

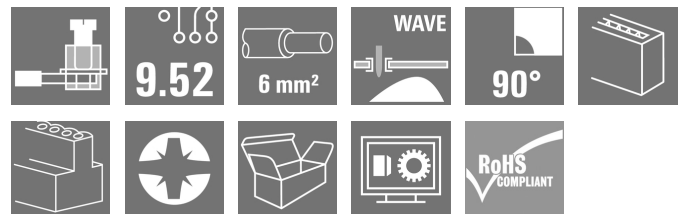
**LL 9.52/02/90 5.0SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

This PCB terminal provides connections for 1000 V, 6 mm<sup>2</sup> conductor cross-section and 32 A with proven clamping yoke connection at 9.52 mm pitch, conductor outlet direction in 90° design.

**General ordering data**

Version	Printed circuit board terminals, 9.52 mm, Number of poles: 2, 90°, Solder pin length (l): 5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 6 mm <sup>2</sup> , Box
Order No.	<a href="#">1724680000</a>
Type	LL 9.52/02/90 5.0SN OR BX
GTIN (EAN)	4008190959777
Qty.	100 pc(s).
Product data	IEC: 1000 V / 32 A / 0.18 - 6 mm <sup>2</sup> UL: 300 V / 30 A / AWG 26 - AWG 10
Packaging	Box

Creation date October 6, 2024 5:38:38 AM CEST

## LL 9.52/02/90 5.0SN OR BX

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## Technical data

## Dimensions and weights

Depth	12.5 mm	Depth (inches)	0.492 inch
Height	26.5 mm	Height (inches)	1.043 inch
Height of lowest version	21.5 mm	Width	19.64 mm
Width (inches)	0.773 inch	Net weight	6.27 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)	9.52 mm
Pitch in inches (P)	0.375 "	Number of poles	2
Pin series quantity	1	Fitted by customer	Yes
Number of rows	1	Max. adjacent poles per row	12
Solder pin length (l)	5 mm	Solder pin dimensions	0.5 x 1.0 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	0.8 x 4.0
Screwdriver blade standard	DIN 5264	Tightening torque, min.	0.5 Nm
Tightening torque, max.	0.6 Nm	Clamping screw	M 3
Stripping length	7 mm	L1 in mm	9.52 mm
L1 in inches	0.375 "	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Protection degree	IP20

## Material data

Insulating material	Wemid (PA)	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	UL 94 flammability rating	V-0
Contact material	Cu-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.	-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.	0.18 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 10
Solid, min. H05(07) V-U	0.18 mm <sup>2</sup>
Solid, max. H05(07) V-U	6 mm <sup>2</sup>
Stranded, min. H07V-R	0.22 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.22 mm <sup>2</sup>
Flexible, max. H05(07) V-K	4 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.	

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w. wire end ferrule, DIN 46228 pt 1, min. 0.5 mm<sup>2</sup>w. wire end ferrule, DIN 46228 pt 1, max. 4 mm<sup>2</sup>

Plug gauge in accordance with EN 60999 a x b; ø 3.6 mm x 3.1 mm; 2.7 mm

Clampable conductor

Cross-section for conductor connection	Type	fine-wired	
	nominal	0.5 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	6 mm
	Recommended wire-end ferrule	<a href="#">H0.5/6</a>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	1 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	6 mm
	Recommended wire-end ferrule	<a href="#">H1.0/6</a>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	1.5 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	7 mm
	Recommended wire-end ferrule	<a href="#">H1.5/7</a>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	2.5 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	7 mm
	Recommended wire-end ferrule	<a href="#">H2.5/7</a>	
Cross-section for conductor connection	Type	fine-wired	
	nominal	0.75 mm <sup>2</sup>	
wire end ferrule	Stripping length	nominal	6 mm
	Recommended wire-end ferrule	<a href="#">H0.75/6</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)

## Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. number of poles (Tu=20°C)	32 A
Rated current, max. number of poles (Tu=40°C)	32 A
Rated voltage for surge voltage class / pollution degree III/2	1,000 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV

Rated current, min. number of poles (Tu=20°C)	32 A
Rated current, min. number of poles (Tu=40°C)	32 A
Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/3	690 V
Rated impulse voltage for surge voltage class/ pollution degree III/2	8 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 C / CSA) 300 V

Rated current (Use group B / CSA) 30 A

Rated current (Use group C / CSA) 35 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 10

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 C / UL 1059) 300 V

Rated current (Use group B / UL 1059) 30 A

Rated current (Use group C / UL 1059) 30 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 10

Reference to approval values Specifications are maximum values, details - see approval certificate.

## Packing

Packaging Box

VPE length 333 mm

VPE width 141 mm

VPE height 51 mm

## Type tests

Test: Durability of markings

Test

mark of origin, type identification, pitch, type of material, approval marking UL, approval marking CSA, durability

Evaluation

available

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## Technical data

Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02
	Conductor type	Type of conductor and flexible 0,22 mm <sup>2</sup> conductor cross-section
		Type of conductor and flexible 4 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 6 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
		Type of conductor and AWG 10/1 conductor cross-section
		Type of conductor and AWG 10/19 conductor cross-section
	Evaluation	passed
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00
	Requirement	0.2 kg
	Conductor type	Type of conductor and stranded 0.25 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and solid 0.5 mm <sup>2</sup> conductor cross-section
	Evaluation	passed
	Requirement	1.4 kg
	Conductor type	Type of conductor and solid 6 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 10/1 conductor cross-section
	Evaluation	passed
	Requirement	0,9 kg
	Conductor type	Type of conductor and flexible 4 mm <sup>2</sup> conductor cross-section
	Evaluation	passed

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## Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00
	Requirement	≥10 N
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-K0.5 conductor cross-section
		Type of conductor and H05V-U0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥60 N
	Conductor type	Type of conductor and H07V-K4 conductor cross-section
	Evaluation	passed
	Requirement	≥80 N
	Conductor type	Type of conductor and H07V-U6 conductor cross-section
		Type of conductor and AWG 10/1 conductor cross-section
	Evaluation	passed

## Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	EC002643	ETIM 9.0	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	ECLASS 13.0	27-46-01-01
ECLASS 14.0	27-46-01-01		

## Environmental Product Compliance

REACH SVHC	/
RoHS Compliance Status	Compliant without exemption

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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>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>It is necessary to hold the insulating body of the one or two pole terminal when tightening the screw</li> <li>Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

## Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

## Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">PCN_2016_273_PL32_Loss_of_nickel_LL_LP_Family_EN</a> <a href="#">PCN_2016_273_PL32_Wegfall_Unternickelung_LL_LP_Familie_DE</a> <a href="#">Modification of the clamping yoke on product families LM 5.0x, LL 6.35, LL 9.52 and WGK 4</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>

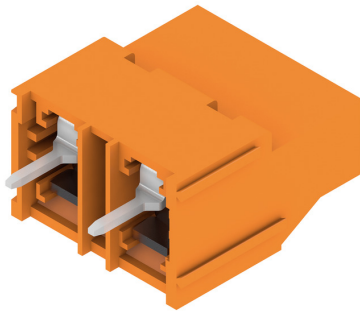
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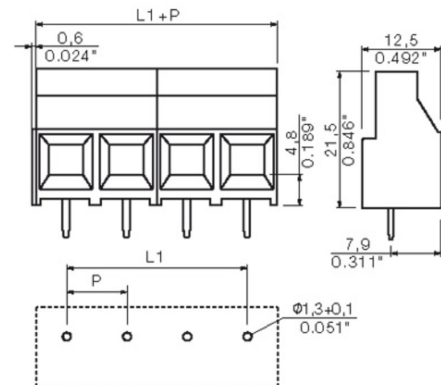
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# Drawings

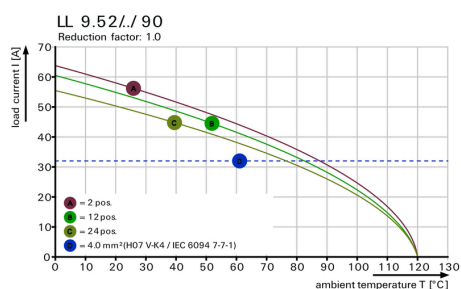
## Product image



## Dimensional drawing



## Graph





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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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 0.8X4.0X100	Version
Order No.	<a href="#">9008400000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248056361	
Qty.	1 pc(s).	

**Crosshead screwdriver Pozidriv**

Crosshead screwdriver, Pozidriv, SDK PZ DIN 5262, ISO 8764/2-PZ, output to ISO 8764/1-PZ, ChromTop tip, SoftFinish grip

**General ordering data**

Type	SDK PZ1 X 80	Version
Order No.	<a href="#">2749440000</a>	Screwdriver, Blade width (B): 80 mm, Blade thickness (A):
GTIN (EAN)	4050118895667	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Crosshead screwdriver Pozidriv**

VDE insulated crosshead screwdriver type Pozidriv SDIK PZ DIN 7438, ISO 8764/2-PZ, output to ISO 8764-PZ, SoftFinish grip

**General ordering data**

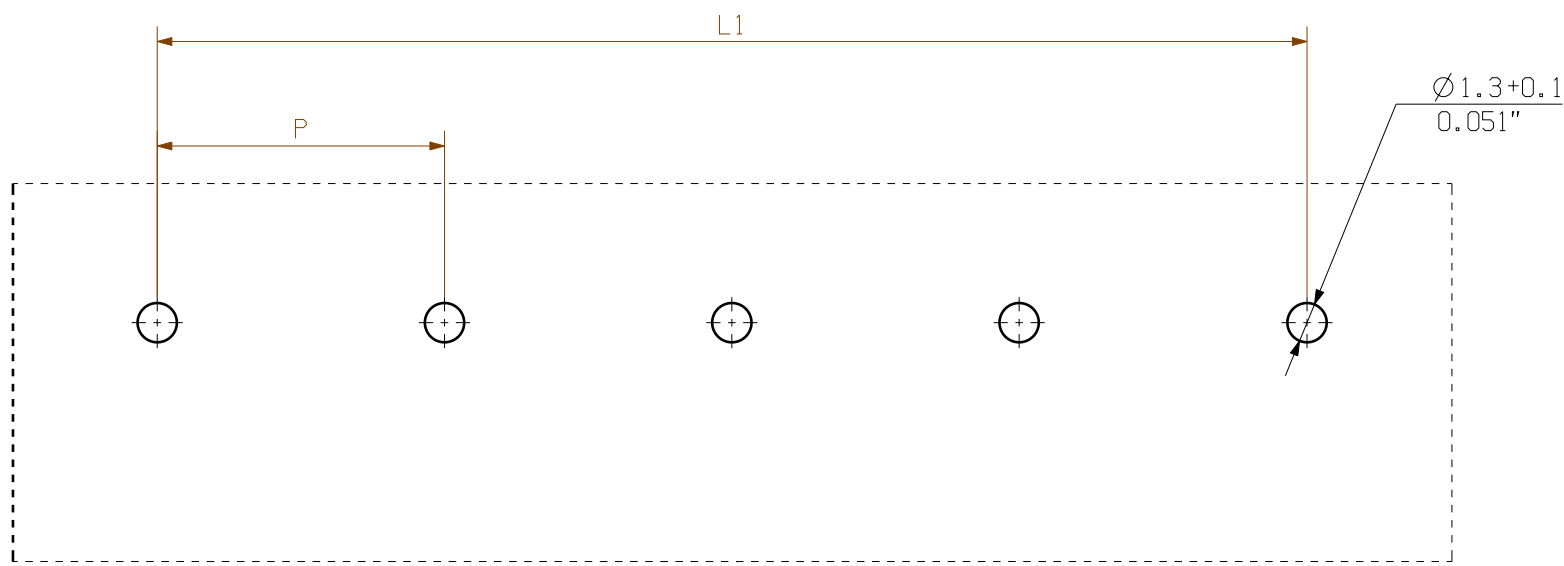
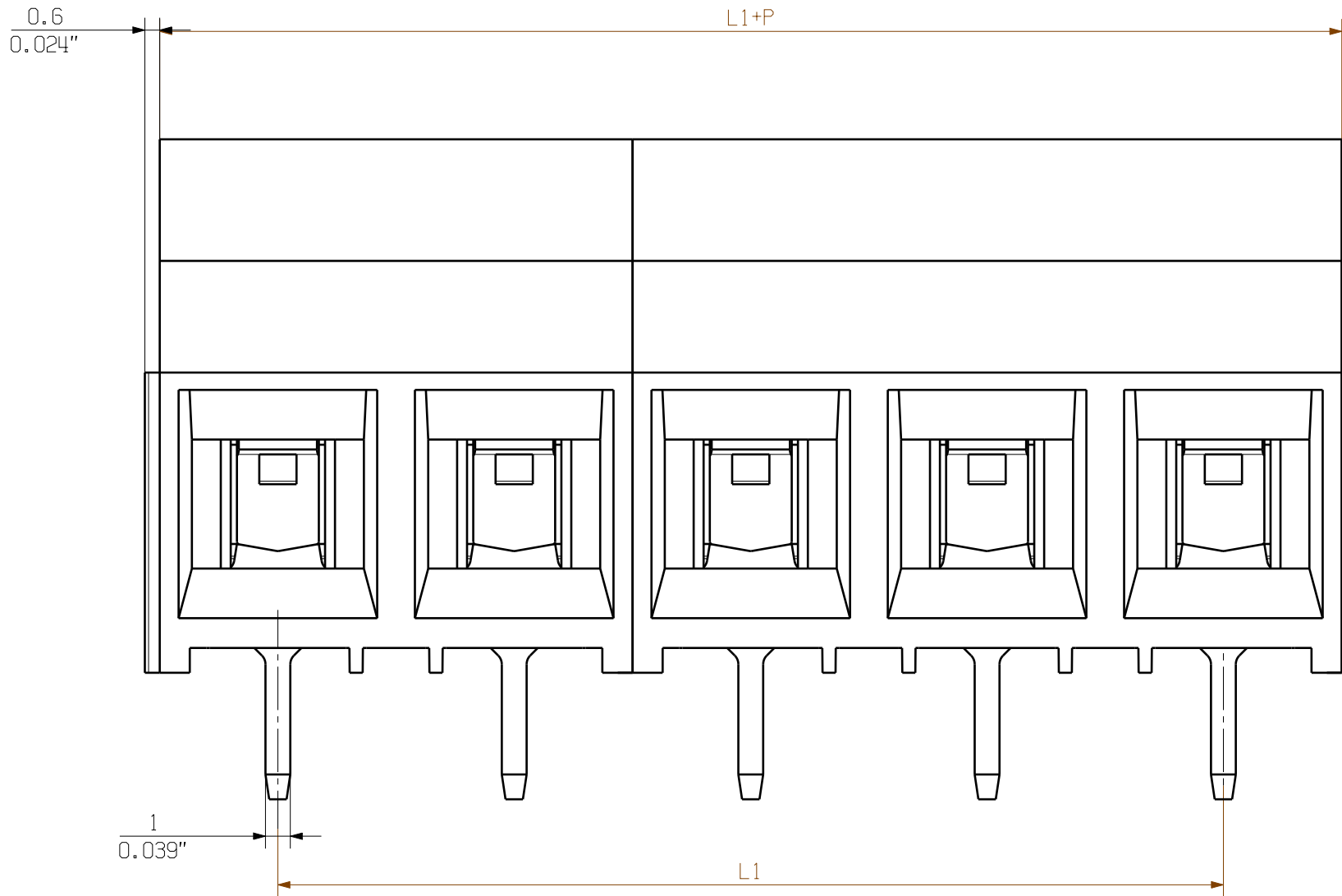
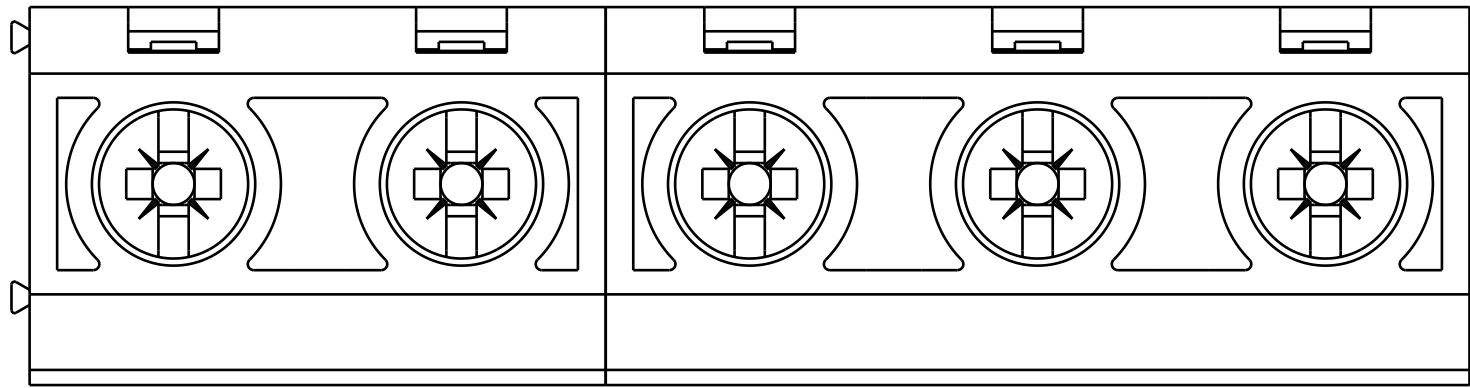
Type	SDIK PZ1 X 80	Version
Order No.	<a href="#">2749920000</a>	Screwdriver, Blade width (B): 1 mm, 80 mm, Blade thickness (A): 1
GTIN (EAN)	4050118897227	
Qty.	1 pc(s).	

**Slotted screwdriver**

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

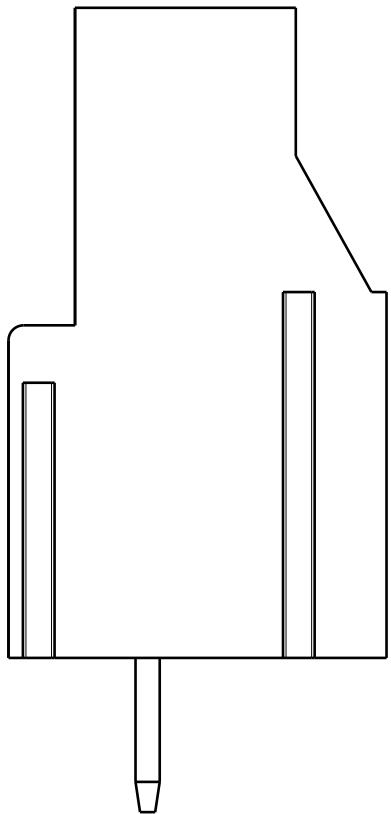
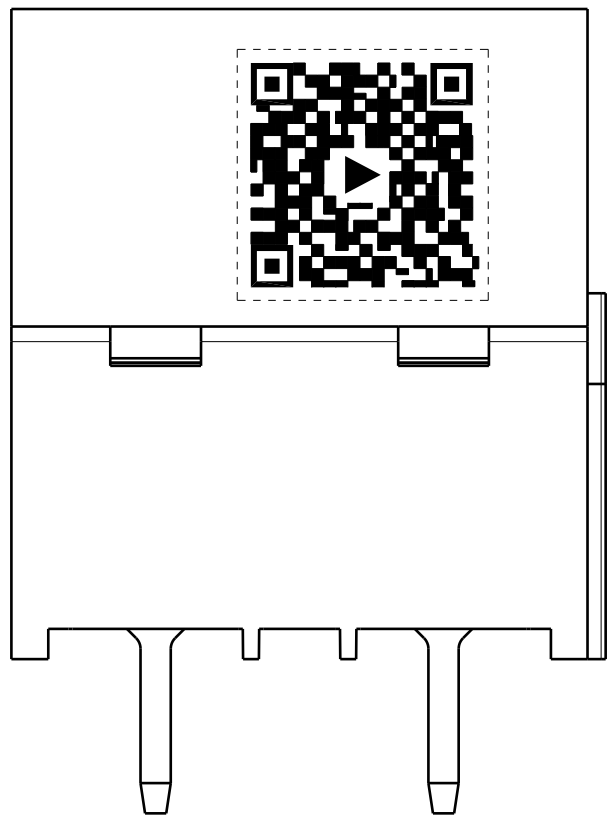
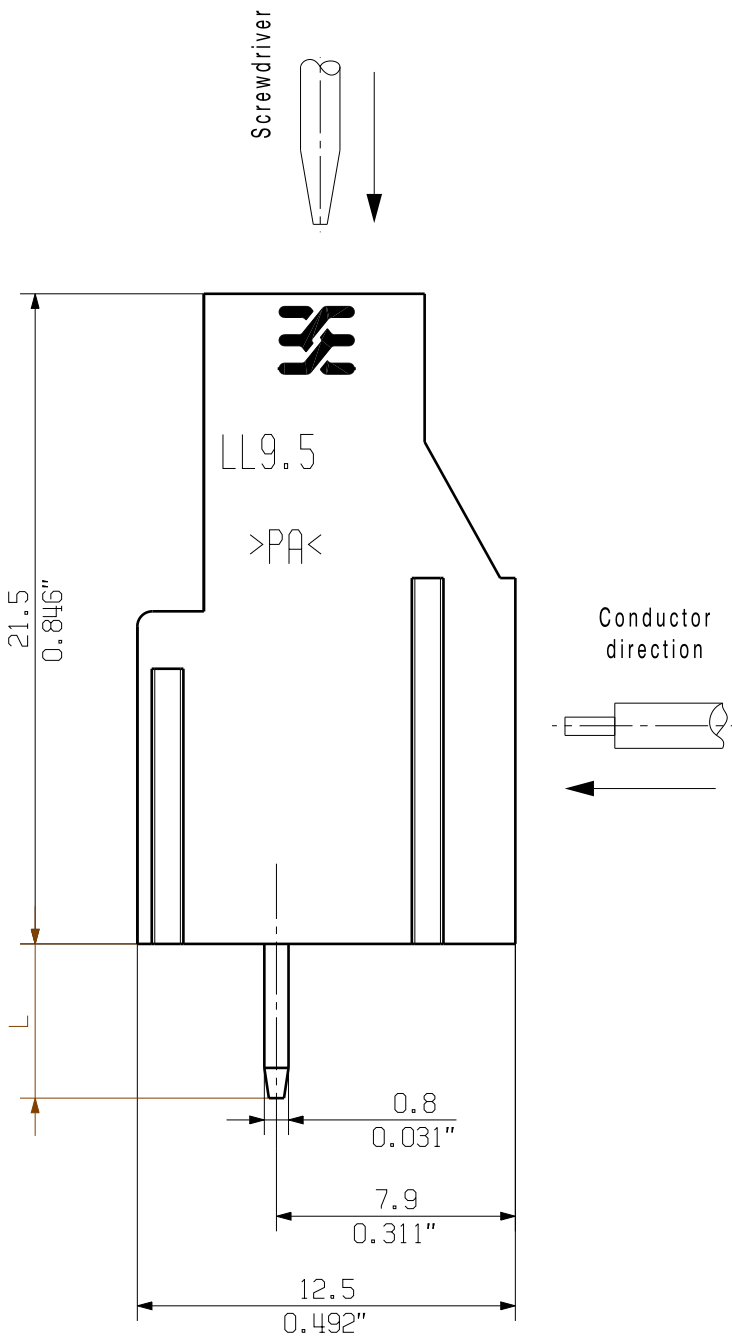
**General ordering data**

Type	SDS 0.8X4.0X100	Version
Order No.	<a href="#">9008340000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248056293	
Qty.	1 pc(s).	



PCB LAYOUT

Customer drawing



Pin length L	Tolerance
5.0	0.10 -0.25

P= 9.52 Pitch  
0.375

12	104.72	4.125
11	95.20	3.750
10	85.68	3.375
9	76.16	3.000
8	66.64	2.625
7	57.12	2.250
6	47.60	1.875
5	38.08	1.500
4	28.56	1.125
3	19.04	0.750
2	9.52	0.375
N	L1 [mm]	L1 [inch]
P	9.52 mm	0.375 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 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, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE:  
DIN ISO 2768-m

	EC00000683	00	Prim PLM Part No.: 026319			Prim ERP Part No.: 1912970000			
	First Issue Date 14.05.2018	Max. nos.				4 1724			
Modification		Drawing no.				Issue no.			
					Sheet	01	of	01	sheets
			Drawn	03.12.2018	LL 9.52/.../90 ...				
			Responsible	Xiang, Keqin	LEITERPLATTENKLEMME				
Scale: 4/1      Size: A2			Approved	04.12.2018	Xu, Shary	PCB TERMINAL			
Drawings Assembly			Product file: 7066 LL 9.52						

Drawing no.	41724	Issue no.	10
Sheet	01	of	01 sheets

## Recommended wave soldering profiles

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Fax: +49 5231 14-292083  
[www.weidmueller.com](http://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.

We reserve the right to make technical changes.