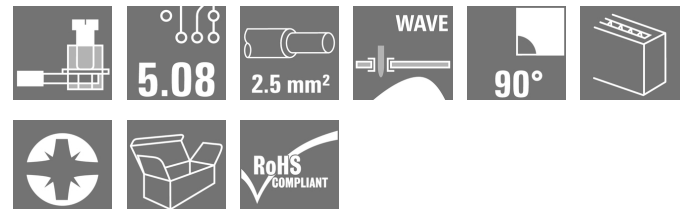


## OMNIMATE Signal - series LM LM 5.08/09/90 3.5SN GN BX

**Weidmüller Interface GmbH & Co. KG**  
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Germany  
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### Product image



Similar to illustration

PCB terminal with proven clamping yoke connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°, 135° and 180°. Suitable for conductor cross-sections up to 2.5 mm².

### General ordering data

Delivery status	Discontinued
Available until	2014-05-20
Type	LM 5.08/09/90 3.5SN GN BX
Order No.	<a href="#">1915650000</a>
Version	Printed circuit board terminals, 5.08 mm, Number of poles: 9, 90°, Solder pin length (l): 3.5 mm, tinned, Pale green, Clamping yoke connection, Clamping range, max.: 2.5 mm², Box
GTIN (EAN)	4032248548323
Qty.	50 pc(s).
Product data	IEC: 630 V / 17.5 A / 0.2 - 2.5 mm²
Creation date	June 15, 2020 3:52:10 PM CEST
Packaging	Box

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

Width	46.27	Width (inches)	1.822 inch
Height	17.3 mm	Height (inches)	0.681 inch
Height of lowest version	13.8 mm	Depth	10 mm
Depth (inches)	0.394 inch	Net weight	10.95 g

**System parameters**

Product family	OMNIMATE Signal - series LM	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	9	Fitted by customer	Yes
Max. adjacent poles per row	24	Solder pin length (l)	3.5 mm
Solder pin dimensions	0.95 x 0.8 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.	0.4 Nm	Tightening torque, max.	0.5 Nm
Clamping screw	M 2.5	Stripping length	6 mm
L1 in mm	40.64 mm	L1 in inches	1.6 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	Wemid (PA)	Colour	Pale green
Colour chart (similar)	RAL 6021	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	Copper alloy
Contact surface	tinned	Coating	1-3 μm Ni, 4-6 μm Sn
Tinning type	matt	Layer structure of solder connection	1...3 μm Ni / 4...6 μm Sn matt
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	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.	0.2 mm <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 24
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, 0.25 mm <sup>2</sup> min.	

Creation date June 13, 2020 3:52:10 PM CEST

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**Technical data**

w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm <sup>2</sup>			
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm; 1.9mm			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	8 mm
		Recommended wire-end ferrule	<a href="#">H0.5/12 OR</a>	
		Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0.5/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	8 mm
		Recommended wire-end ferrule	<a href="#">H0.75/12 W</a>	
		Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0.75/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	8 mm
		Recommended wire-end ferrule	<a href="#">H1.0/12 GE</a>	
		Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H1.0/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.25 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	8 mm	
	Recommended wire-end ferrule	<a href="#">H0.25/10 HBL</a>		
	Stripping length	nominal	5 mm	
	Recommended wire-end ferrule	<a href="#">H0.25/5</a>		
Cross-section for conductor connection	Type	fine-wired		
	nominal	0.34 mm <sup>2</sup>		
wire end ferrule	Stripping length	nominal	8 mm	
	Recommended wire-end ferrule	<a href="#">H0.34/10 TK</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)			
Max. clamping range	2.5 mm <sup>2</sup>			


**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	17.5 A
Rated current, max. number of poles (Tu=20°C)	16 A	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	14.2 A	Rated voltage for surge voltage class / pollution degree II/2	630 V
Rated voltage for surge voltage class / pollution degree III/2	320 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


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**Technical data****Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	200039-1815154
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	18 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Rated data acc. to UL 1059**

Institute (cURus)		Certificate No. (cURus)	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)	15 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Packing**

Packaging	Box	VPE length	0
VPE width	0	VPE height	0

**Classifications**

UNSPSC	30-21-18-11
--------	-------------

**Notes**

Notes	<ul style="list-style-type: none"> <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>The data given under CSA relates to a cUL approval - E60693</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> </ul>
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.

**Data sheet****OMNIMATE Signal - series LM  
LM 5.08/09/90 3.5SN GN BX**

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**Technical data****Approvals**

Approvals



ROHS

Conform

**Downloads**Approval/Certificate/Document of  
Conformity[Declaration of the Manufacturer](#)

Engineering Data

[LM.zip](#)

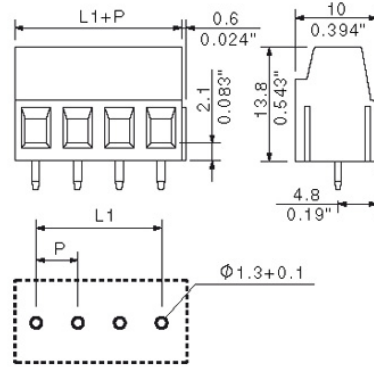
**Data sheet**

**OMNIMATE Signal - series LM  
LM 5.08/09/90 3.5SN GN BX**

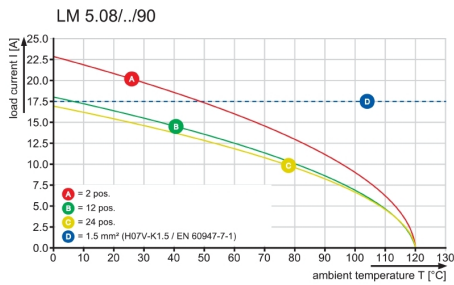
**Weidmüller Interface GmbH & Co. KG**  
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**Drawings**

**Dimensional drawing**



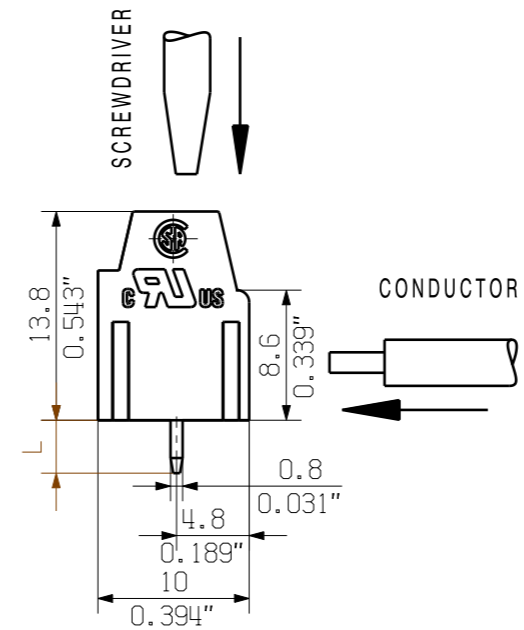
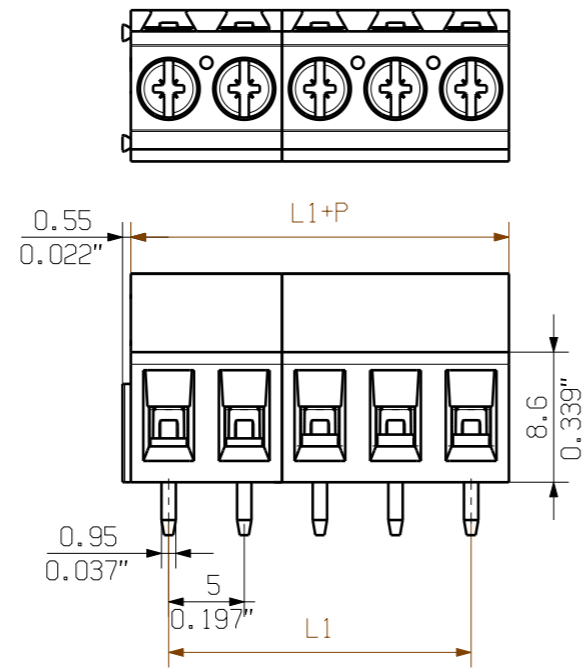
**Graph**



MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

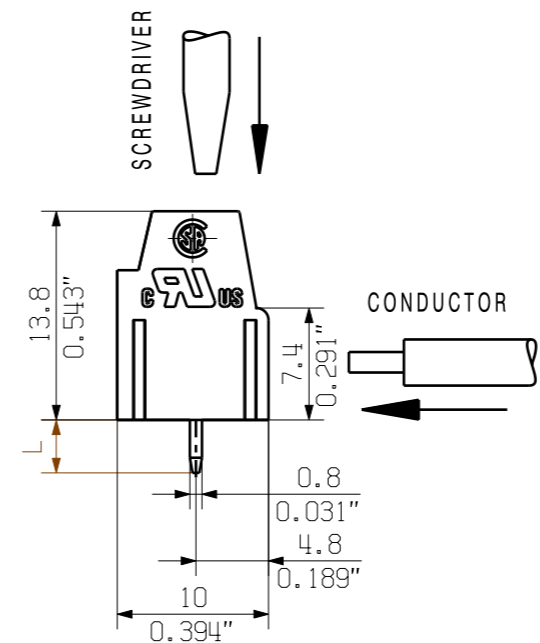
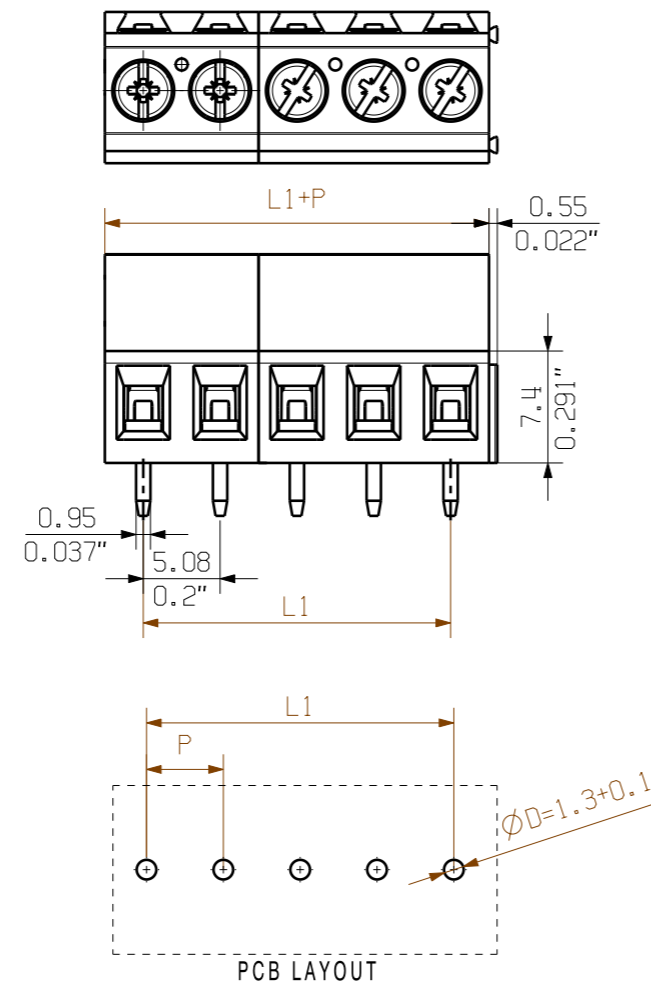
WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.  
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTERENTRAGUNG VORBEHALTEN.  
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LM5.00/.../90...



STIFTLÄNGE L	TOLERANZ
PIN LENGTH L	TOLERANCE
3.5	0.2 -0.2

LM5.08/.../90...



24	115.00	4.528	116.84	4.600
23	110.00	4.331	111.76	4.400
22	105.00	4.134	106.68	4.200
21	100.00	3.937	101.60	4.000
20	95.00	3.740	96.52	3.800
19	90.00	3.543	91.44	3.600
18	85.00	3.346	86.36	3.400
17	80.00	3.150	81.28	3.200
16	75.00	2.953	76.20	3.000
15	70.00	2.756	71.12	2.800
14	65.00	2.559	66.04	2.600
13	60.00	2.362	60.96	2.400
12	55.00	2.165	55.88	2.200
11	50.00	1.969	50.80	2.000
10	45.00	1.772	45.72	1.800
9	40.00	1.575	40.64	1.600
8	35.00	1.378	35.56	1.400
7	30.00	1.181	30.48	1.200
6	25.00	0.984	25.40	1.000
5	20.00	0.787	20.32	0.800
4	15.00	0.591	15.24	0.600
3	10.00	0.394	10.16	0.400
2	5.00	0.197	5.08	0.200
N	L1 [mm]	L1 [inch]	L1 [mm]	L1 [inch]
	P=5.00 mm, 0.197inch		P=5.08mm, 0.200 inch	

KUNDENZEICHUNG  
 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 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.

GENERAL TOLERANCE: DIN ISO 2768-m		76680/5		CAT.NO.: .	
RoHS COMPLIANT		17.07.14 MA_J		C 41708 10	
MAX. NRN./NOS.		MODIFICATION		DRAWING NO. SHEET 01 OF 01 SHEETS	
DRAWN		DATE		NAME	
RESPONSIBLE		30.03.2005		XU_S	
CHECKED				WU_M	
APPROVED				ZHOV_N	
SCALE: 2/1				XU_S	
SUPERSEDES: .				PRODUCT FILE: LM	
				LM 5.../.../90 ...	
				LEITERPLATTENKLEMME PCB TERMINAL	
				7065	

## 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.