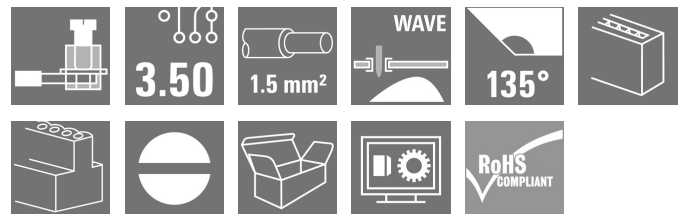


**LM 3.50/10/135 3.2SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

Small, compact PCB terminal with proven clamping yoke connection and 3.5 mm pitch. Conductor outlet direction 90° and 135°. Suitable for conductor cross-sections up to 1.5 mm².

**General ordering data**

Version	Printed circuit board terminals, 3.50 mm, Number of poles: 10, 135°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.08 mm², Box
Order No.	<a href="#">1845280000</a>
Type	LM 3.50/10/135 3.2SN OR BX
GTIN (EAN)	4032248357994
Qty.	48 pc(s).
Product data	IEC: 320 V / 16 A / 0.5 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14
Packaging	Box

Creation date July 5, 2024 8:26:35 AM CEST

Catalogue status 29.06.2024 / We reserve the right to make technical changes.

## LM 3.50/10/135 3.2SN OR BX

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## Technical data

## Dimensions and weights

Depth	12.7 mm	Depth (inches)	0.5 inch
Height	15.9 mm	Height (inches)	0.626 inch
Height of lowest version	12.7 mm	Width	35.6 mm
Width (inches)	1.402 inch	Net weight	6.36 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	135°
Pitch in mm (P)	3.5 mm	Pitch in inches (P)	0.138 "
Number of poles	10	Pin series quantity	1
Fitted by customer	Yes	Number of rows	1
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	31.5 mm	L1 in inches	1.24 "
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	Volume resistance	3.60 mΩ

## Material data

Insulating material	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-2	Contact material	Cu-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.	-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.	0.08 mm <sup>2</sup>
Clamping range, 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, 0.5 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm <sup>2</sup> max.	
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

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## Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired		
		nominal	0.75 mm²		
	wire end ferrule	Stripping length	nominal	8 mm	
		Recommended wire-end ferrule	<a href="#">H0.75/12 W</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, min. number of poles (Tu=20°C)	16 A
Rated current, max. number of poles (Tu=20°C)	12 A	Rated current, min. number of poles (Tu=40°C)	14 A
Rated current, max. number of poles (Tu=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 / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	10 A	Rated current (Use group D / CSA)	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 / UL 1059)	300 V	Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A	Rated current (Use group D / UL 1059)	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.		

## Packing

Packaging	Box	VPE length	353 mm
VPE width	136 mm	VPE height	25 mm

## Type tests

Test: Durability of markings	Test	type identification, mark of origin, type of material
	Evaluation	available

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## Technical data

Test: Clampable cross section	Standard	DIN EN 60999 section 6 / 04.94
	Conductor type	Type of conductor and solid 0.08 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 0.08 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999 section 8.4 / 04.94
	Requirement	0.2 kg
	Conductor type	Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/7 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
		Type of conductor and stranded 0.5 mm <sup>2</sup> conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor and solid 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 1.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and AWG 16/7 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	Evaluation	passed

## LM 3.50/10/135 3.2SN OR BX

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## Technical data

Pull-out test	Standard	DIN EN 60999 section 8.4 / 04.94
	Requirement	≥5 N
	Conductor type	Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/7 conductor cross-section
	Evaluation	passed
	Requirement	≥30 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section
		Type of conductor and H07V-K1.5 conductor cross-section
		Type of conductor and AWG 16/7 conductor cross-section
		Type of conductor and AWG 16/19 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

## Environmental Product Compliance

REACH SVHC

/

## LM 3.50/10/135 3.2SN OR BX

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Germany

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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 variants 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> <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. (UR)	E60693

## Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<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="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FL INDUSTR.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> <a href="#">PO OMNIMATE EN</a>

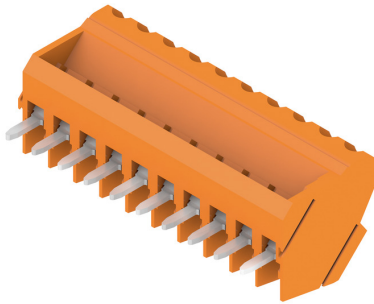
## LM 3.50/10/135 3.2SN OR BX

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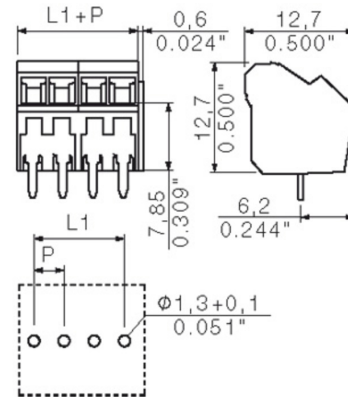
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings

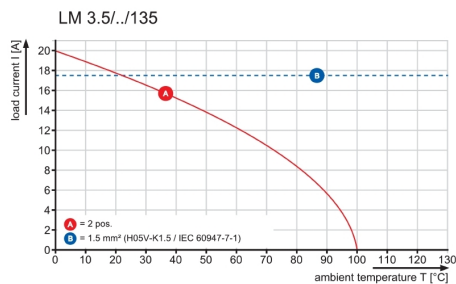
## Product image



## Dimensional drawing



## Graph



**LM 3.50/10/135 3.2SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**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 0.4X2.5X75	Version
Order No.	<a href="#">9009030000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248266944	
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 0.4X2.5X75	Version
Order No.	<a href="#">9008370000</a>	Screwdriver, Screwdriver
GTIN (EAN)	4032248056330	
Qty.	1 pc(s).	

## Technical Data

**Rev.**

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

System characteristic values		
Pitch <b>P</b>	mm/inch	3.5/0.138
Number of rows		1
Dielectric strength (r.m.s withstand voltage)	kV	>2.0
Through resistance (typical)	mOhm	1.6
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		M2
Screw torque max. acc. to EN 60999	Nm	0.2
Screw driver type		SDI 0.4x2.5
Solder pin length <b>L</b>	mm/inch	3.2/0.126
PCB hole diameter <b>D</b> (wave soldering)	mm/inch	1.3+0.1/0.051+0.004
PCB hole diameter <b>D</b> (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 <b>d</b> (max.)	mm/inch	1.22/0.048

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	24

<b>Conductor</b>		
Clamping range	mm <sup>2</sup>	0.08...1.5
"e" solid H05(07) V-U	mm <sup>2</sup>	0.08...1.5
"f" flexible H05(07) V-K	mm <sup>2</sup>	0.08...1.5
"f" with ferrule acc. to DIN 46228/1	mm <sup>2</sup>	n.a.
... with plastic collar acc. to DIN 46228/4	mm <sup>2</sup>	n.a.
Conductor insulation stripping length	mm/inch	7/0.276
Conductor insulation diameter max.	mm/inch	n.a.
Two wire clamping range	mm <sup>2</sup>	0.5...0.75
Gauge to EN 60999 (a x b ; Ø)	mm	2.4x1.5

<b>IEC 664-1 / VDE0110 (4.97) rated data</b>		
Rated cross section acc. to EN 60999	mm <sup>2</sup>	1.5
Rated current @ 20°C ambient	A	17
Rated current @ 40°C ambient	A	14.5
<b>Overvoltage category / Pollution degree</b>		<b>III/3 III/2 II/2</b>
Rated voltage	V	160 160 320
Rated impulse voltage	kV	2.5 2.5 2.5

<b>UL 1059 rated data</b>	<b>File No.: E60693</b>	<b>B</b>	<b>C</b>	<b>D</b>
Rated voltage		150	---	300
Rated current		10	---	10
AWG wire range (field wiring / factory wiring)		28...14		

CSA C22.2 rated data	File No.: LR12400	B	C	D
Rated voltage		150	---	300
Rated current		10	---	10
AWG wire range (field wiring / factory wiring)		28...14		

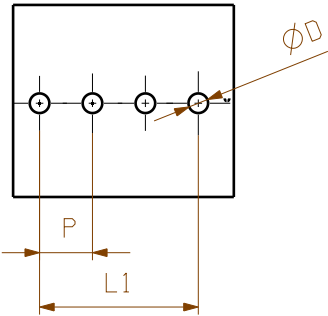
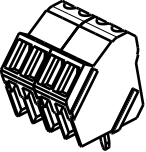
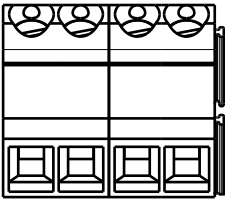
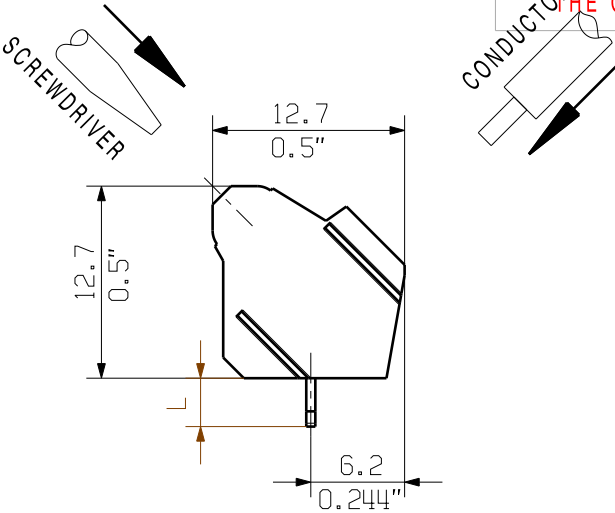
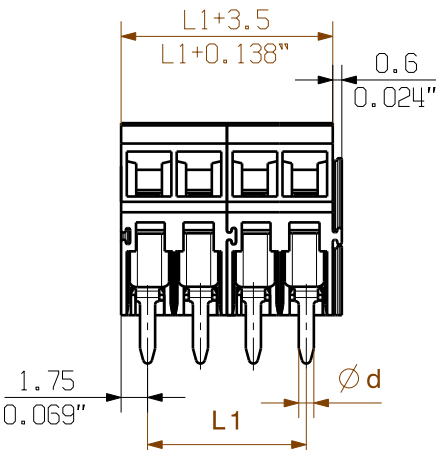
<b>Packaging</b>	carton
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**Downloads** [www.weidmueller.de](http://www.weidmueller.de)

- 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



24	80,50	3,169
23	77,00	3,031
22	73,50	2,894
21	70,00	2,756
20	66,50	2,618
19	63,00	2,480
18	59,50	2,343
17	56,00	2,205
16	52,50	2,067
15	49,00	1,929
14	45,50	1,791
13	42,00	1,654
12	38,50	1,516
11	35,00	1,378
10	31,50	1,240
9	28,00	1,102
8	24,50	0,965
7	21,00	0,827
6	17,50	0,689
5	14,00	0,551
4	10,50	0,413
3	7,00	0,276
2	3,50	0,138
<b>n</b>	<b>L1 [mm]</b>	<b>L1 [Inch]</b>

<div><div><div></div><div></div></div><div>RoHS</div><div>COMPLIANT</div></div>	METRIC TOLERANCES				CAT.NO.:	
	X. = ±0.3	39842/5	00	<div><div><div><div></div><div></div></div><div>Weidmüller</div><div></div></div></div>		<div>C 25475</div> <div>06</div>
	X.X = ±0.1	17.03.08 HELIS_MA				
	X.XX = ±0.05	MODIFICATION				
<div><div><div></div><div></div></div></div>		DATE	NAME	<div>LM3.5/./135°</div> <div>LEITERPLATTENKLEMME</div> <div>PCB TERMINAL</div>		
	DRAWN	17.03.2008	HELIS_MA			
	RESPONSIBLE		KRUG_M			
SCALE: 5/1	CHECKED	20.03.2008	HECKERT_M	<div></div>		
SUPERSEDES: .	APPROVED		HECKERT_M			PRODUCT FILE: LM 3.5/135

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
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  $260 \text{ }^{\circ}\text{C}$ . In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.