

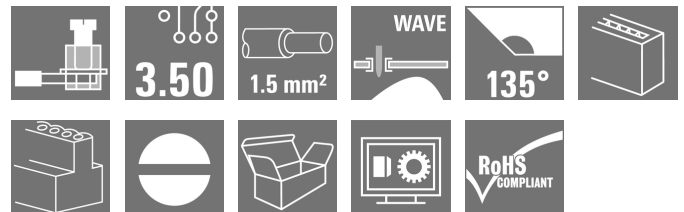
LM 3.50/02/135 3.2SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Similar to illustration

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: 2, 135°, Solder pin length (l): 3.2 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 2.08 mm², Box
Order No.	1714980000
Type	LM 3.50/02/135 3.2SN OR BX
GTIN (EAN)	4008190337315
Qty.	100 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 March 24, 2021 9:54:14 PM CET

LM 3.50/02/135 3.2SN OR BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

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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	Net weight	1.21 g
Width	7.6 mm	Width (inches)	0.299 inch

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 inch
Number of poles	2	Pin series quantity	1
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	3.5 mm
L1 in inches	0.138 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
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 ⁸ 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.	-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 ²
Clamping range, max.	2.08 mm ²
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 ²
Solid, max. H05(07) V-U	1.5 mm ²
Flexible, min. H05(07) V-K	0.5 mm ²
Flexible, max. H05(07) V-K	1.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 0.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm ² max.	
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

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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	H0.75/12 W	
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)	12 A	Rated current, min. number of poles (Tu=20°C)	16 A	
Rated current, max. number of poles (Tu=40°C)	10 A	Rated current, min. number of poles (Tu=40°C)	14 A	
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree II/2	320 V	
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated voltage for surge voltage class / pollution degree III/3	160 V	
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	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	46 mm
VPE width	80 mm	VPE height	90 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	ECLASS 11.0	27-46-01-01

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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	• Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • Max. outer diameter of the conductor: 2.9 mm • Wire end ferrule with plastic collar to DIN 46228/4 • P on drawing = pitch • 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. • It is necessary to hold the insulating body of the one or two pole terminal when tightening the screw • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



ROHS	Conform
UL File Number Search	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	EPLAN, WSCAD

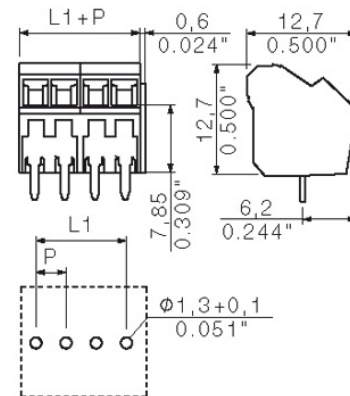
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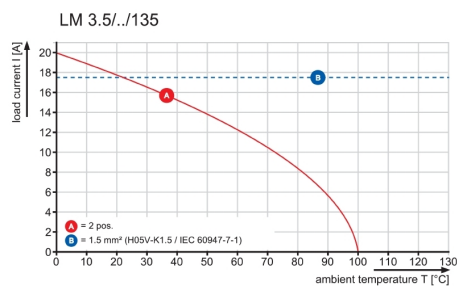
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Drawings

Dimensional drawing



Graph



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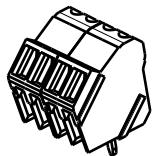
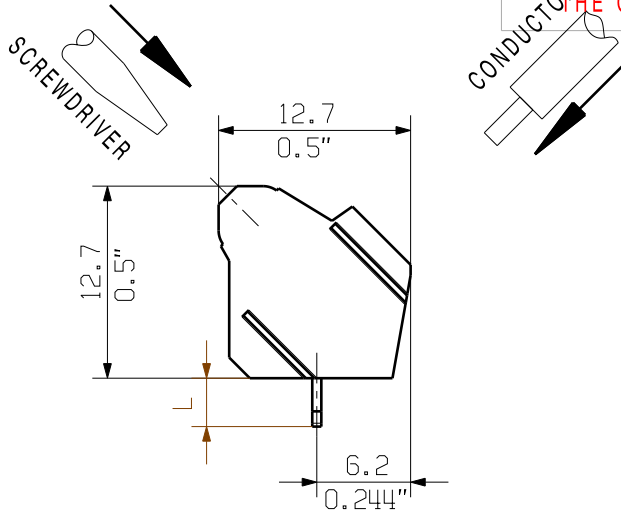
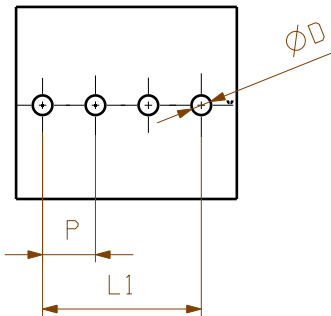
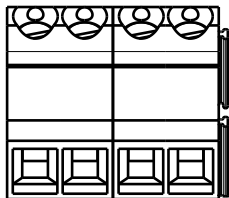
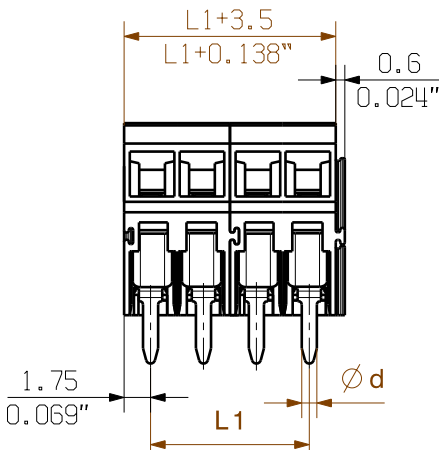
Technical Data

Material data		
Insulation material type		PA 66
Insulation material colours		orange
Insulation material flammability class	UL94	V - 2
Insulation resistance	MOhm	10 ³
Conatct base material		Cu-alloy
Contact plating		tin-plated
System characteristic values		
Pitch P	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 L	mm/inch	3.2/0.126
PCB hole diameter D (wave soldering)	mm/inch	1.3+0.1/0.051+0.004
PCB hole diameter D (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 d (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
Conductor		
Clamping range	mm ²	0.08...1.5
"e" solid H05(07) V-U	mm ²	0.08...1.5
"f" flexible H05(07) V-K	mm ²	0.08...1.5
"f" with ferrule acc. to DIN 46228/1	mm ²	n.a.
... with plastic collar acc. to DIN 46228/4	mm ²	n.a.
Conductor insulation stripping length	mm/inch	7/0.276
Conductor insulation diameter max.	mm/inch	n.a.
Two wire clamping range	mm ²	0.5...0.75
Gauge to EN 60999 (a x b ; Ø)	mm	2.4x1.5
IEC 664-1 / VDE0110 (4.97) rated data		
Rated cross section acc. to EN 60999	mm ²	1.5
Rated current @ 20°C ambient	A	17
Rated current @ 40°C ambient	A	14.5
Overvoltage category / Pollution degree		III/3 III/2 II/2
Rated voltage	V	160 160 320
Rated impulse voltage	kV	2.5 2.5 2.5
UL 1059 rated data		
		B C D
Rated voltage		150 --- 300
Rated current		10 --- 10
AWG wire range (field wiring / factory wiring)		28...14
CSA C22.2 rated data		
		B C D
Rated voltage		150 --- 300
Rated current		10 --- 10
AWG wire range (field wiring / factory wiring)		28...14
Packaging		
		carton
Downloads		
		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
n	L1 [mm]	L1 [Inch]

	METRIC TOLERANCES				CAT.NO.: .			
	X. = ±0.3		39842/5					
	X.X = ±0.1		17.03.08 HELIS_MA		00			
		X.XX = ±0.05						
		MODIFICATION						
		DATE	NAME					
	DRAWN	17.03.2008	HELIS_MA					
	RESPONSIBLE		KRUG_M					
SCALE: 5/1	CHECKED	20.03.2008	HECKERT_M					
	APPROVED		HECKERT_M					
SUPERSEDES: .								

LM3.5/./135°

LEITERPLATTENKLEMME

PCB TERMINAL

PRODUCT FILE: LM 3.5/135

7196

CAT.NO.: .

C 25475

06

DRAWING NO. SHEET 02 OF 03 SHEETS

ISSUE NO.

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.

We reserve the right to make technical changes.

