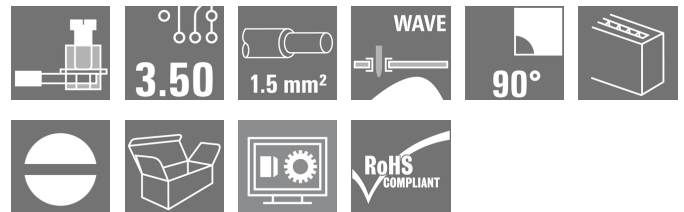


## OMNIMATE Signal - series LM LM 3.50/05/90 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 1429-0  
Fax: +49 5231 14292083  
www.weidmueller.com



Small, compact PCB terminal or -tier PCB terminal with proven clamping yoke connection and 3.5 mm pitch. Suitable for conductor cross-sections up to 1.5 mm<sup>2</sup>.

- 0.20 - 1.50 mm<sup>2</sup> (IEC) / 28 - 14 AWG (UL)
- 320 V (IEC) / 300 V (UL)
- 16 A (IEC) / 10 A (UL)

### General ordering data

Type	LM 3.50/05/90 3.2SN OR BX
Order No.	<a href="#">1720250000</a>
Version	PCB terminal, 3.50 mm, No. of poles: 5, 90°, Solder pin length (l): 3.2 mm, tinned, Orange, Clamping yoke connection, Clamping range, rated connection, max.: 2.08 mm <sup>2</sup> , Box
GTIN (EAN)	4008190355142
Qty.	100 pc(s).
Product data	IEC: 320 V / 16 A / 0.5 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 28 - AWG 14
Packaging	Box

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

Net weight	3.09 g
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**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)	3.5 mm	Pitch in inches (P)	0.138 inch
No. of poles	5	Fitted by customer	Yes
Max. adjacent poles per row	24	Solder pin length (l)	3.2 mm
Solder pin dimensions	1.0 x 0.6 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	0.4 x 2.5	Screwdriver blade standard	DIN 5264
Tightening torque, min.	0.2 Nm	Tightening torque, max.	0.25 Nm
Clamping screw	M 2	Stripping length	5 mm
L1 in mm	14 mm	L1 in inches	0.551 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	3.60 mΩ		

**Material data**

Insulating material	PA	Colour	Orange
Colour chart (similar)	RAL 2000	Insulating material group	I
CTI	≥ 600	Insulation resistance	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-2	Contact material	Copper alloy
Contact surface	tinned	Coating	1-3 μm Ni, 4-6 μm SN
Tinning type	matt	Layer structure of solder connection	1.5-3 μm Ni / 4-6 μm Sn matt
Storage temperature, min.	-25 °C	Storage temperature, max.	55 °C
Max. relative humidity during storage	80 %	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, rated connection, min.	0.08 mm <sup>2</sup>	Clamping range, rated connection, max.	2.08 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 28	Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>	Solid, max. H05(07) V-U	1.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>	Flexible, max. H05(07) V-K	1.5 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.	0.75 mm <sup>2</sup>
Plug gauge acc. to EN 60999 a x b; Ø	2.4 mm x 1.5 mm		

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**Technical data**


**Rated data acc. to IEC**

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Ta = 20°C)	16 A
Rated current, max. no. of poles (Ta = 20°C)	12 A	Rated current, min. no. of poles (Ta = 40°C)	14 A
Rated current, max. no. of poles (Ta = 40°C)	10 A	Rated voltage for surge voltage class / pollution degree II/2	320 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	160 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 72 A

**Rated data acc. to CSA**

Institute (CSA)		Certificate No. (CSA)	154685-1202192
Rated voltage (Use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	10 A	Rated current (use group D)	10 A
Wire cross-section, AWG, min.	AWG 28	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 (UR)		Certificate No. (UR)	E60693
Rated voltage (use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	10 A	Rated current (use group D)	10 A
Wire cross-section, AWG, min.	AWG 28	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

**Classifications**

ETIM 3.0	EC001284	ETIM 4.0	EC002643
ETIM 5.0	EC002643	ETIM 6.0	EC002643
UNSPSC	30-21-18-01	eClass 6.2	27-26-11-01
eClass 7.1	27-44-04-01	eClass 8.1	27-44-04-01
eClass 9.0	27-44-04-01	eClass 9.1	27-44-04-01

**Data sheet**

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**Technical data**

**Notes**

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>• Max. outer diameter of the conductor: 2.9 mm</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> </ul>
IPC conformity	The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

**Approvals**

Approvals



ROHS Conform

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">FL ANALO.SIGN.CONV. EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">CAT 2 PORTFOLIOGUIDE EN</a> <a href="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FLIndustr.CONTROLS EN</a> <a href="#">FL MACHINE SAFETY EN</a> <a href="#">FL HEATING ELECTR EN</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>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">LM.zip</a>

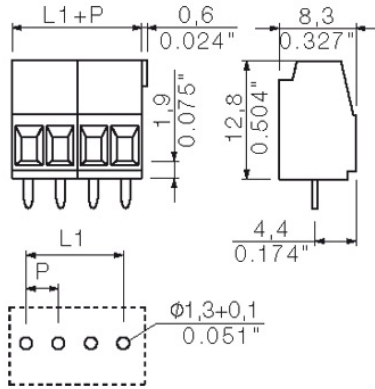
**Data sheet**

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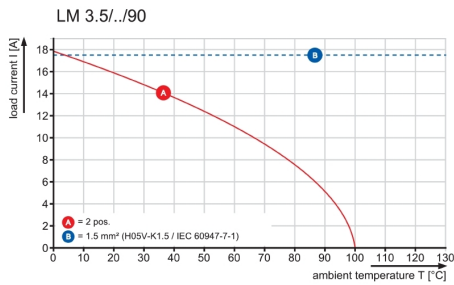
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**Drawings**

**Dimensional drawing**



**Graph**



## 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.