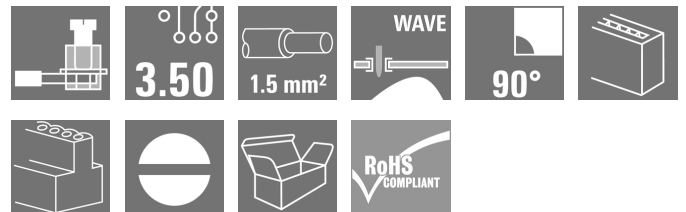


LM 3.50/04/90 4.5SN BK BX

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

www.weidmueller.com

Product image



Small, compact PCB terminal or -tier PCB terminal with proven clamping yoke connection and 3.5 mm pitch. Suitable for conductor cross-sections up to 1.5 mm².

General ordering data

Version	Printed circuit board terminals, 3.50 mm, Number of poles: 4, 90°, Solder pin length (l): 4.5 mm, tinned, black, Clamping yoke connection, Clamping range, max. : 2.08 mm ² , Box
Order No.	1433780000
Type	LM 3.50/04/90 4.5SN BK BX
GTIN (EAN)	4050118238549
Qty.	100 Stück
Product data	IEC: 320 V / 16 A / 0.5 - 1.5 mm ² UL: 300 V / 10 A / AWG 28 - AWG 14
Packaging	Box

Erstellungs-Datum May 24, 2023 3:37:47 PM CEST

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Dimensions and weights

Depth	8.3 mm	Depth (inches)	0.327 inch
Height	17.3 mm	Height (inches)	0.681 inch
Height of lowest version	12.8 mm	Width	14.6 mm
Width (inches)	0.575 inch	Net weight	1.153 g

Temperatures

Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
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System parameters

Product family	OMNIMATE Signal - series LM	Wire connection method	Clamping yoke connection
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	3.5 mm	Pitch in inches (P)	0.138 inch
Number of poles	4	Pin series quantity	1
Fitted by customer	Yes	Number of rows	1
Max. adjacent poles per row	24	Solder pin length (l)	4.5 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	10.5 mm	L1 in inches	0.413 inch
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	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	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.

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w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm²
 max.

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm


Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.75 mm ²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	HO.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, 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	155 mm
VPE width	64 mm	VPE height	38 mm

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Katalogstand 12.05.2023 / Technische Änderungen vorbehalten

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Type tests

Test: Durability of markings	Test	type identification, mark of origin, type of material	
	Evaluation	available	
Test: Clampable cross section	Standard	DIN EN 60999 section 6 / 04.94	
	Conductor type	Type of conductor and conductor cross-section	solid 0.08 mm ²
		Type of conductor and conductor cross-section	stranded 0.08 mm ²
		Type of conductor and conductor cross-section	solid 1.5 mm ²
		Type of conductor and conductor cross-section	stranded 1.5 mm ²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	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 conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/7
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm ²
		Type of conductor and conductor cross-section	stranded 0.5 mm ²
	Evaluation	passed	
	Requirement	0.4 kg	
Conductor type	Type of conductor and conductor cross-section	solid 1.5 mm ²	
	Type of conductor and conductor cross-section	stranded 1.5 mm ²	
	Type of conductor and conductor cross-section	AWG 16/7	
	Type of conductor and conductor cross-section	AWG 16/19	
Evaluation	passed		

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

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
ETIM 8.0	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

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"> 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	UL Website
Certificate No. (UR)	E60693

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Germanywww.weidmueller.com**Technische Daten****Downloads**

Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN FL DRIVES DE

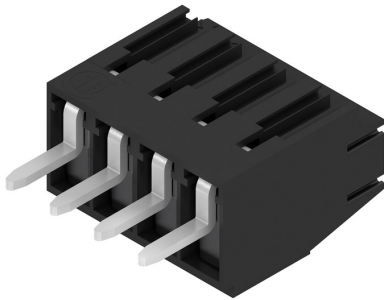
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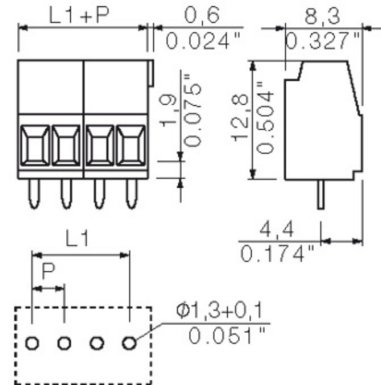
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Zeichnungen

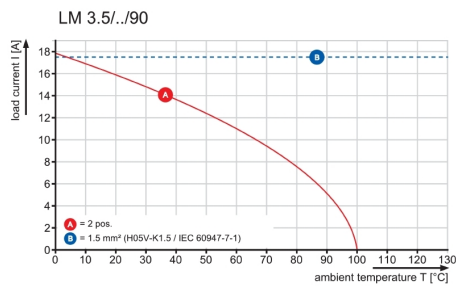
Product image



Dimensional drawing



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°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.