

LM 5.00/03/90 3.5SN GN BX**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

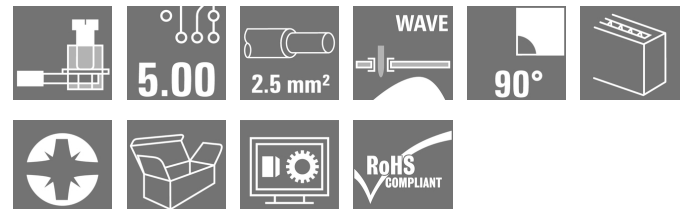
32760 Detmold

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info@weidmueller.com

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Product image

Similar to illustration

PCB terminal with proven clamping yoke connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°, 135° and 180°. Suitable for conductor cross-sections up to 2.5 mm².

General ordering data

Version	Printed circuit board terminals, 5.00 mm, Number of poles: 3, 90°, Solder pin length (l): 3.5 mm, tinned, Pale green, Clamping yoke connection, Clamping range, max. : 2.5 mm², Box
Order No.	1715380000
Type	LM 5.00/03/90 3.5SN GN BX
GTIN (EAN)	4008190365264
Qty.	114 pc(s).
Product data	IEC: 630 V / 17.5 A / 0.2 - 2.5 mm² UL: 300 V / 15 A / AWG 24 - AWG 14
Packaging	Box

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Technical data

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Dimensions and weights

Depth	10 mm	Depth (inches)	0.394 inch
Height	17.3 mm	Height (inches)	0.681 inch
Height of lowest version	13.8 mm	Width	15.55 mm
Width (inches)	0.612 inch	Net weight	3.564 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	90°
Pitch in mm (P)	5 mm	Pitch in inches (P)	0.197 inch
Number of poles	3	Pin series quantity	1
Fitted by customer	Yes	Max. adjacent poles per row	24
Solder pin length (l)	3.5 mm	Solder pin dimensions	0.95 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	1	Screwdriver blade	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.5 Nm	Clamping screw	M 2.5
Stripping length	6 mm	L1 in mm	10 mm
L1 in inches	0.394 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	1.20 mΩ		

Material data

Insulating material	Wemid (PA)	Colour	Pale green
Colour chart (similar)	RAL 6021	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	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...3 µm Ni / 4...6 µm Sn
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.	0.2 mm ²
Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 24
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, max.	1.5 mm ²
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²

Creation date October 11, 2022 7:31:03 PM CEST

Catalogue status 07.10.2022 / We reserve the right to make technical changes.

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Technical data

w. wire end ferrule, DIN 46228 pt 1, max. 1.5 mm²

Plug gauge in accordance with EN 60999 a x b; ø 2.4 mm x 1.5 mm; 1.9mm

Clampable conductor

Cross-section for conductor connection

Type fine-wired

nominal 0.5 mm²

wire end ferrule

Stripping length nominal 8 mm

Recommended wire-end ferrule [H0.5/12 OR](#)

Stripping length nominal 6 mm

Recommended wire-end ferrule [H0.5/6](#)

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](#)

Stripping length nominal 6 mm

Recommended wire-end ferrule [H0.75/6](#)

Cross-section for conductor connection

Type fine-wired

nominal 1 mm²

wire end ferrule

Stripping length nominal 8 mm

Recommended wire-end ferrule [H1.0/12 GE](#)

Stripping length nominal 6 mm

Recommended wire-end ferrule [H1.0/6](#)

Cross-section for conductor connection

Type fine-wired

nominal 0.25 mm²

wire end ferrule

Stripping length nominal 8 mm

Recommended wire-end ferrule [H0.25/10 HBL](#)

Stripping length nominal 5 mm

Recommended wire-end ferrule [H0.25/5](#)

Cross-section for conductor connection

Type fine-wired

nominal 0.34 mm²

wire end ferrule

Stripping length nominal 8 mm

Recommended wire-end ferrule [H0.34/10 TK](#)

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)

16 A

Rated current, max. number of poles (Tu=40°C)

14.2 A

Rated voltage for surge voltage class / pollution degree III/2

320 V

Rated impulse voltage for surge voltage class/ pollution degree II/2

4 kV

Rated impulse voltage for surge voltage class/ contamination degree III/3

4 kV

Rated current, min. number of poles (Tu=20°C)

17.5 A

Rated current, min. number of poles (Tu=40°C)

17.5 A

Rated voltage for surge voltage class / pollution degree II/2

630 V

Rated voltage for surge voltage class / pollution degree III/3

250 V

Rated impulse voltage for surge voltage class/ pollution degree III/2

4 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 D / CSA) 300 V

Rated current (Use group B / CSA) 18 A

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 24

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 (cURus)



Certificate No. (cURus)

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) 15 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 24

Wire cross-section, AWG, max. AWG 14

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

Packing

Packaging	Box	VPE length	75 mm
VPE width	165 mm	VPE height	240 mm

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

- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule without plastic collar to DIN 46228/1
- Wire end ferrule with plastic collar to DIN 46228/4
- The data given under CSA relates to a cUL approval - E60693
- 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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Technical data

Approvals

Approvals



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

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	CAD data – STEP
Engineering Data	WSCAD
Product Change Notification	20211116 Änderung der Verpackung LL 5.0x and LM 5.0x 20211116 Change of packaging to LL 5.0x and LM 5.0x
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN FL ANALO.SIGN.CONV. EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL BASE STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN

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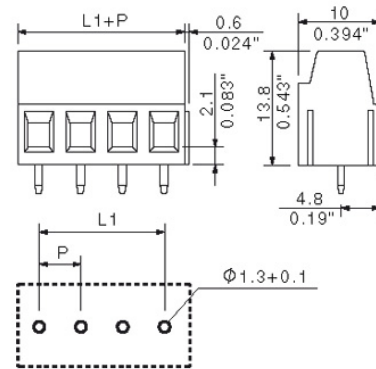
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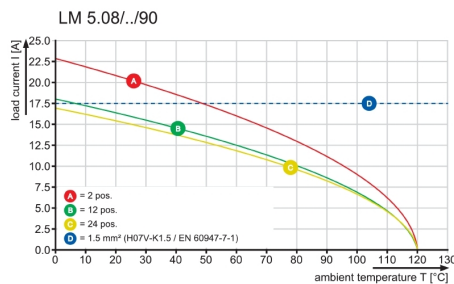
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Drawings

Dimensional drawing info@weidmueller.com



Graph

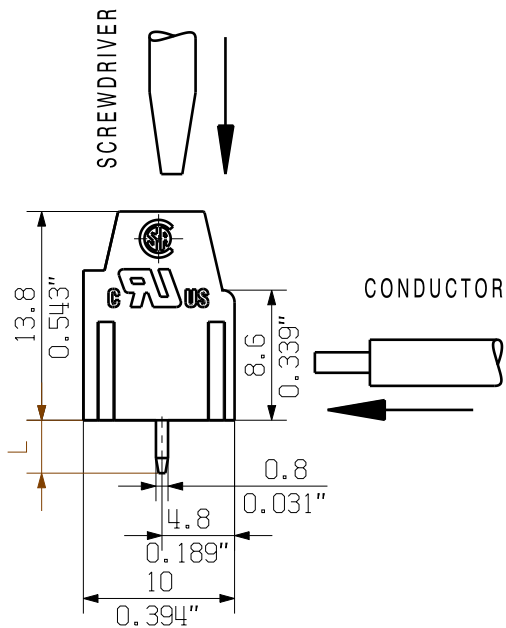
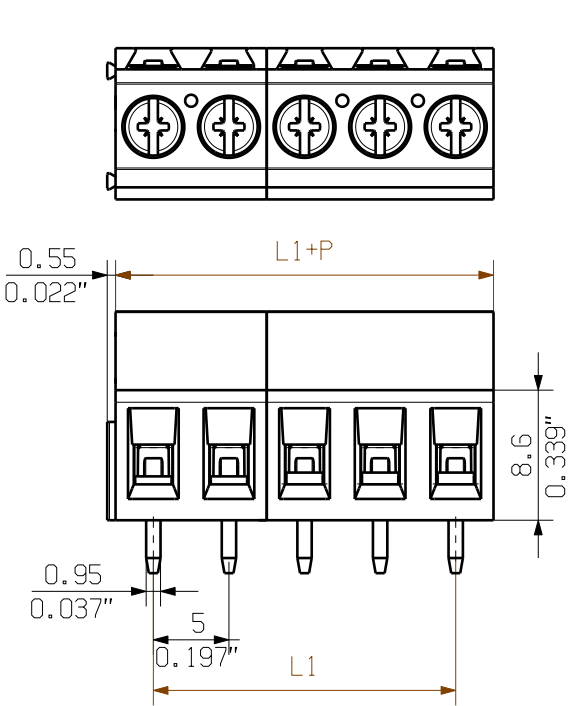


Derating curve valid for 5.00 & 5.08 pitch

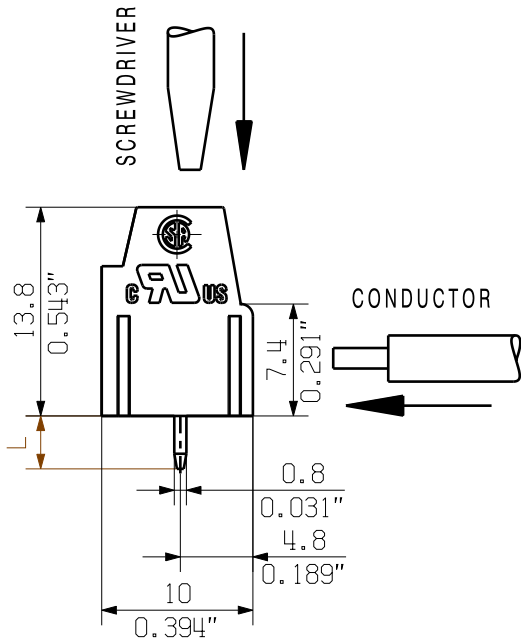
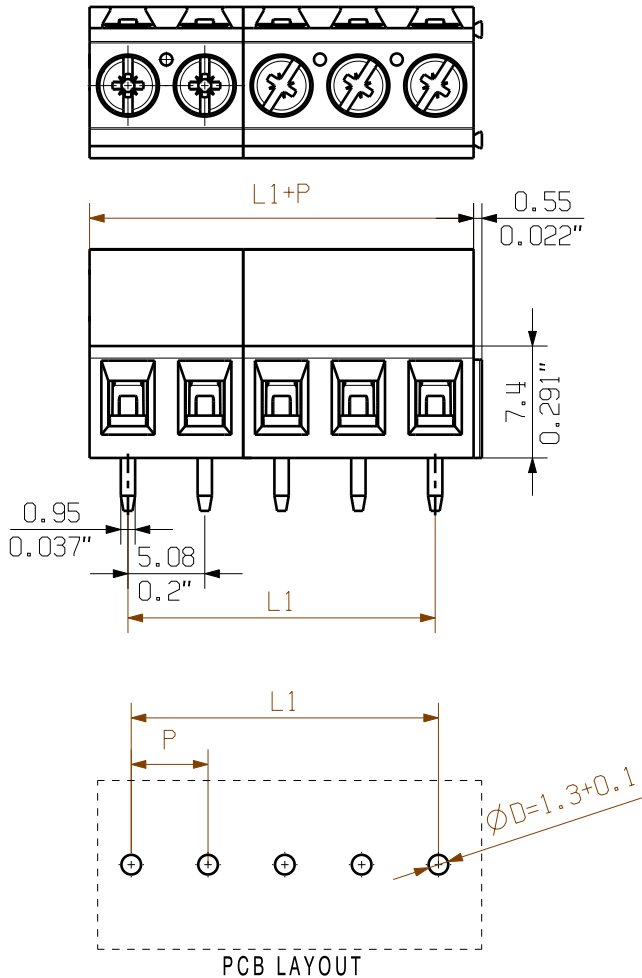
WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.
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MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.



STIFTLÄNGE L PIN LENGTH L	TOLERANZ TOLERANCE
3.5	0.2 -0.2



KUNDENZEICHNUNG
CUSTOMER DRAWING

24	115.00	4.528	116.84	4.600
23	110.00	4.331	111.76	4.400
22	105.00	4.134	106.68	4.200
21	100.00	3.937	101.60	4.000
20	95.00	3.740	96.52	3.800
19	90.00	3.543	91.44	3.600
18	85.00	3.346	86.36	3.400
17	80.00	3.150	81.28	3.200
16	75.00	2.953	76.20	3.000
15	70.00	2.756	71.12	2.800
14	65.00	2.559	66.04	2.600
13	60.00	2.362	60.96	2.400
12	55.00	2.165	55.88	2.200
11	50.00	1.969	50.80	2.000
10	45.00	1.772	45.72	1.800
9	40.00	1.575	40.64	1.600
8	35.00	1.378	35.56	1.400
7	30.00	1.181	30.48	1.200
6	25.00	0.984	25.40	1.000
5	20.00	0.787	20.32	0.800
4	15.00	0.591	15.24	0.600
3	10.00	0.394	10.16	0.400
2	5.00	0.197	5.08	0.200
N	L1 [mm]	L1 [inch]	L1 [mm]	L1 [inch]
	P=5.00 mm, 0.197inch		P=5.08mm, 0.200 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 664 / VDE 0110.
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 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



MAX. NRN./NOS.

76680/5
17.07.14 MA_J
MODIFICATION

00
Weidmüller

CAT.NO.:.

C 41708 **10**

DRAWING NO. SHEET 01 OF 01 SHEETS
ISSUE NO.



DATE	NAME
DRAWN	XU_S
RESPONSIBLE	WU_M
CHECKED	ZHOU_N
APPROVED	XU_S

SCALE: 2/1
SUPERSEDES:.

LM 5.../.../90 ...

LEITERPLATTENKLEMME
PCB TERMINAL

PRODUCT FILE: LM

7065

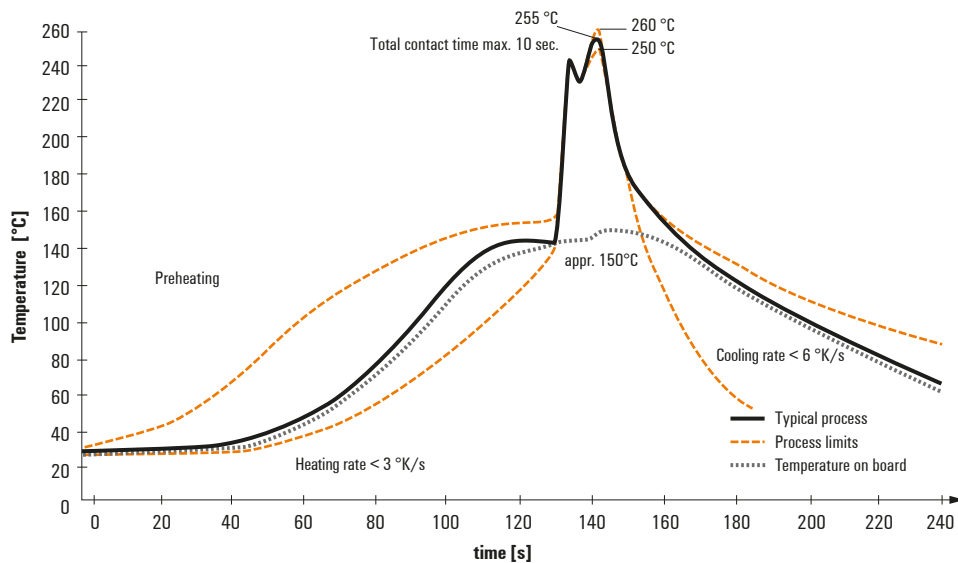
Recommended wave soldering profiles

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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.

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