

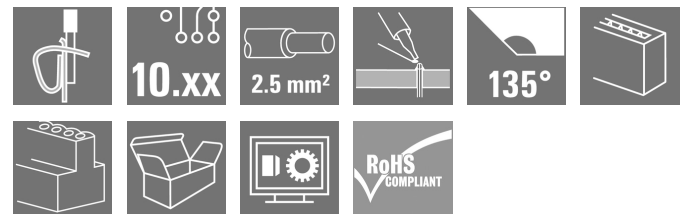
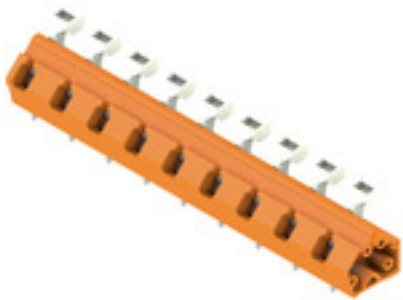
**LMZFL 10/9/135 3.5OR****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

The compact installation terminal for the standard wire cross-section size of 2.5mm<sup>2</sup>.

Tension clamp connection with a 135° outlet direction, in variable pitch: 10.00 - 10.16 mm (1 part with 2 pitches).

Rated data:

- 24A at 40°C / 1000V (IEC) or 15A / 300V (UL)
- 0.13 - 2.5 mm<sup>2</sup> (IEC) / 26 - 14 AWG (UL)
- Flammability class according to UL 94: V0

Application benefits:

- Safe: ATEX certification Ex II 2GD / Ex e II (KEMA07 ATAEX0047U) optional
- Temperature resistant: long-term resistance up to 120°C provided by high-performance Wemid insulation material
- Adaptable: simple pitch adaptation from 10.00 to 10.16 mm (0.400 inch)
- Convenient: optional lever for simple opening of terminal point

**General ordering data**

Version	Printed circuit board terminals, 10.00 mm, Number of poles: 9, 135°, Solder pin length (l): 3.5 mm, tinned, orange, Tension clamp connection with actuator, Clamping range, max.: 2.5 mm <sup>2</sup> , Box
Order No.	<a href="#">1954000000</a>
Type	LMZFL 10/9/135 3.5OR
GTIN (EAN)	4032248663064
Qty.	100 pc(s).
Product data	IEC: 1000 V / 24 A / 0.13 - 2.5 mm <sup>2</sup> UL: 300 V / 15 A / AWG 26 - AWG 14
Packaging	Box

## LMZFL 10/9/135 3.5OR

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## Technical data

## Dimensions and weights

Depth	15.6 mm	Depth (inches)	0.614 inch
Height	20.24 mm	Height (inches)	0.797 inch
Height of lowest version	16.74 mm	Width	92.9 mm
Width (inches)	3.657 inch	Net weight	18.76 g

## System parameters

Product family	OMNIMATE Signal - series LMZF	Wire connection method	Tension clamp connection with actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	135°
Pitch in mm (P)	10 mm	Pitch in inches (P)	0.394 "
Number of poles	9	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Max. adjacent poles per row	12	Solder pin length (l)	3.5 mm
Solder pin dimensions	0.8 x 0.8 mm	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		Number of solder pins per pole	2
Screwdriver blade	0.6 x 3.5	Screwdriver blade standard	DIN 5264-A
Stripping length	6 mm	L1 in mm	80 mm
L1 in inches	3.15 "	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	5-8 µm SN	Tinning type	matt
Layer structure of solder connection	5...8 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.	0.13 mm <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.13 mm <sup>2</sup>
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.13 mm <sup>2</sup>
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm <sup>2</sup> max.	
w. wire end ferrule, DIN 46228 pt 1, 0.25 mm <sup>2</sup> min.	
w. wire end ferrule, DIN 46228 pt 1, 1.5 mm <sup>2</sup> max.	

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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>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.25 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	8 mm
		Recommended wire-end ferrule	<a href="#">H0.25/10 HBL</a>	
		Stripping length	nominal	5 mm
		Recommended wire-end ferrule	<a href="#">H0.25/5</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.34 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	8 mm
		Recommended wire-end ferrule	<a href="#">H0.34/10 TK</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)
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## Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	24 A
Rated current, max. number of poles (Tu=20°C)	24 A	Rated current, min. number of poles (Tu=40°C)	24 A
Rated current, max. number of poles (Tu=40°C)	24 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/3	500 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	8 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	8 kV		

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## Technical data

## Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	150 V
Rated voltage (Use group D / CSA)	300 V	Rated current (Use group B / CSA)	15 A
Rated current (Use group C / CSA)	15 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14

## 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)	150 V
Rated voltage (Use group D / UL 1059)	300 V	Rated current (Use group B / UL 1059)	15 A
Rated current (Use group C / UL 1059)	15 A	Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

Packaging	Box	VPE length	295 mm
VPE width	282 mm	VPE height	124 mm

## Type tests

Test: Durability of markings	Test	mark of origin, type identification, type of material, approval marking UL, approval marking CSA, durability
	Evaluation	available
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 solid 0.14 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 0.14 mm <sup>2</sup> conductor cross-section
		Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section
		Type of conductor and stranded 2.5 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 14/1 conductor cross-section
		Type of conductor and AWG 14/19 conductor cross-section
	Evaluation	passed

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## Technical data

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 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
	Type of conductor and stranded 0.5 mm <sup>2</sup> conductor cross-section
Evaluation	passed
Requirement	0.7 kg
Conductor type	Type of conductor and solid 2.5 mm <sup>2</sup> conductor cross-section
	Type of conductor and stranded 2.5 mm <sup>2</sup> conductor cross-section
Evaluation	passed
Requirement	0.9 kg
Conductor type	Type of conductor and AWG 14/1 conductor cross-section
	Type of conductor and AWG 14/19 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-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥50 N
	Conductor type	Type of conductor and H07V-U2.5 conductor cross-section
		Type of conductor and H07V-K2.5 conductor cross-section
		Type of conductor and AWG 14/1 conductor cross-section
		Type of conductor and AWG 14/19 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	/
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>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="#">Material changeover of the levers in the LMZFL product family</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>

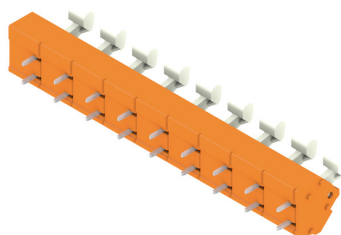
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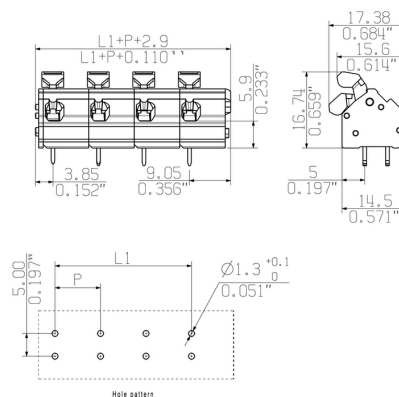
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## Drawings

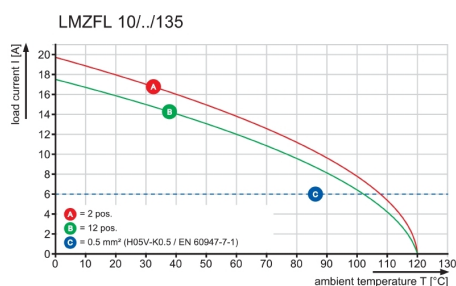
### Product image



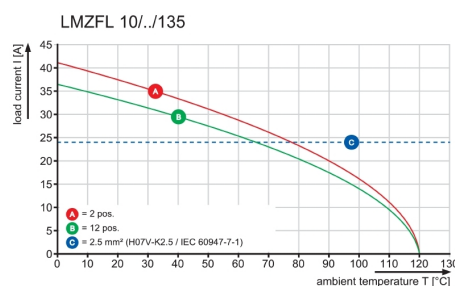
### Dimensional drawing



### Graph



### 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  $260 \text{ °C}$ . In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.