

## LP2HR 5.08/06/90 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**

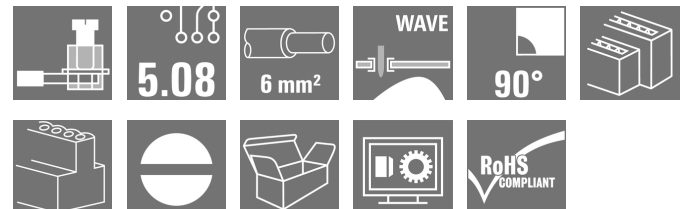
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

### Product image



Multi-row PCB terminal with proven clamping yoke connection at 5.08 mm pitch. Conductor outlet direction 90°. Suitable for conductor cross-sections up to 6.0 mm<sup>2</sup>.

### General ordering data

Version	Printed circuit board terminals, 5.08 mm, Number of poles: 6, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box
Order No.	<a href="#">1636220000</a>
Type	LP2HR 5.08/06/90 3.2SN OR BX
GTIN (EAN)	4008 190267 155
Qty.	50 pc(s).
Product data	IEC: 500 V / 32 A / 0.5 - 6 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box
Creation date	12.03.2021 4:08:26 PM CET
Availability until	2020-12-31

This article will no longer be available in the future.

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**Technical data**
**Dimensions and weights**

Depth	21.7 mm	Depth (inches)	0.854 inch
Height	48.2 mm	Height (inches)	1.898 inch
Height of lowest version	45 mm	Net weight	14.588 g
Width	18.38 mm	Width (inches)	0.724 inch

**System parameters**

Product family	OMNIMATE Signal - series LP	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	5.08 mm	Pitch in inches (P)	0.2 inch
Number of poles	6	Pin series quantity	2
Fitted by customer	Yes	Max. adjacent poles per row	48
Solder pin length (l)	3.2 mm	Solder pin dimensions	0.75 x 0.9 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	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Tightening torque, min.	0.5 Nm
Tightening torque, max.	0.6 Nm	Clamping screw	M 3
Stripping length	6 mm	L1 in mm	10.16 mm
L1 in inches	0.4 inch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Volume resistance	1.20 mΩ

**Material data**

Insulating material	PA	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-2
Contact material	Copper alloy	Contact surface	tinned
Coating	1-3 μm Ni, 4-6 μm SN	Tinning type	mat
Layer structure of solder connection	4...6 μm Ni / 4...6 μm Sn	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	100 °C		

**Conductors suitable for connection**

Clamping range, min.	0.13 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 12
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>	Solid, max. H05(07) V-U	6 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 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>
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.4 mm; 3.0 mm	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)

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## Technical data


## 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)	28 A	Rated current, min. number of poles (Tu=40°C)	32 A
Rated current, max. number of poles (Tu=40°C)	24 A	Rated voltage for surge voltage class / pollution degree II/2	500 V
Rated voltage for surge voltage class / pollution degree III/2	250 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

## Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	20 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12

## Rated data acc. to UL 1059

Institute (UR)		Certificate No. (UR)	E60693
Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	20 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

Packaging	Box	VPE length	45 mm
VPE width	170 mm	VPE height	200 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

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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>• 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="#">EPLAN, WSCAD</a>

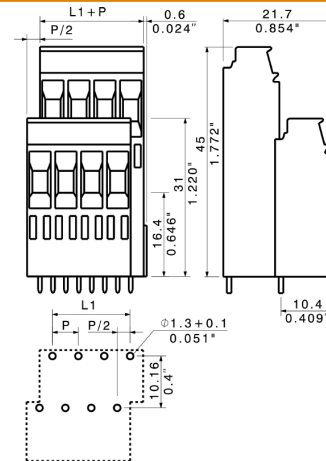
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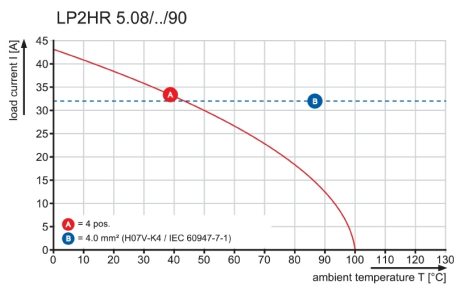
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Drawings

**Dimensional drawing**



**Graph**



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### Technical Data

Rev.

#### Material data

Insulation material type	PA 66
Insulation material colours	orange
Insulation material flammability class	UL94 V - 2
Insulation resistance	MOhm 10 <sup>3</sup>
Contact base material	Cu - alloy
Contact plating	tin - plated

#### System characteristic values

Pitch P	mm/inch	5.08/0.2
Number of rows		2
Dielectric strength (r.m.s withstand voltage)	kV	2.5
Through resistance (typical)	mOhm	0.5
Operating temperature range	°C	-55 ... +100
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 0.6x3.5
Solder pin length L	mm/inch	3.2/0.126
PCB hole diameter D (wave soldering)	mm/inch	1.3+0.1/0.051+0.004
PCB hole diameter D (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 d (max.)	mm/inch	1.27/0.05

#### Application notes

Coding possibility	yes/no	no
Joinable without loss of pitch	yes/no	no
Manual assembly of modules	yes/no	yes
Max. number of poles	n	48

#### Conductor

Clamping range	mm <sup>2</sup>	0.12...6.0
"e" solid H05(07) V-U	mm <sup>2</sup>	0.12...6.0
"f" flexible H05(07) V-K	mm <sup>2</sup>	0.12...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	6/0.236
Conductor insulation diameter max.	mm/inch	n.a.
Two wire clamping range	mm <sup>2</sup>	0.5...1.5
Gauge to EN 60999 (a x b ; Ø)	mm	2.8x2.4; 3

#### 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	A	30
Rated current @ 40°C ambient	A	27

#### Overvoltage category / Pollution degree

Rated voltage	V	250	250	500
Rated impulse voltage	kV	4	4	4

#### UL 1059 rated data

File No.: E60693

Rated voltage	B	C	D
	300		300
Rated current	20		10
AWG wire range (field wiring / factory wiring)	26...12		

#### CSA C22.2 rated data

File No.: 154685

Rated voltage	B	C	D
	300		300
Rated current	20		10
AWG wire range (field wiring / factory wiring)	26...12		

#### Packaging

carton

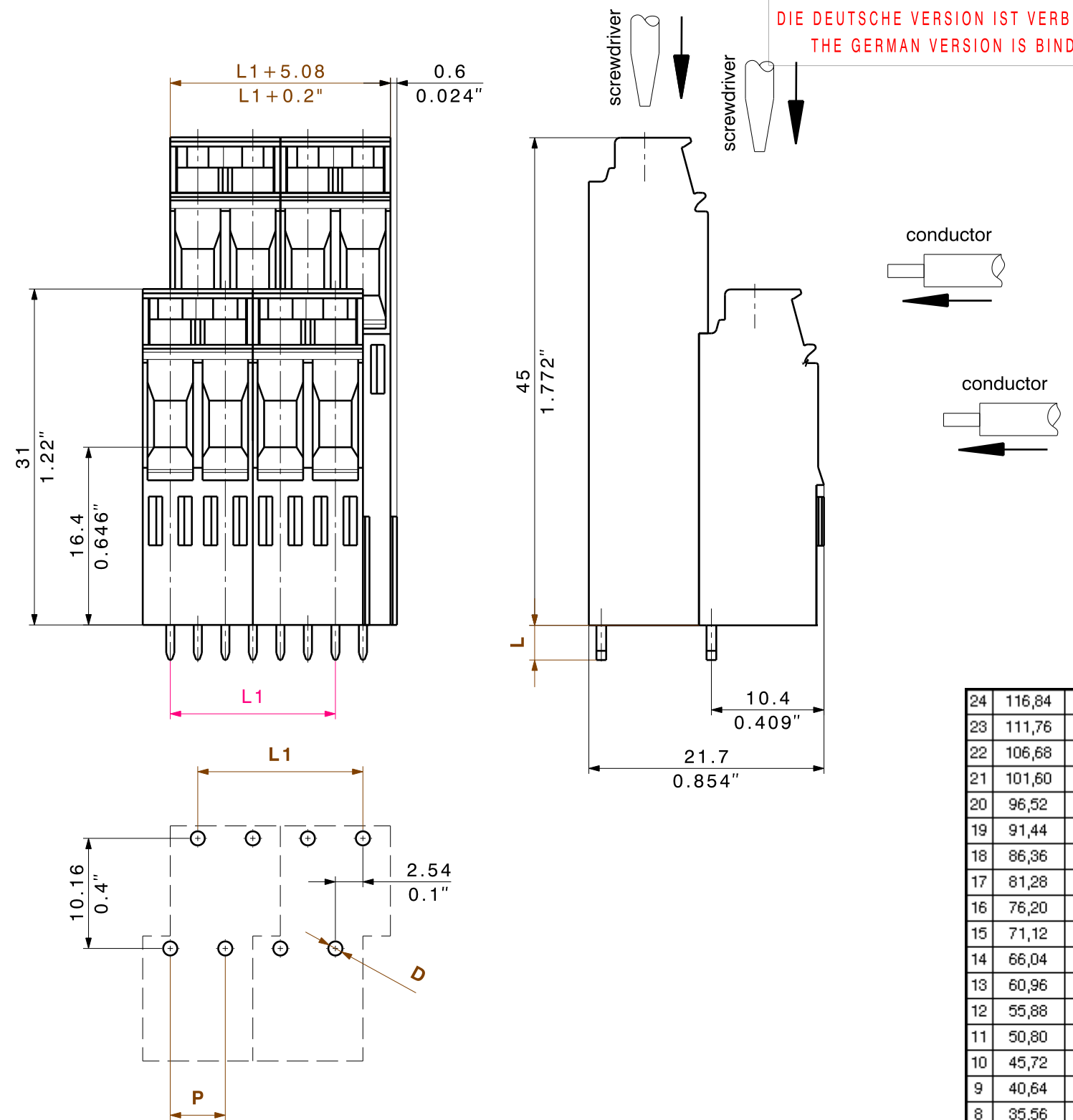
#### Downloads

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- 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



Layout finished holes

shown: LP2HR5.08/8

<b>METRIC TOLERANCES</b> X. = ±0.3 X.X = ±0.1 X.XX = ±0.05	35711/5 28.08.06 KRUG_M 00	<b>METRIC/INCH DIMENSIONS</b> SCALE: 2:1 SUPERSEDES: SUPERSEDED BY:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>DATE</th><th>NAME</th></tr> <tr><td>DRAWN 13.11.2002</td><td>KAMP</td></tr> <tr><td>RESPONSIBLE</td><td>KRUG_M</td></tr> <tr><td>CHECKED 28.08.2006</td><td>HECKERT_M</td></tr> <tr><td>APPROVED</td><td>GUENTHER_W</td></tr> </table>	DATE	NAME	DRAWN 13.11.2002	KAMP	RESPONSIBLE	KRUG_M	CHECKED 28.08.2006	HECKERT_M	APPROVED	GUENTHER_W	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: right;">CAT. NO.:</td></tr> <tr><td colspan="2" style="text-align: center;"><b>C 21361 07</b></td></tr> <tr><td colspan="2" style="text-align: right;">ISSUE NO.</td></tr> <tr><td style="text-align: right;">DRAWING NO.</td><td style="text-align: left;">SHEET 3</td></tr> <tr><td style="text-align: right;">OF 4</td><td style="text-align: left;">SHEETS</td></tr> </table> <div style="text-align: center; font-size: 24pt; font-weight: bold; color: red;">             LP2HR5.08/...           </div> <div style="text-align: right; font-weight: bold; color: red;">             PRODUCT FILE:           </div>	CAT. NO.:		<b>C 21361 07</b>		ISSUE NO.		DRAWING NO.	SHEET 3	OF 4	SHEETS
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OF 4	SHEETS																							

DIE DEUTSCHE VERSION IST VERBINDLICH  
 THE GERMAN VERSION IS BINDING

24	116,84	4,600
23	111,76	4,400
22	106,68	4,200
21	101,60	4,000
20	96,52	3,800
19	91,44	3,600
18	86,36	3,400
17	81,28	3,200
16	76,20	3,000
15	71,12	2,800
14	66,04	2,600
13	60,96	2,400
12	55,88	2,200
11	50,80	2,000
10	45,72	1,800
9	40,64	1,600
8	35,56	1,400
7	30,48	1,200
6	25,40	1,000
5	20,32	0,800
4	15,24	0,600
3	10,16	0,400
2	5,08	0,200
<b>n</b>	<b>L1 [mm]</b>	<b>L1 [Inch]</b>

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.

## Recommended wave soldering 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.