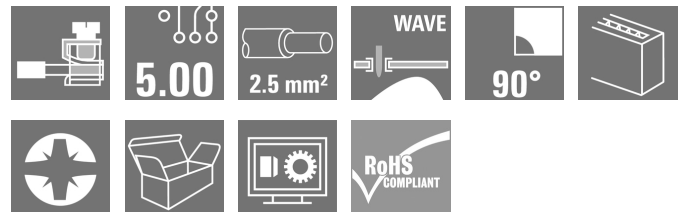
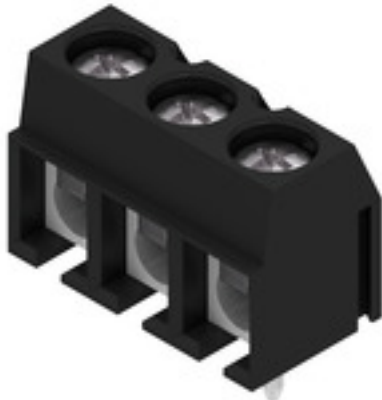


PM 5.00/03/90 3.5SN BK BX

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Product image



PCB terminal with leaf spring connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°. 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, black, Pressure clamp connection, Clamping range, max. : 2.5 mm ² , Box
Order No.	1791640000
Type	PM 5.00/03/90 3.5SN BK BX
GTIN (EAN)	4032248223039
Qty.	500 Stück
Product data	IEC: 600 V / 24 A / 0.13 - 2.5 mm ² UL: 300 V / 15 A / AWG 26 - AWG 14
Packaging	Box

Erstellungs-Datum May 30, 2023 3:17:28 PM CEST

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Dimensions and weights

Depth	8 mm	Depth (inches)	0.315 inch
Height	13.5 mm	Height (inches)	0.531 inch
Height of lowest version	10 mm	Width	15.6 mm
Width (inches)	0.614 inch	Net weight	2.478 g

Temperatures

Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
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System parameters

Product family	OMNIMATE Signal - series PM	Wire connection method	Pressure clamp 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	Number of rows	1
Max. adjacent poles per row	24	Solder pin length (l)	3.5 mm
Solder pin dimensions	d = 1.0 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, above the PCB; with conductor connected	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Protection degree	IP20		

Material data

Insulating material	Wemid (PA)	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	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	1.5...3.5 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.	120 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	120 °C		

Conductors suitable for connection

Clamping range, min.	0.13 mm ²
Clamping range, max.	2.5 mm ²
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 ²
Solid, max. H05(07) V-U	2.5 mm ²
Flexible, min. H05(07) V-K	0.13 mm ²
Flexible, max. H05(07) V-K	2.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4,	0.25 mm ² min.

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w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm²
 max.

w. wire end ferrule, DIN 46228 pt 1, 0.25 mm²
 min.

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

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm ²
wire end ferrule	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	wire end ferrule	Type	fine-wired
		nominal	0.75 mm ²
		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.75/12 W
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1 mm ²
		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H1.0/12 GE
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.25 mm ²
		Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0.25/10 HBL
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.34 mm ²
		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, 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	600 V
Rated voltage for surge voltage class / pollution degree III/2	250 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	3 x 1s with 120 A

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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)	15 A	Rated current (Use group D / CSA)	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.				

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 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	333 mm
VPE width	140 mm	VPE height	52 mm

Type tests

Test: Durability of markings	Test	mark of origin, type identification, pitch, type of material, approval marking UL, approval marking CSA, durability
	Evaluation	available

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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 conductor cross-section	solid 0.14 mm ²
		Type of conductor and conductor cross-section	stranded 0.14 mm ²
		Type of conductor and conductor cross-section	solid 2.5 mm ²
		Type of conductor and conductor cross-section	stranded 2.5 mm ²
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
Evaluation	passed		
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 conductor cross-section	stranded 0.25 mm ²
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm ²
	Evaluation	passed	
	Requirement	0.7 kg	
Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm ²	
	Type of conductor and conductor cross-section	stranded 2.5 mm ²	
	Type of conductor and conductor cross-section	AWG 14/1	
	Type of conductor and conductor cross-section	AWG 14/19	
Evaluation	passed		

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Technische Daten

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00		
	Requirement	≥10 N		
	Conductor type	Type of conductor and conductor cross-section	stranded 0.25 mm ²	
		Type of conductor and conductor cross-section	AWG 26/1	
		Type of conductor and conductor cross-section	AWG 26/19	
	Evaluation	passed		
	Requirement	≥20 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-K0.5	
		Evaluation	passed	
	Requirement	≥50 N		
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5	
		Type of conductor and conductor cross-section	H07V-K2.5	
		Type of conductor and conductor cross-section	AWG 14/1	
		Type of conductor and conductor cross-section	AWG 14/19	
	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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	c2abd024-c370-41bc-90fc-5ba34b090103

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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"> 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

Approvals

Approvals



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

Downloads

Engineering Data	CAD data – STEP
Engineering Data	WSCAD
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 FLIndustr.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

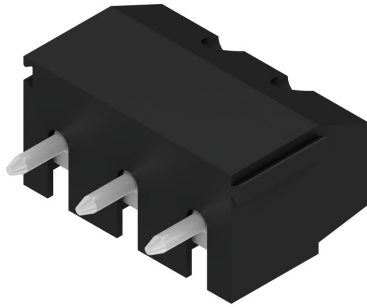
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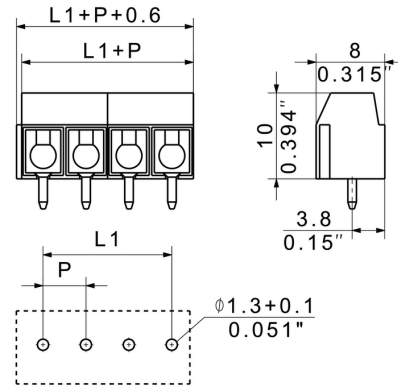
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Zeichnungen

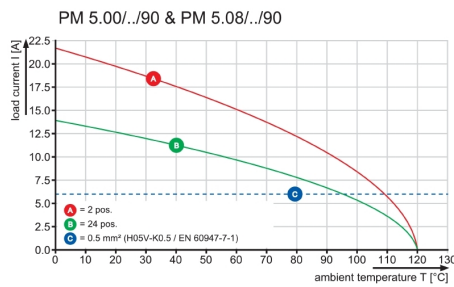
Product image



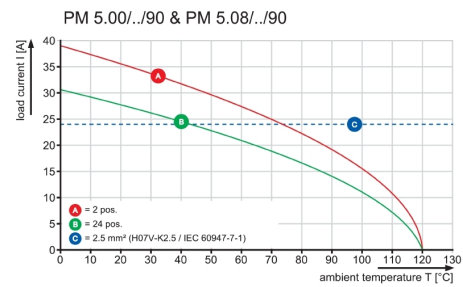
Dimensional drawing



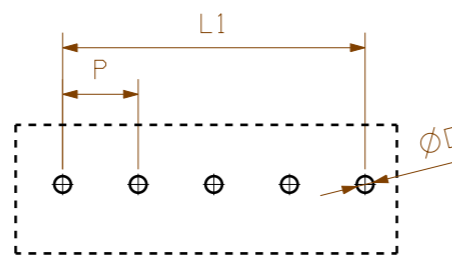
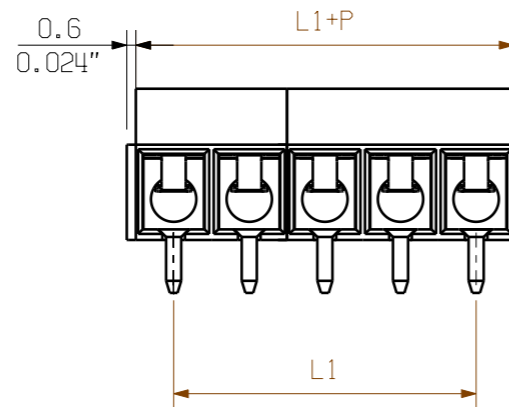
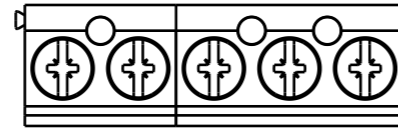
Graph



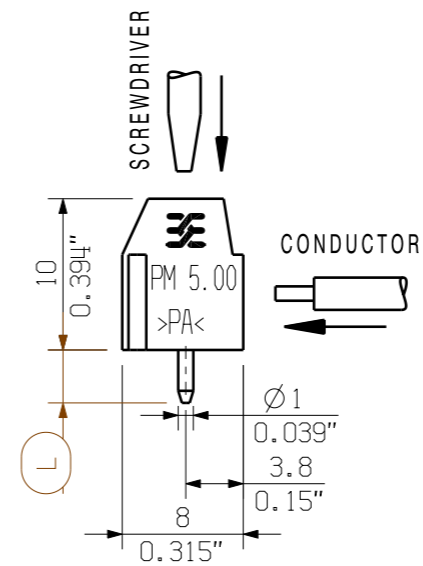
Graph



09



PCB LAYOUT



L = 3.5 +/- 0.2
 P = 5.00
 L1 = (N-1)XP

KUNDENZEICHNUNG
 CUSTOMER DRAWING

For the mounting of PCBs, it should be noted that the rated data stated in the catalog 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.

14	65.00	2.559
13	60.00	2.362
12	55.00	2.165
11	50.00	1.969
10	45.00	1.772
9	40.00	1.575
8	35.00	1.378
7	30.00	1.181
6	25.00	0.984
5	20.00	0.787
4	15.00	0.591
3	10.00	0.394
2	5.00	0.197
N	L1 [mm]	L1 [inch]

GENERAL TOLERANCE: DIN ISO 2768-m		91688/5 20.01.17 MA_J		01		Cat.no.: .	
RoHS COMPLIANT		Max. nos.		Modification		Weidmüller	
		Date		Name		C 41698	
Scale: 5/1		Drawn		12.03.2005		HE_J	
Supersedes: .		Responsible		23.01.2017		MA_J	
		Checked		ZHOU_N		Sheet 01 of 01 sheets	
		Approved		XU_S		Product file: PM 5.00	
						7062	

PM 5.00/.../90 ...
 LEITERPLATTENKLEMME
 PCB TERMINAL

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Recommended wave soldering profiles

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 Fax: +49 5231 14-292083
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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.