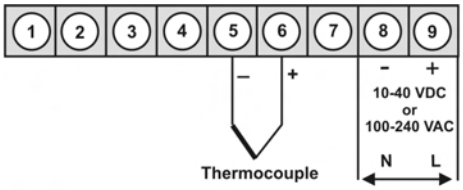
M3 – 5-digit digital panel meter 96x48 (BxH)
Thermocouple type L, J, K, B, S, N, E, T, R

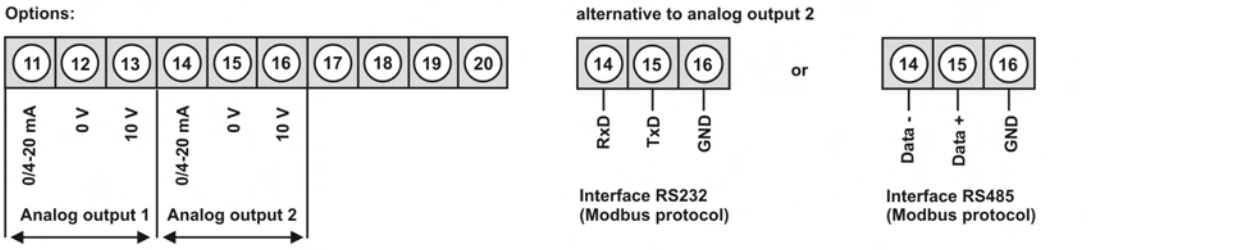
- red display of -19999…99999 digits (optional green, orange, blue or tricolour display)
- installation depth: 120 mm without plug-in screw terminal
- multi voltage power supply unit 100-240 VAC, alternatively 10-40 VDC
- adjustment via factory setting or directly on the sensor signal
- min-/max-memory with adjustable permanent display
- display flashing at threshold value exceedance / undercut
- flexible alarm system with adjustable delay times
- brightness control via parameter or front keys
- programming interlock via access code
- protection class IP65 at the front
- plug-in screw terminal
- optional: 2 or 4 relay outputs or 8 PhotoMos-outputs
- optional: 1 or 2 independently scalable analog outputs
- optional: interface RS232 or RS485
- accessories: pc-based configuration-kit PM-TOOL with CD & USB adapter
- on demand: devices for working temperatures of -20°C…60°C or -40°C…70°C

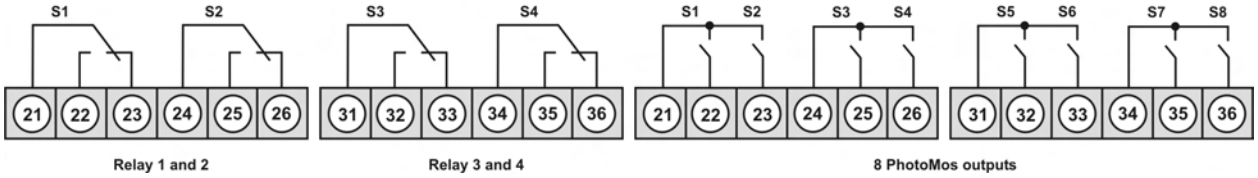
	ORDER NUMBER (without options)	EUR

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



Supply 100-240 VAC, DC ± 10%	M3-1TR5B.040X.S70BD	
Supply 10-40 VDC, 18-30 VAC	M3-1TR5B.040X.W70BD	





• Order key options

M	3-	1	V	R	5	B.	0	4	0	X.	S	7	0	B	D
M	3-	1	V	R	5	B.	0	4	0	X.	W	7	0	B	D

		EUR
	2	2 relay outputs
	4	4 relay outputs
	8	8 PhotoMos-outputs
	1	without keypad, operation on the back
	X	Analog output 0/4-20 mA, 0-10 VDC galv. insulated
	Y	2 analog outputs galv. insulated
	3	Interface RS232 galv. insulated
	4	Interface RS485 galv. insulated
	B	Blue
	G	Green
	Y	Orange
	T	Tricolour (Red-Green-Orange)

On demand state dimension unit on order, e.g. °F.

	ORDER NUMBER	EUR

• Parameterisation software

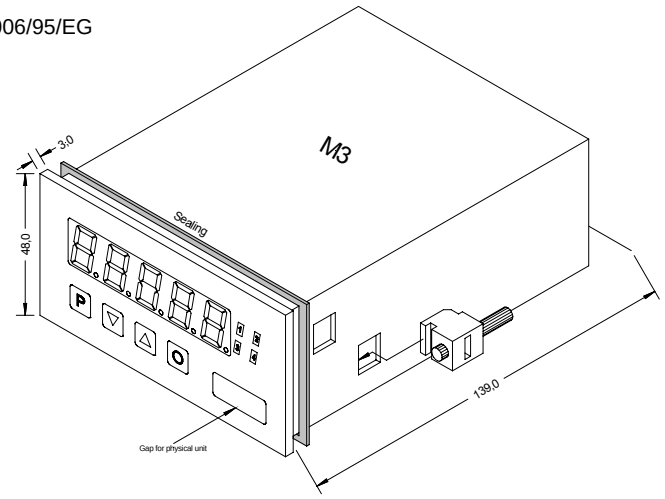
PC based configuration software PM-Tool for devices without keypad,
for a simple adjustment of standard devices, incl. CD & USB-adapter.
Programming is made via an interface on the back.

PM-TOOL-MUSB4

• Technical data

Dimensions	Housing	B96 x H48 x D120 mm, (incl. plug-in terminal D = 139 mm)
	Panel cut-out	$92.0^{+0.8}$ x $45.0^{+0.6}$ mm
	Fixing	screw elements for insulation thickness up to 3 mm
	Housing material	PC Polycarbonate, black
	Sealing material	EPDM, 65 Shore, black
	Protection type	front side IP65 standard, back side IP00
	Weight	approx. 350 g
	Connection	plug-in terminal; line cross-section up to 2.5 mm^2
Display	Display	5-digit
	Digit height	14 mm
	Segment colour	red (standard), optional available in green, blue, orange or tricolour (red/green/orange)
	Range of display	-19999 to 99999
	Threshold	optical display flashing
	Overflow	horizontal bars at the top
	Underflow	horizontal bars at the bottom
	Display time	0.1 to 10.0 seconds
Measuring input	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 fault	2 K, ± 1 Digit
	Temperature drift	100 ppm/K
	Measuring time	0.1 … 10.0 seconds
	Measuring principle	U/F-conversions
	Resolution	0.1°C
	Characteristic curve fault	<±1 K
	Reference junction	Thermistor
Output	Relays	with change-over contact 250 V / 5 AAC, 30 V / 5 ADC
	Switching cycles	10 * 10^5 at 5 AAC, 5 ADC contact rate, 10 * 10^6 mechanically
	PhotoMos output	Separation in accordance with DIN EN50178 / Specifications in accordance with DIN EN 60255 NOC contacts: 30 VDC/AC, 4 A
	Analog output	0-10 VDC / burden ≥ 10 kΩ, 0/4-20 mA / burden ≤ 500 Ω, 16 Bit
Interface	Protocol	manufacturer's specifics ASCII
	RS232	9.600 Baud, no parity, 8 DataBit, 1 StopBit, wire length max. 3 m
	RS485	9.600 Baud, no parity, 8 DataBit, 1 StopBit, wire length max. 1000 m
Power pack	Supply	100-240 VAC 50/60 Hz ± 10 % (max. 15 VA) 10-40 VDC, galvanic insulated, 18-30 VAC 50/60 Hz (max. 15 VA)
Memory	EEPROM	Data life ≥ 100 years at 25°C
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, EN 55011	
Safety standard	according to low voltage directive 2006/95/EG EN 61010; EN 60664-1	

Housing:



• Order key

	M	3-	1	T	R	5	B.	0	4	0	X.	S	7	0	B	D	

Basic type M-Line

Installation depth

139 mm (incl. plug-in terminal) 3

Housing size

96x48x120 mm (BxHxD) 1

Display type

Temperature T

Display colours

Blue	B
Green	G
Red	R
Red/Green/Orange	T
Orange	Y

Number of digits

5-digit 5

Digit height

14 mm B

Digital input

without	0	
Interface RS232	3	galv. insulated
Interface RS485	4	galv. insulated

Dimension

D physical unit (at buyer's option)

Version

B B

Swicthing points

0	no switching point
2	2 relay outputs
4	4 relay outputs
8	8 PhotoMos-outputs

Protection class

1	without keypad, via PM-TOOL
7	IP65 / plug-in terminal

Voltage supply

S	100-240 VAC
W	10-40 VDC galv. insulated

Measuring input

X Thermocouple

Analog output

0	without
X	1x 0-10 VDC, 0/4-20 mA
Y	2x 0-10 VDC, 0/4-20 mA

Thermocouple

4 Type L, J, K, B, S, N, E, T, R