

# M1 – 4-digit digital panel meter in 96x48 mm (BxH)

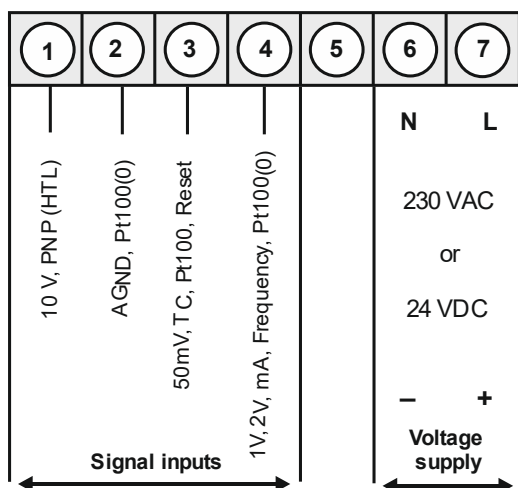
## Multi-function measuring input: Direct voltage, Direct current, Pt100(0), Frequency, Thermocouple, Rotation speed, Counter

- red display of -1999...9999 Digits (optional green, orange or blue display)
- minimal installation depth: 25 mm without plug-in screw terminal
- digit height 14 mm
- min/max-value recording
- 5 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- Tara-function
- programming interlock via access code
- protection class IP65 at the front side
- plug-in screw terminal
- accessories: PC-based configuration kit PM-TOOL with USB-adapter



**ORDER NUMBER** **EUR**  
(without options)

### • Multi-function measuring input



Supply 230 VAC

**M1-1UR4B.000X.570xD** **164.10**

Supply 24 VDC galv. isolated

**M1-1UR4B.000X.770xD** **174.70**

### • Order key for options

M	1-	1	U	R	4	B.	0	0	0	X.	5	7	0	x	D
M	1-	1	U	R	4	B.	0	0	0	X.	7	7	0	x	D

D	Dimension/physical unit, customer-specific settings	20.00
B	Blue	35.00
G	Green	10.10
Y	Orange	10.10

Please quote physical unit by order, like e.g. m/min.

### • Parameterisation software

PC-based configuration software PM-TOOL, for devices without keypad; for a simple adjustment of standard devices, incl. USB-adapter. Programming happens via interface on the back side.

**PM-TOOL-MUSB4** **94.30**

## • Technical data

<b>Housing</b>	Dimensions	W96 x H48 x D25 mm, (with plug-in terminal D=38 mm)	
	Panel cut-out	92.0 <sup>+0.8</sup> x 45.0 <sup>+0.6</sup> mm	
	Fixing	screw elements for a wall thickness up to 3 mm	
	Housing material	PC Polycarbonate, black, UL94V-0	
	Sealing material	EPDM, 65 Shore, black	
	Protection class	IP65 (Standard) at the front, IP00 at the back side	
	Weight	approx. 100 g	
<b>Display</b>	Connection	plug-in terminal; wire cross section up to 2.5 mm <sup>2</sup>	
	Display	4-digit	
	Digit height	14 mm	
	Segment colour	red (Standard), optional available in green, blue or orange	
	Display range	-1999 to 9999	
	Limit values	optical display flashing	
	Overflow	horizontal bars at the top	
Underflow	horizontal bars at the bottom		
Display/Measuring time	0.1 to 10.0 seconds		
<b>Measuring input</b>			
Signal	Measuring range	Measuring range	Resolution
Voltage	0...10 V (Ri > 100 kOhm)	0...12 V	≥ 14 bit
Voltage	0...2 V (Ri ≥ 10 kOhm)	0...2.2 V	≥ 14 bit
Voltage	0...1 V (Ri ≥ 10 kOhm)	0...1.1 V	≥ 14 bit
Voltage	0...50 mV (Ri ≥ 10 kOhm)	0...75 mV	
Current	4...20 mA (Ri = ~125 Ohm)	1...22 mA	
Current	0...20 mA (Ri = ~125 Ohm)	0...22 mA	
Pt100-3-wire	-50...200°C	-58...392°F	0.1°C / 0.1°F
Pt100-3-wire	-200...850°C	-328...1562°F	1°C / 1°F
Pt1000-2-wire	-200...850°C	-328...1562°F	1°C / 1°F
Thermo K	-270...1350°C	-454...2462°F	1°C / 1°F
Thermo S	-50...1750°C	-328...3182°F	1°C / 1°F
Thermo N	-270...1300°C	-454...2372°F	1°C / 1°F
Thermo J	-170...950°C	-274...1742°F	1°C / 1°F
Thermo T	-270...400°C	-454...752°F	1°C / 1°F
Thermo R	-50...1768°C	-58...3214°F	1°C / 1°F
Thermo B	80...1820°C	176...3308°F	1°C / 1°F
Thermo E	-270...1000°C	-454...1832°F	1°C / 1°F
Thermo L	-200...900°C	-328...1652°F	1°C / 1°F
Frequency	0...10 kHz	0...10 kHz	0.001 Hz / ±1
NPN	0...3 kHz	0...3 kHz	0.001 Hz / ±1
PNP	0...1 kHz	0...1 kHz	0.001 Hz
Rotation speed	0...9999 1/min	0...9999 1/min	0.001 1/min
Counter	0...9999 (Prescaler up to 1000)		
<b>Pulse counter</b>	TTL Low <2 V / High >3 V	<b>HTL/PNP</b> Low <6 V / High >8 V	
	NPN Low <0.8 V / High via resistance	<b>Namur</b> Low <1.5 mA / High >2.5 mA	
<b>Reset input</b>	active <0.8 V		
<b>Measuring error</b>	Standard	0.2% of measuring range ±1 digit	
	Pt100 / Pt1000	0.5% of measuring range ±1 digit	
	Thermocouples	0.3% of measuring range ±1 digit	
<b>Accurateness</b>	Reference junction	± 1°C	
	Drift of temperature	100 ppm/K	
	Measuring time	0.01...2.0 seconds	
	Measuring rate	approx. 1/s at temperature sensor, approx. 100/s at standard signals	
	Measuring principle	U/F-conversion	
Resolution	approx. 14 bit at 1 sec measuring time		
<b>Power pack</b>	Supply	230 VAC 50/60 Hz, ≤ 3 VA	
		24 VDC ± 10% galvanic isolated, ≤ 1 VA	
<b>Memory</b>	EEPROM	Data preservation ≥ 100 years at 25°C	
<b>Ambient conditions</b>	Working temperature	-20 to +50°C	
	Storing temperature	-30 to +70°C	
	Weathering resistance	relative humidity 0-85% on years average without dew	
<b>CE-sign</b>	Conformity according to directive 2014/30/EU		
<b>EMV</b>	EN 61326		
<b>Safety standard</b>	According to low voltage directive 2014/35/EU; EN 61010; EN 60664-1		

