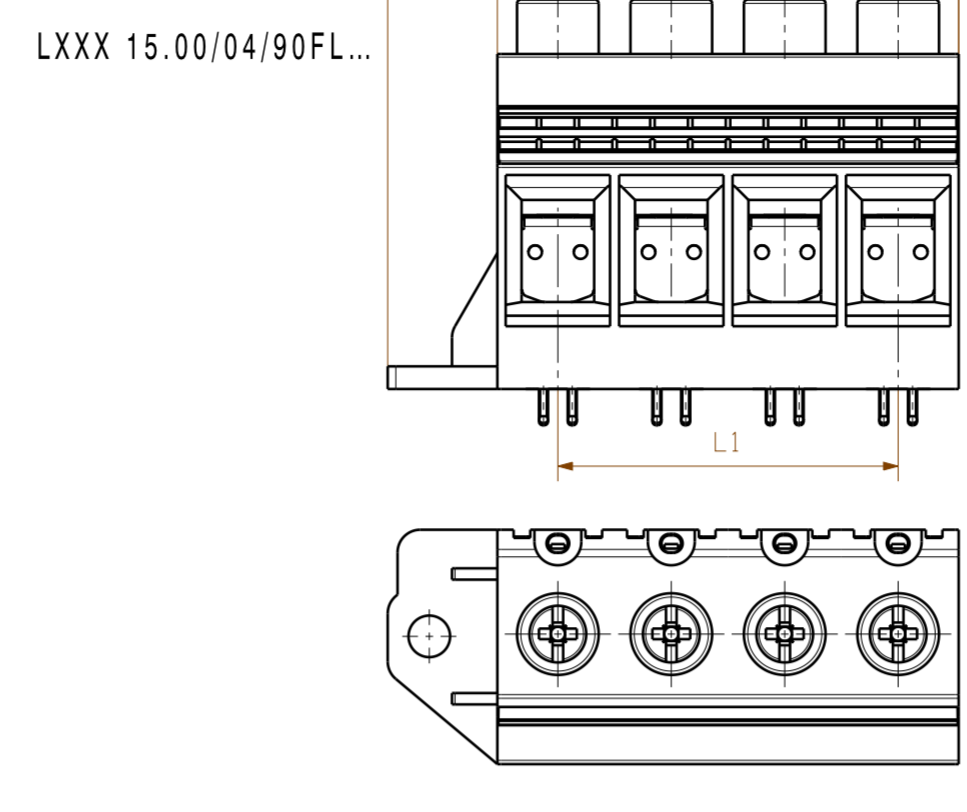
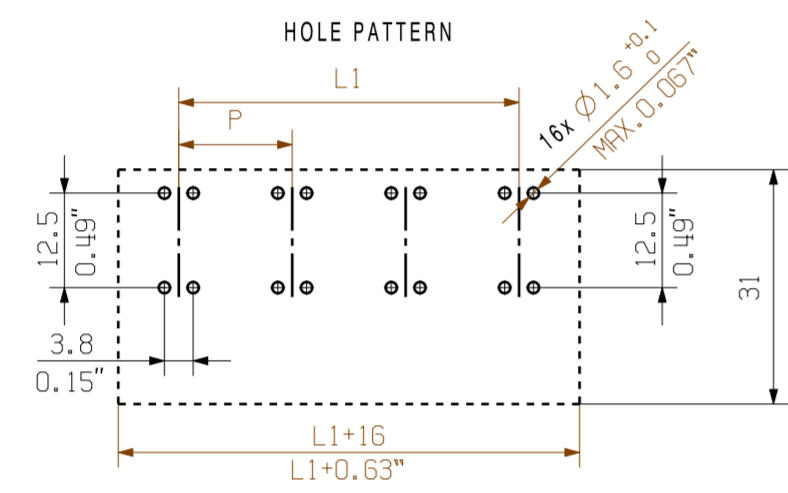
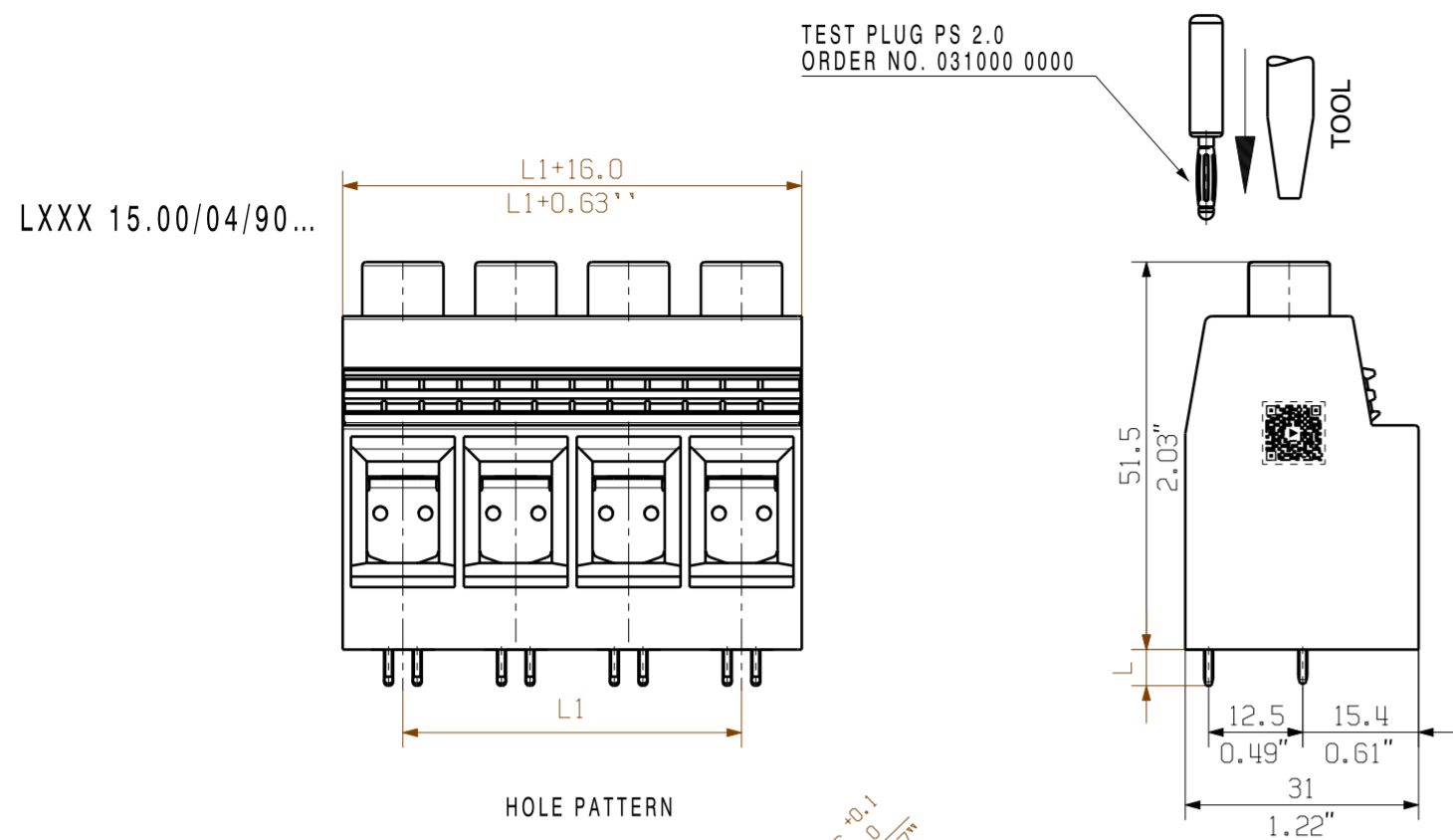
Tel. +49 5231 14-0

Fax. +49 5231 14-2083

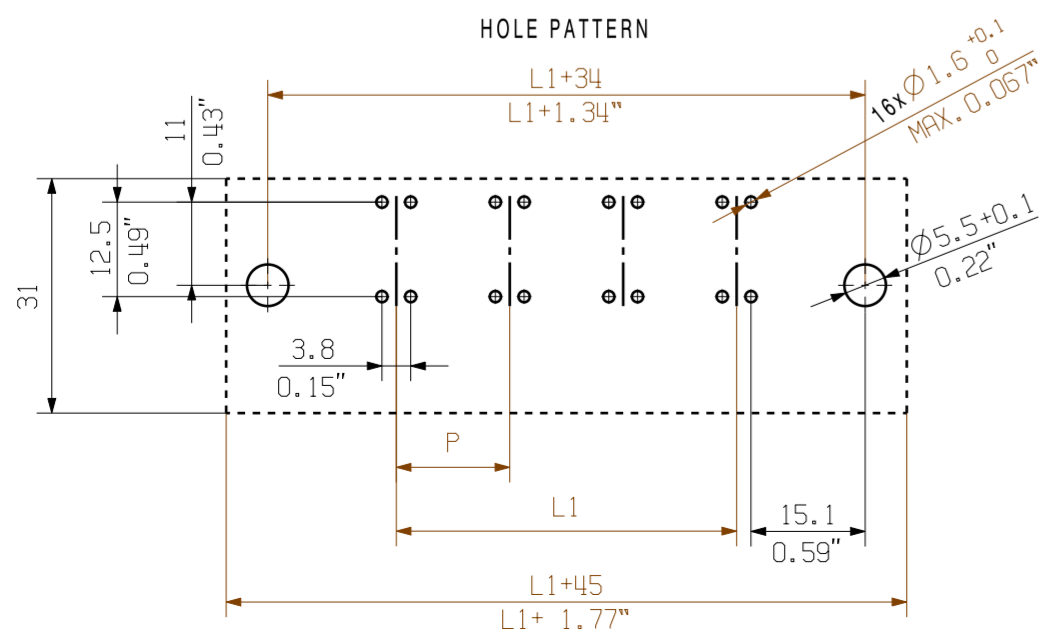
info@weidmueller.com

www.weidmueller.com

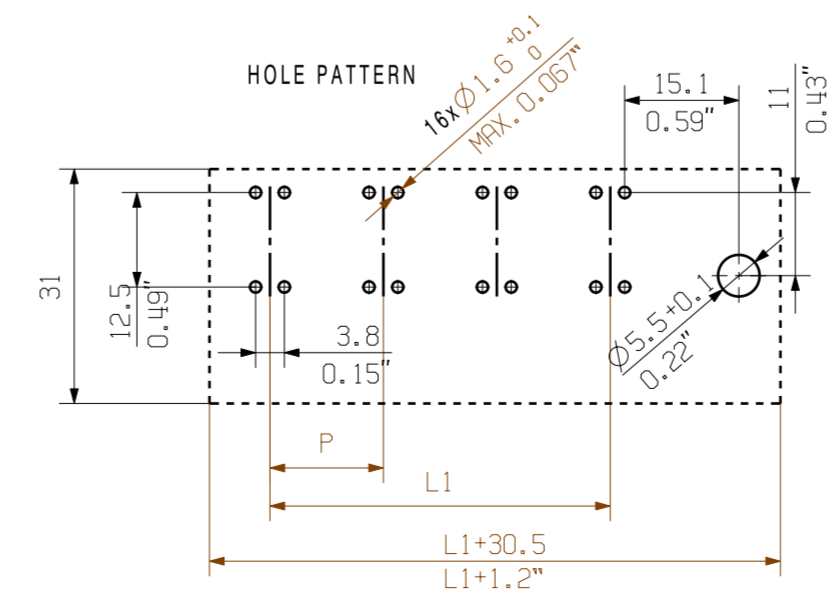
**Drawings**



n = No. of poles  
L = 4.8<sup>±0.35</sup>  
P = Pitch



Customer drawing



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 occurring of electrical, mechanical, thermal and corrosive stress will be satisfied.

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
n	L1[mm]	L1[inch]

GENERAL TOLERANCE:  
DIN ISO 2768-m

EC00000683	00	Prim PLM Part No.: 004587	Prim ERP Part No.: 1047150000	
RoHS COMPLIANT	Max. nos.	<b>Weidmüller</b>		
First Issue Date 14.05.2018	Modification			
	Date	Name	<b>46279</b>	
Drawn	03.12.2018	Xiang, Keqin		
Responsible		Xiang, Keqin		
Scale: 1/1	Size: A2	Approved	04.12.2018	Xu, Shary
Drawings Assembly		Product file: 7082 LXXX 15.00		

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

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. Weidmüller exclusively reserves the right to file for patents, utility models or designs.

© Weidmüller Interface GmbH & Co. KG

## 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.