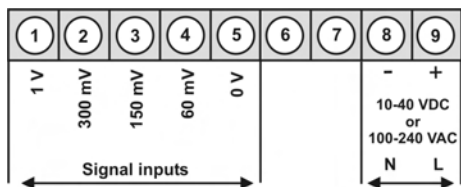




M3 – 5-digit digital panel meter 96x48 (BxH) Direct voltage signals Shunt 60 mV, 150 mV, 300 mV, 1000 mV

- 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
- 30 additional adjustable support points
- display flashing at threshold value exceedance / undercut
- zero key for the triggering of Hold, Tara, display change, setpoint setting, alarm actuation
- flexible alarm system with adjustable delay times
- demand measurement and energy measurement at constant voltage
- mathematical functions like reciprocal value, square root, square and rounding
- constant setting / setpoint setting
- sliding averaging
- 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: galv. isolated digital input for the triggering of Tara, Hold, display change
- 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

• Direct voltage (Shunt)



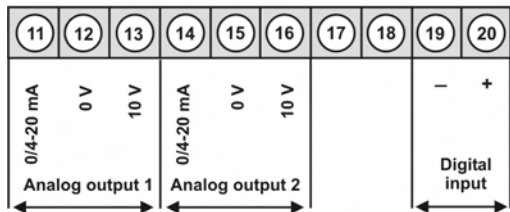
Supply 100-240 VAC, DC ± 10%

M3-1VR5B.0002.S70BD

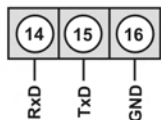
Supply 10-40 VDC, 18-30 VAC

M3-1VR5B.0002.W70BD

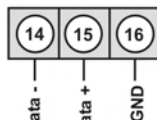
Options:



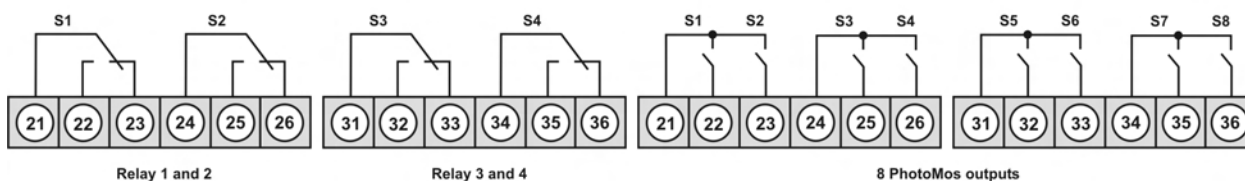
alternative to analog output 2



Interface RS232
(Modbus protocol)



Interface RS485
(Modbus protocol)



• Order key options

M	3-	1	V	R	5	B.	0	0	0	2.	S	7	0	B	D
M	3-	1	V	R	5	B.	0	0	0	2.	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. isolated
Y	2 analog outputs galv. isolated
3	Interface RS232 galv. isolated
4	Interface RS485 galv. isolated
I	Digital input galv. isolated
B	Blue
G	Green
Y	Orange
T	Tricolour (Red-Green-Orange)

On demand state dimension unit on order, e.g. A.

• 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.

ORDER NUMBER

EUR

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	Span	-5...75 mV / -15...180 mV / -30...360 mV / -100...1200 mV
	Measuring range	0...60 mV / 0...150 mV / 0...300 mV / 0...1000 mV
	Input resistance	Ri at ~12 kΩ / Ri at ~60 kΩ / Ri at ~30 kΩ / Ri at ~200 kΩ
	Measuring fault	0.2% of measuring range, ± 1 Digit / 0.2% 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
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
	Analog output	NOC contacts: 30 VDC/AC, 4 A 0-10 VDC / burden ≥ 10 kΩ, 0/4-20 mA / burden ≤ 500 Ω, 16 Bit
Digital input	Input galv. isolated	< 2.4 V OFF; 10 V ON; max. 30 VDC, Ri ~ 5 kΩ
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 isolated, 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:

