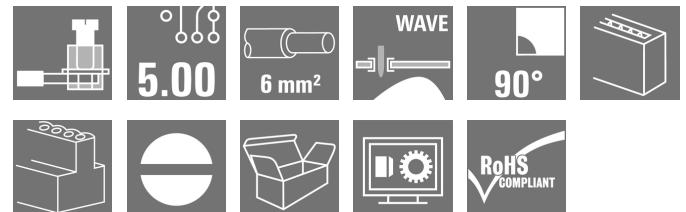


## OMNIMATE Signal - series LL LL1N 5.00/06/90 3.2SN OR BX

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



Similar to illustration

Multi-row PCB terminals with proven clamping yoke connections, in 5.00 and 5.08 mm pitch. 90° conductor outlet direction. Suitable for conductor cross-sections up to 6.0 mm<sup>2</sup>.

### General ordering data

Type	LL1N 5.00/06/90 3.2SN OR BX
Order No.	<a href="#">1975290000</a>
Version	Printed circuit board terminals, 5.00 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
GTIN (EAN)	4032248672516
Qty.	50 pc(s).
Product data	IEC: 500 V / 32.5 A / 0.5 - 6 mm <sup>2</sup> UL: 300 V / 20 A / AWG 26 - AWG 12
Packaging	Box

Creation date May 3, 2020 4:20:09 AM CEST

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**LL1N 5.00/06/90 3.2SN OR BX**

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

Width	30.64 mm	Width (inches)	1.206 inch
Height	34.3 mm	Height (inches)	1.35 inch
Height of lowest version	31.1 mm	Depth	10.84 mm
Depth (inches)	0.427 inch	Net weight	13.7 g

**System parameters**

Product family	OMNIMATE Signal - series LL	Wire connection method	Clamping yoke connection
Property, clamping point	WireReady	Mounting onto the PCB	THT solder connection
Conductor outlet direction	90°	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Number of poles	6
Fitted by customer	Yes	Max. adjacent poles per row	12
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	25 mm
L1 in inches	0.985 inch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch		

**Material data**

Insulating material	Wemid (PA)	Colour	orange
Colour chart (similar)	RAL 2000	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	4-6 μm SN
Tinning type	matt	Layer structure of solder connection	2-4 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.	0.08 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>

Creation date May 3, 2020 4:20:09 AM CEST

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### Technical data

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			
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>		
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	6 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)	32.5 A
Rated current, max. number of poles (Tu=20°C)	26 A	Rated current, min. number of poles (Tu=40°C)	27.5 A
Rated current, max. number of poles (Tu=40°C)	22 A	Rated voltage for surge voltage class / pollution degree II/2	500 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

### Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1202191
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
Reference to approval values	Specifications are maximum values, details - see approval certificate.		


**Data sheet**

**OMNIMATE Signal - series LL  
LL1N 5.00/06/90 3.2SN OR BX**

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**Technical data**

**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	40 mm
VPE width	135 mm	VPE height	190 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	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>• 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.

**Approvals**

Approvals	
ROHS	Conform

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**Technical data****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="#">STEP</a>

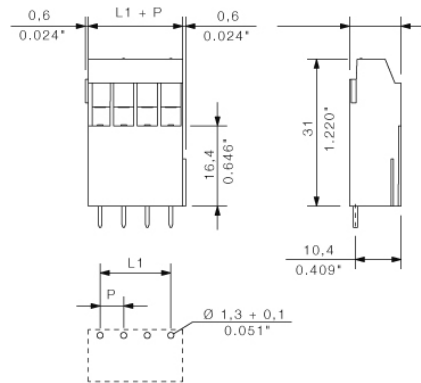
**Data sheet**

**OMNIMATE Signal - series LL  
LL1N 5.00/06/90 3.2SN OR BX**

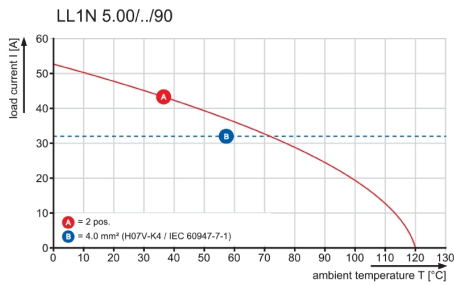
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**Drawings**

**Dimensional drawing**



**Graph**



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**Accessories**

**Slotted screwdriver**

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip



**General ordering data**

Type	SDS 0.6X3.5X200	Version
Order No.	<a href="#">9010110000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 200 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4032248300754	
Qty.	1 pc(s).	
Type	SDS 0.6X3.5X100	Version
Order No.	<a href="#">9008330000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4032248056286	
Qty.	1 pc(s).	

**Slotted screwdriver**

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

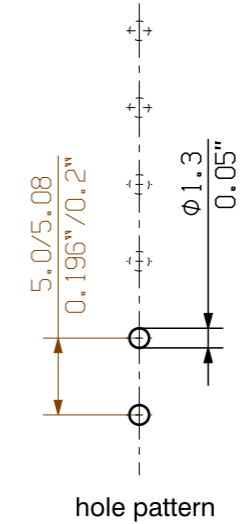
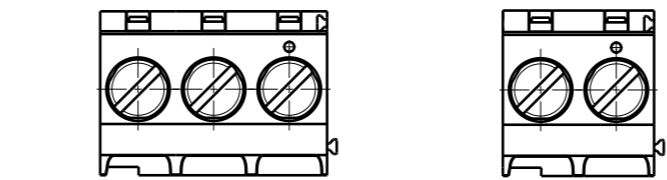
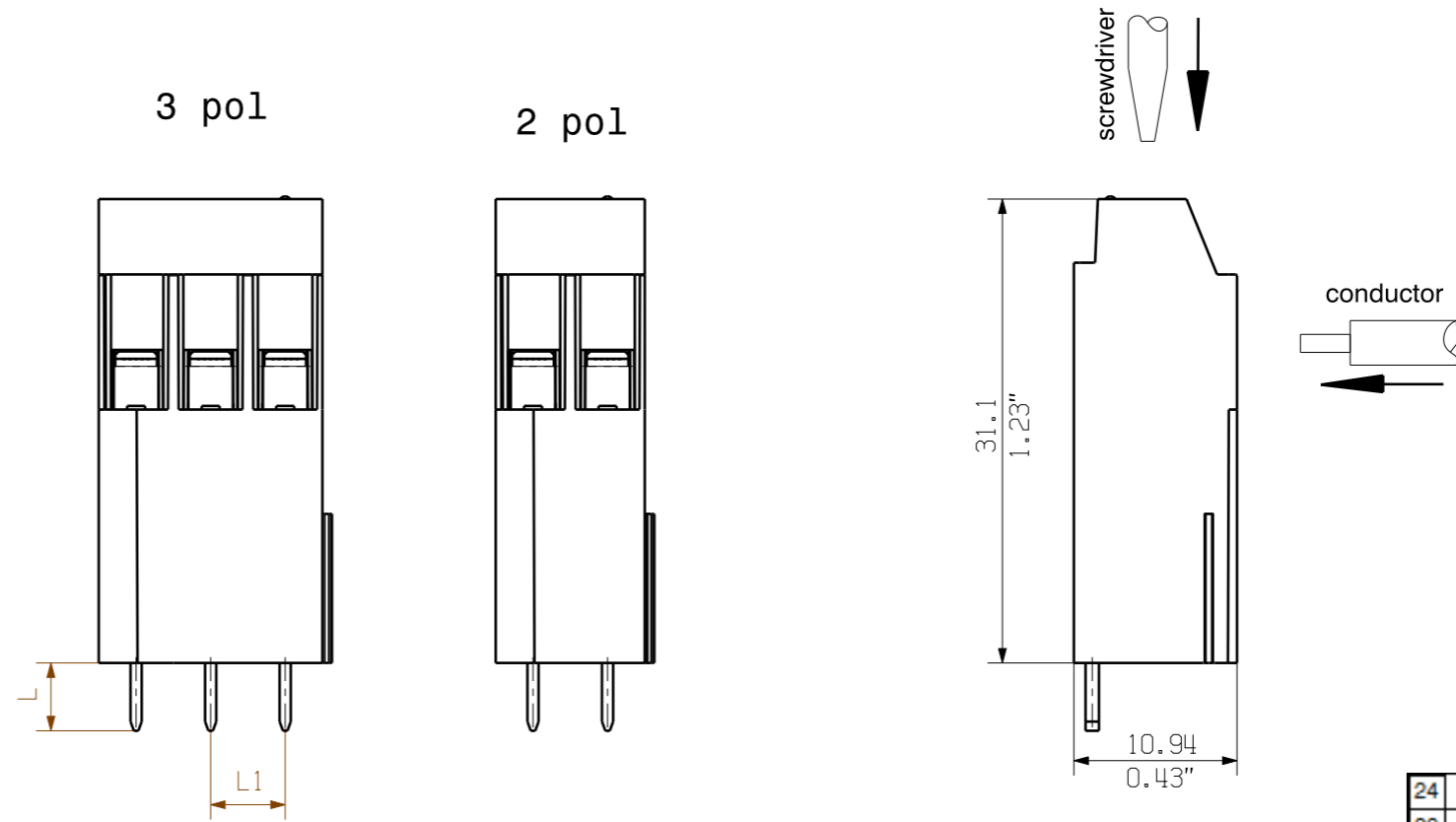


**General ordering data**

Type	SDIS 0.6X3.5X100	Version
Order No.	<a href="#">9008390000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4032248056354	
Qty.	1 pc(s).	

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24	116,84	4,600	24	115,00	4,528
23	111,76	4,400	23	110,00	4,331
22	106,68	4,200	22	105,00	4,134
21	101,60	4,000	21	100,00	3,937
20	96,52	3,800	20	95,00	3,740
19	91,44	3,600	19	90,00	3,543
18	86,36	3,400	18	85,00	3,346
17	81,28	3,200	17	80,00	3,150
16	76,20	3,000	16	75,00	2,953
15	71,12	2,800	15	70,00	2,756
14	66,04	2,600	14	65,00	2,559
13	60,96	2,400	13	60,00	2,362
12	55,88	2,200	12	55,00	2,165
11	50,80	2,000	11	50,00	1,969
10	45,72	1,800	10	45,00	1,772
9	40,64	1,600	9	40,00	1,575
8	35,56	1,400	8	35,00	1,378
7	30,48	1,200	7	30,00	1,181
6	25,40	1,000	6	25,00	0,984
5	20,32	0,800	5	20,00	0,787
4	15,24	0,600	4	15,00	0,591
3	10,16	0,400	3	10,00	0,394
2	5,08	0,200	2	5,00	0,197
n	L1 [mm]	L1 [Inch]	n	L1 [mm]	L1 [Inch]

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-mK		91592/5 15.02.17 HELIS_MA 00		Cat.no.: .		
				<b>3 42533</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">03</span>		
				Drawing no. <span style="float: right;">Issue no.</span> Sheet 00 of 00 sheets		
		Modification		<b>LL1N 5.0x</b> LEITERPLATTENKLEMME PCB TERMINAL		
		Drawn	Date			Name
		Responsible				
Scale: 2:1		Checked	17.02.2017	HELIS_MA	Product file: LL5.0x 3Stock	
Supersedes: .		Approved		LANG_T		7191



## 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.