

M1 – 4-digit digital panel meter in 48x24 mm (WxH)

Multi-function measuring inputs:

Direct voltage, Direct current, Pt100, Pt1000, Frequency,
Thermocouple, Rotation speed, Counter

- red display of -1999...9999 Digits (optional green, orange or blue display)
- minimal installation depth: 52 mm without plug-in screw terminal
- digit height 10 mm
- min/max value recording
- 5 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- Tara-function
- two semiconductor switching points
- programming interlock via access code
- protection class IP65 at the front side
- plug-in screw terminal
- accessories: PC-based configuration kit PM-TOOL with CD & USB-adaptor
- on demand: devices for working temperatures of -40°C ... 80°C or -25°C...60°C



ORDER NUMBER
(without options)

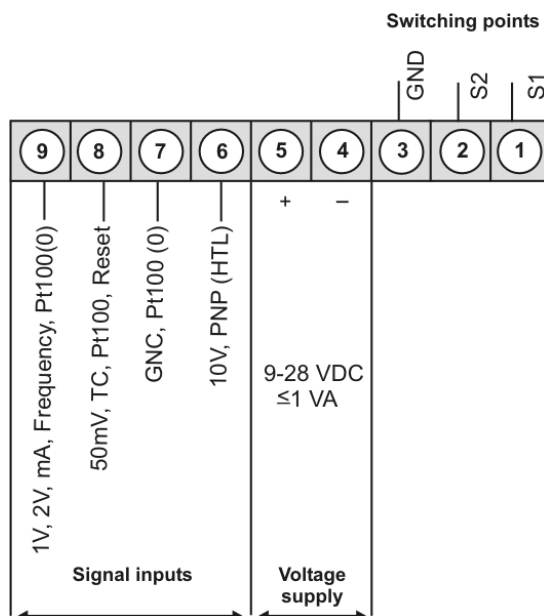
EUR

• Multi-function measuring input

Supply 9-28 VDC

(galvanically not isolated)

M1-7UR4A.000X.372AD



• Order key for options

M 1- 7 U R 4 A. 0 0 0 X. 3 7 2 A D

EUR

B	Blue
G	Green
Y	Orange

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. CD & USB-adaptor. Programming happens via interface on the back side.

PM-TOOL-MUSB4

• Technical data

Housing	Dimensions	W48 x H24 x D52 mm, (with plug-in terminal D=67 mm)
	Panel cut-out	45.0 ^{+0.6} x 22.2 ^{+0.3} mm
	Fixing	screw elements for a wall thickness up to 5 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	ca. 100 g
Display	Connection	plug-in terminal; wire cross section up to 2.5 mm ²
	Display	4-digit
	Digit height	10 mm
	Segment colour	red (Standard), optional available in green, blue or orange
	Display range	-1999 to 9999
	Switching points	LED S1, LED S2
	Overflow	horizontal bars at the top
Underflow	horizontal bars at the bottom	
Display/Measuring time	0.1 to 10.0 seconds	

Measuring input

Signal	Measuring range	Measuring range	Auflösung	Bemerkung
Voltage	0...10 V	0...12 V	≥ 14 bit	Ri > 100 kOhm
Voltage	0...2 V	0...2.2 V	≥ 14 bit	Ri ≥ 10 kOhm
Voltage	0...1 V	0...1.1 V	≥ 14 bit	Ri ≥ 10 kOhm
Voltage	0...50 mV	0...55 mV		Ri ≥ 10 kOhm
Current	4...20 mA	1...22 mA		Ri = ~125 Ohm
Current	0...20 mA	0...22 mA		Ri = ~125 Ohm
Pt100	-50...200°C	-58...392°F	0.1°C / 0.1°F	3-wire
Pt100	-200...850°C	-328...1562°F	1°C / 1°F	3-wire
Pt1000	-200...850°C	-328...1562°F	1°C / 1°F	2-wire
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	0...9999		Prescaler up to 1000
Pulse counter	TTL Low <2 V High >3 V	HTL/PNP Low <60 V High >8 V	NPN Low <0,8 V High via resistance	Namur Low <1,5 V High >2,5 V

Reset input Active <0,8

Measuring error Standard
Pt100 / Pt1000
Thermocouples

0.2% of measuring range ±1 Digit
0.5% of measuring range ±1 Digit
measuring range ±1 Digit

Accurateness Reference junction ± 1°C
Drift of temperature 100 ppm/K
Measuring time 0.01...20.0 seconds
Measuring rate approx. 1/s at temperature sensor, approx. 100/s at standard signals
Measuring principle U/F-conversion

Output Resolution approx. 14 bit at 1s measuring time
Semiconductor switchpoint Low-side / NPN: max. 28V, 100 mA
High / PNP U_V -3V, 100 mA

Power pack Supply 98-28 VDC galvanically not isolated, ≤1 VA

Memory EEPROM
Data preservation ≥ 100 years at 25°C

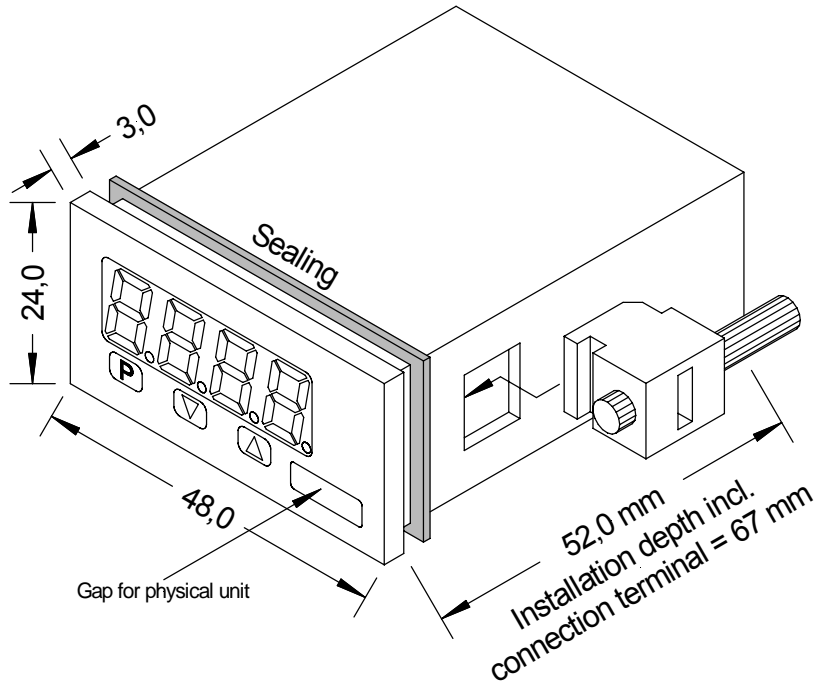
Ambient conditions Working temperature -20 to +50°C
Storing temperature -30 to +70°C
Weathering resistance relative humidity 0-85% on years average without dew

CE-sign Conformity according to directive 2004/108/EG

EMV EN 61326

Safety standard According to low voltage directive 2006/95/EG; EN 61010; EN 60664-1

Housing:



• Order key

		M	1-	7	U	R	4	A.	0	0	0	X.	3	7	2	A	D		
Standard type M-Line																Operation			
Installation depth 67 mm incl. plug-in terminal																<input type="checkbox"/> D physical unit			
Housing size 48x24x52 mm (WxHxD)																Version			
																<input type="checkbox"/> A A			
Display type Multi-function meas. input																Switching points			
																<input type="checkbox"/> 2 2 semiconductor switchpoints			
Display colours Green Red Orange Blue																Protection class			
																<input type="checkbox"/> 7 IP65 / plug-in terminal			
Number of digits 4-digit																Voltage supply			
																<input type="checkbox"/> 3 9-28 VDC, galv. not isolated			
Digit height 10 mm																Measuring input			
																<input type="checkbox"/> X Voltage, Current, Temperature, Frequency			
Interface without																Analog output			
																<input type="checkbox"/> 0 without			
																Sensor supply			
																<input type="checkbox"/> 0 without			