



## Digital panel meter 4-digit

### M1

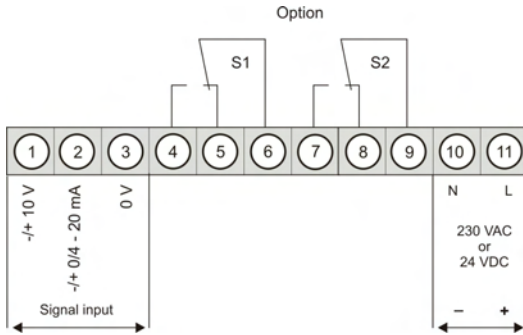
- red display with -1999...9999 digits (optional green, orange or blue displays)
- minimal installation depth: 97 mm without plug-in terminal
- min-/max-value recording
- 10 adjustable setpoints
- display flashing at threshold undercut/ exceedance
- tara function
- zero-point slow-down
- programming interlock via access code
- protection class IP65 at the front
- plug-in terminal
- optional: 2 relay outputs
- accessories: PC-based configuration software PM-TOOL

# Digital panel meters

- Direct current
- Potentiometer
- Thermocouple
- Direct voltage
- Resistance
- Shunt
- PT100



## • Direct current, direct voltage



Supply 230 VAC

Supply 24 VDC

**ORDER NUMBER**  
(without options)

**EUR**

**M1-6VR4B.0001.570AD**

165,00

**M1-6VR4B.0001.770AD**

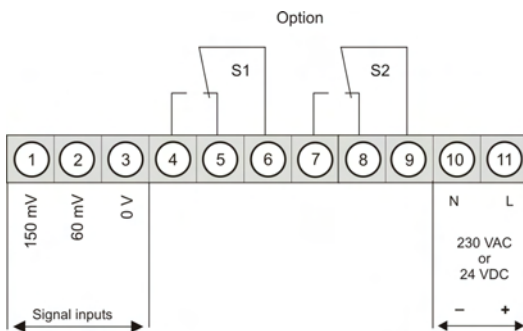
175,00

For further voltage inputs see options!

### Product key options:

M	1-6V	R	4	B.	0	0	0	1.	5	7	0	A	D	EUR		
M	1-6V	R	4	B.	0	0	0	1.	5	7	0	A	D			
M	1-6V	R	4	B.	0	0	0	1.	7	7	0	A	D			
														2	2 relay outputs	20,00
														1	without keypad, operation on the back	on demand
														B	Blue	38,00
														G	Green	9,50
														Y	Orange	3,00

## • Direct voltage (Shunt)



Supply 230 VAC

Supply 24 VDC

**M1-6VR4B.0002.570AD**

190,00

**M1-6VR4B.0002.770AD**

200,00

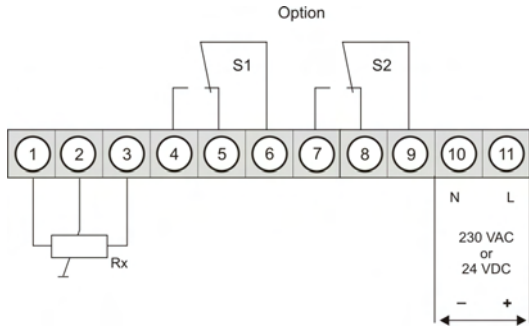
### Product key options:

M	1-6V	R	4	B.	0	0	0	2.	5	7	0	A	D	EUR		
M	1-6V	R	4	B.	0	0	0	2.	5	7	0	A	D			
M	1-6V	R	4	B.	0	0	0	2.	7	7	0	A	D			
														2	2 relay outputs	20,00
														1	without keypad, operation on the back	on demand
														B	Blue	38,00
														G	Green	9,50
														Y	Orange	3,00

**ORDER NUMBER**  
(without options)

**EUR**

• **Potentiometer 0-100 % (>1 kΩ ... <1000 kΩ)**



Supply 230 VAC

**M1-6VR4B.0005.570AD**

190,00

Supply 24 VDC

**M1-6VR4B.0005.770AD**

200,00

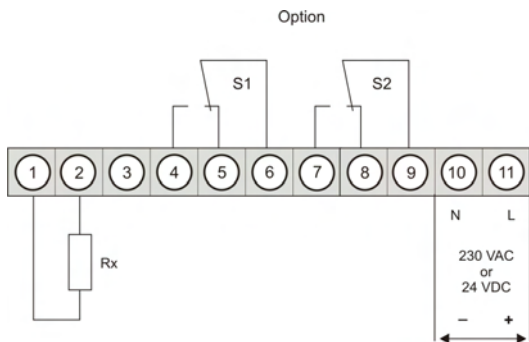
**Product key options:**

M	1-	6	V	R	4	B.	0	0	0	5.	5	7	0	A	D
M	1-	6	V	R	4	B.	0	0	0	5.	7	7	0	A	D

EUR

2	2 relay outputs	20,00
1	without keypad, operation on the back	on demand
B	Blue	38,00
G	Green	9,50
Y	Orange	3,00

• **Resistance (1 kΩ, 10 kΩ, 100 kΩ or 1000 kΩ)**



Supply 230 VAC

**1 kΩ**

**M1-6VR4B.0806.570AD**

190,00

Supply 24 VDC

**1 kΩ**

**M1-6VR4B.0806.770AD**

200,00

Supply 230 VAC

**10 kΩ**

**M1-6VR4B.0506.570AD**

190,00

Supply 24 VDC

**10 kΩ**

**M1-6VR4B.0506.770AD**

200,00

Supply 230 VAC

**100 kΩ**

**M1-6VR4B.0606.570AD**

190,00

Supply 24 VDC

**100 kΩ**

**M1-6VR4B.0606.770AD**

200,00

Supply 230 VAC

**1000 kΩ**

**M1-6VR4B.0706.570AD**

190,00

Supply 24 VDC

**1000 kΩ**

**M1-6VR4B.0706.770AD**

200,00

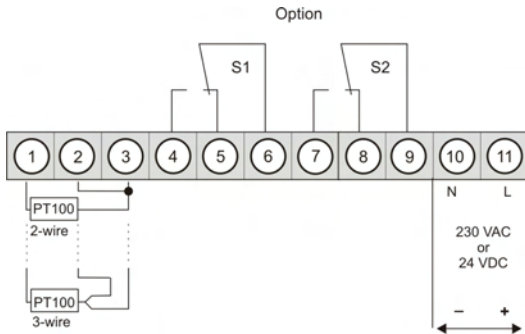
**Product key options:**

M	1-	6	V	R	4	B.	0	X	0	6.	5	7	0	A	D
M	1-	6	V	R	4	B.	0	X	0	6.	7	7	0	A	D

EUR

2	2 relay outputs	20,00
1	without keypad, operation on the back	on demand
B	Blue	38,00
G	Green	9,50
Y	Orange	3,00

• **PT100 (2-/3-wire) -200°C...850°C / -328°F...1562°F**



Supply 230 VAC

**M1-6TR4B.030C.570AD**

195,00

Supply 24 VDC

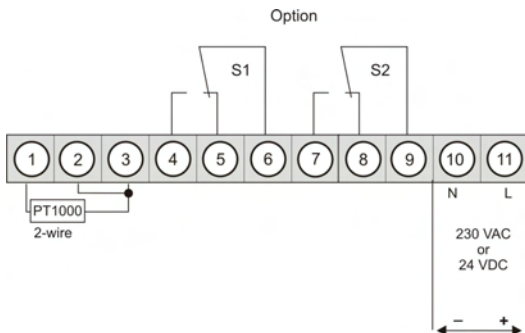
**M1-6TR4B.030C.770AD**

205,00

Product key options:

M	1-	6	T	R	4	B.	0	3	0	C.	5	7	0	A	D	EUR
M	1-	6	T	R	4	B.	0	3	0	C.	7	7	0	A	D	
										2	2 relay outputs				20,00	
										1	without keypad, operation on the back		on demand			
										B	Blue				38,00	
										G	Green				9,50	
										Y	Orange				3,00	

• **PT1000 (2-wire) -200°C...850°C / -328°F...1562°F**



Supply 230 VDC

**M1-6TR4B.060C.570AD**

195,00

Supply 24 VDC

**M1-6TR4B.060C.770AD**

205,00

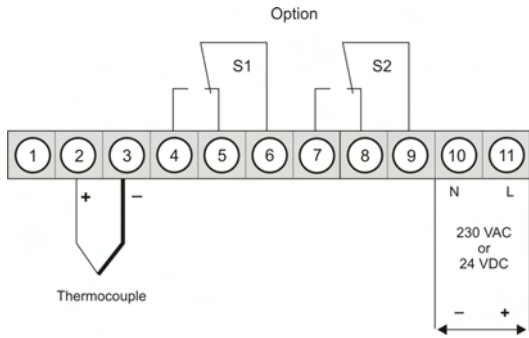
Product key options:

M	1-	6	T	R	4	B.	0	6	0	C.	5	7	0	A	D	EUR
M	1-	6	T	R	4	B.	0	6	0	C.	7	7	0	A	D	
										2	2 relay outputs				20,00	
										1	without keypad, operation on the back		on demand			
										B	Blue				38,00	
										G	Green				9,50	
										Y	Orange				3,00	

**ORDER NUMBER**  
(without options)

**EUR**

• **Thermocouple Type L, J, K, B, S, N, E, T, R**



Supply 230 VAC

**M1-6TR4B.040X.570AD**

195,00

Supply 24 VDC

**M1-6TR4B.040X.770AD**

205,00

**Product key options:**

M	1-	6	T	R	4	B.	0	4	0	X.	5	7	0	A	D
M	1-	6	T	R	4	B.	0	4	0	X.	7	7	0	A	D

**EUR**

2	2 relay outputs	20,00
1	without keypad, operation on the back	on demand
B	Blue	38,00
G	Green	9,50
Y	Orange	3,00

• **Accessories**

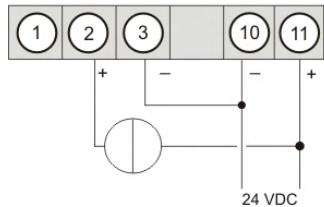
PC based configuration software PM-Tool for devices without keypad, for a simple adjustment of standard devices, incl. USB-cable and device adapter. Programming is made via an interface on the back.

**PM-TOOL-MUSB4**

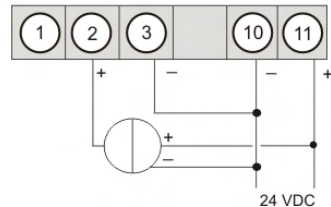
89,00

**Connection examples: M1-devices with current input / voltage input**

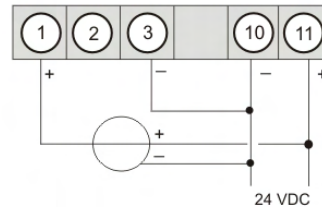
**M1 in combination with a 2-wire sensor 4-20 mA**



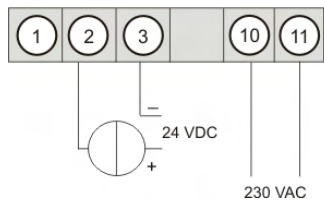
**M1 in combination with a 3-wire sensor 0/4-20 mA**



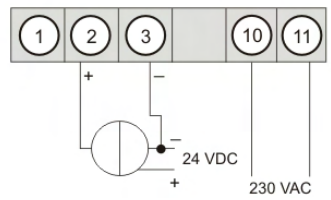
**M1 in combination with a 3-wire sensor 0-10 V**



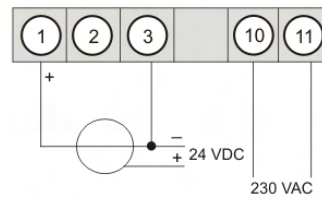
**2-wire sensor 0/4-20 mA**



**3-wire sensor 0/4-20 mA**



**3-wire sensor 0-10 V**



# Technical data

<b>Dimensions</b>	Housing	B72 x H36 x D97 mm, (incl. plug-in terminal D = 113 mm)	
	Panel cut-out	68.0 <sup>+0.7</sup> x 33.0 <sup>+0.6</sup> mm	
	Fixing	screw elements for wall thickness up to 3 mm	
	Housing material	PC Polycarbonate, black	
	Sealing material	EPDM, 65 Shore, black	
	Protection class	at the front IP65 Standard at the back IP00	
	Weight	approx. 200 g	
	Connection	plug-in terminal; wire cross section up to 2.5 mm <sup>2</sup>	
<b>Display</b>	Display	4-digit	
	Digit height	14 mm	
	Segment colour	red (Standard), optional available in green, blue and orange	
	Range of display	-1999 to 9999	
	Threshold values	optical display flashing	
	Overflow	horizontal bars at the top	
	Underflow	horizontal bars at the bottom	
	Display time/Meas. time	0.1 to 10.0 seconds	
<b>Measuring input</b>			
<i>M1-6VR4B.0001...</i>	Measuring span	-12...12 V	/ -22...24 mA
<i>Direct voltage/</i>	Measuring range	0-10 VDC	/ 0/4-20 mA
<i>Direct current</i>	Input resistance	Ri with ~100 kΩ	/ Ri with ~100 Ω
	Measuring error	0.1% of measuring range, ± 1 Digit	/ 0.1% of measuring range, ± 1 Digit
	Temperature drift	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 18 Bit at 1s measuring time	
<b>Messeingang</b>			
<i>M1-6VR4B.0002...</i>	Measuring span	-5...80 mV	/ -10...180 mV
<i>Shunt</i>	Measuring range	0...60 mV	/ 0...150 mV
	Input resistance	Ri with ~12 kΩ	/ Ri with ~30 kΩ
	Measuring error	0.1% of measuring range, ± 1 Digit	/ 0.1% of measuring range, ± 1 Digit
	Temperature drift	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 18 Bit at 1s measuring time	
<b>Measuring input</b>			
<i>M1-6VR4B.0005...</i>	Measuring span	>1 kΩ ... <1000 kΩ	
<i>Potentiometer</i>	Measuring range	0-100 %	
	Measuring error	0.1% of measuring range, ± 1 Digit	
	Temperature drift	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 18 Bit at 1s measuring time	
<b>Measuring input</b>			
<i>M1-6VR4B.0x06...</i>	Measuring span	0...1,1 kΩ, 0...11 kΩ, 0...110 kΩ, 0...1100 kΩ	
<i>Resistance</i>	Measuring range	0...1 kΩ, 0...10 kΩ, 0...100 kΩ, 0...1000 kΩ	
	Measuring error	0.1% of measuring range, ± 1 Digit	
	Temperature drift	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 18 Bit at 1s measuring time	
<b>Measuring input</b>			
<i>M1-6TR4B.030C...</i>	Measuring range	-200...850°C / -328...1562°F	
<i>PT100</i>	Measuring error	0.1% of measuring range, ± 1 Digit	
	Temperature drift	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 0.1°C or 0.1°F	
<b>Measuring input</b>			
<i>M1-6TR4B.060C...</i>	Measuring range	-200...850°C / -328...1562°F	
<i>PT1000</i>	Measuring error	0.2% of measuring range, ± 1 Digit	
	Temperature drift	100 ppm/K	
	Measuring principle	U/F-conversion	
	Resolution	approx. 0.1°C or 0.1°F	

**Measuring input**

M1-6TR4B.040X...  
Thermocouple

Measuring range	Type L -200...900°C Type J -210...1200°C Type K -270...1372°C Type B 80...1820°C Type S -50...1768°C Type N -270...1300°C Type E -270...1000°C Type T -270...400°C Type R -50...1768°C
Measuring error	2 K, ± 1 Digit
Temperature drift	100 ppm/K
Measuring time	0.1 ... 10.0 seconds
Measuring principle	U/F-conversion
Resolution	0.1°C
Characteristic line error	<±1 kΩ
Reference junction	Thermistor

**Output**

Relay	with change-over contact 250 V / 5 AAC, 30 V / 5 VDC
Switching cycles	30 * 10 <sup>3</sup> with 5 AAC, 5 ADC ohm resistive load 10 * 10 <sup>6</sup> mechanically Diversity according to DIN EN50178 / Characteristics according to DIN EN60255

**Power pack**

Supply	230 VAC +/- 10 % (max. 6 VA) 24 VDC +/- 10 %, galvanisch getrennt (max. 1 VA)
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**Memory**

EEPROM	
Data life	≥ 100 years

**Ambient conditions**

Working temperature	0 to + 60 °C
Storing temperature	-20 to + 80 °C
Climatic density	relative humidity 0-85% on years average without dew

**CE-sign**

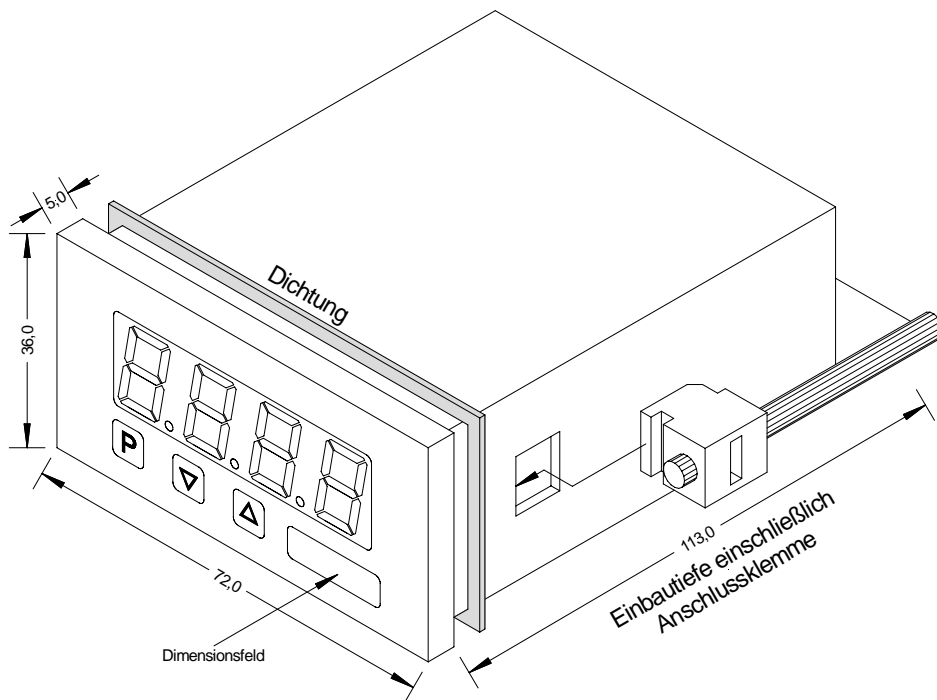
Conformity to directive 2004/108/EG

**EMV**

EN 61326

**Safety standard**

EN 61010; EN 60664-1

**Housing:**

# Product key M1

## Digital display (Standard)

	M	1-	6	V	R	4	B.	0	0	0	1.	7	7	0	A	D	
<b>Basic type M-line</b>																	<b>Dimension</b>
																	<b>D</b> physical unit (free choice)
<b>Installation depth</b>																	<b>Version</b>
113 mm																	<b>A</b> A
incl. plug-in terminal																	
<b>Housing size</b>																	<b>Setpoints</b>
72x36x97mm (BxHxD)																	<b>0</b> no setpoints
without plug-in terminal																	<b>2</b> relay outputs
<b>Display type</b>																	<b>Protection class</b>
Temperature																	<b>1</b> Without keypad, Operation on the back
V, A, Ohm																	<b>7</b> IP65/steckbare Klemme
<b>Display colours</b>																	<b>Supply voltage</b>
Blue																	<b>4</b> 115 VAC plus 10.25€
Green																	<b>5</b> 230 VAC
Red																	<b>7</b> 24 VDC galv. insulated
Orange																	
<b>Number of digits</b>																	<b>Measuring input</b>
4-digit																	<b>1</b> Direct current, direct voltage
																	<b>2</b> Shunt
																	<b>5</b> Potentiometer
																	<b>6</b> Resistance
																	<b>C</b> PT100 wire 800°C
																	<b>X</b> Thermocouple
																	Type B, E, J, K, L, N, R, S, T
<b>Digit height</b>																	<b>Analog output</b>
14 mm																	<b>0</b> none
<b>Digital input</b>																	<b>Temperatur devices</b>
none																	<b>3</b> PT100 2-/3-wire
																	<b>4</b> Thermocouple
																	<b>Resistance</b>
																	<b>8</b> 1 kΩ
																	<b>5</b> 10 kΩ
																	<b>6</b> 100 kΩ
																	<b>7</b> 1000 kΩ
																	<b>Sensor supply</b>
																	<b>0</b> none