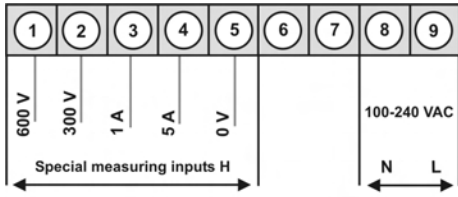




**M3 – 5-digit digital panel meter 96x48 (BxH)
AC current / AC voltage signals rms-value (TRMS)
300 VAC, 600 VAC, 1AAC, 5 AAC**

- 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
- 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
- power 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 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

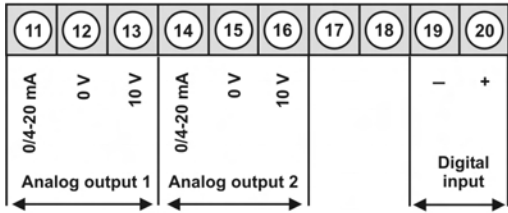
• AC current, AC voltage (RMS-value) – special measuring input H



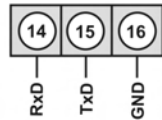
Supply 100-240 VAC, DC ± 10%

M3-1VR5B.0H04.S70BD

Options:

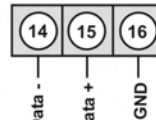


alternative to analog output 2

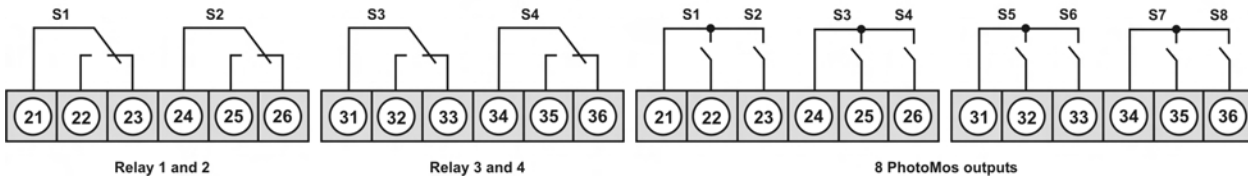


Interface RS232
(Modbus protocol)

or



Interface RS485
(Modbus protocol)



• Order key options

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

• 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

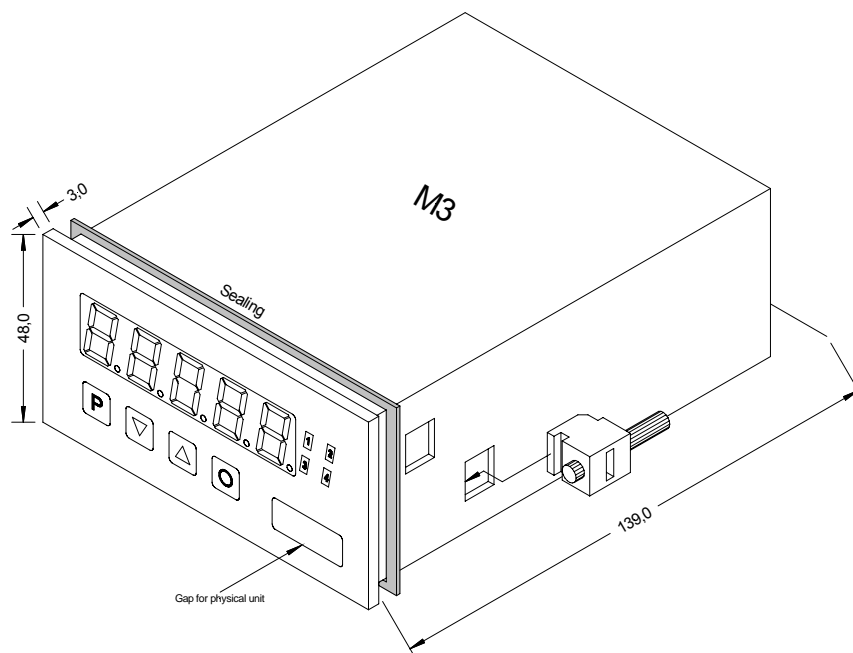
EUR

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	Measuring range	600 VAC / 300 VAC / 5 AAC / 1 AAC
	Input resistance	R _i at ~2 MΩ / R _i at ~1 MΩ / R _i at ~0.05 Ω / R _i at ~200 Ω
	Measuring fault	0.5% of measuring range at 50 Hz...1 kHz up to crestfactor 4 for input signals of 1...100% of final value
	Temperature drift	100 ppm/K
	Measuring time	0.1 ... 10.0 seconds
	Measuring principle	U/F-conversion
	Resolution	approx. 18 Bit at 1 second 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 Separation in accordance with DIN EN50178 / Specifications in accordance with DIN EN 60255
	PhotoMos output	NOC contacts: 30 VDC/AC, 4 A
	Analog output	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, R _i ~ 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)
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	V	R	5	B.	0	H	0	4.	S	7	0	B	D	
Basic type M-Line																	Dimension
																	<input type="checkbox"/> D physical unit (at buyer's option)
Installation depth 139 mm (incl. plug-in terminal)			<input type="checkbox"/> 3														Version
																	<input type="checkbox"/> B B
Housing size 96x48x120 mm (BxHxD)			<input type="checkbox"/> 1														Switching points
																	<input type="checkbox"/> 0 no switching point
																	<input type="checkbox"/> 2 2 relay outputs
																	<input type="checkbox"/> 4 4 relay outputs
																	<input type="checkbox"/> 8 8 PhotoMos-outputs
Display type V, A				<input type="checkbox"/> V													Protection class
																	<input type="checkbox"/> 1 Without keypad, operation via PM-TOOL
																	<input type="checkbox"/> 7 IP65 / plug-in terminal
Display colours																	Voltage supply
Blue																	<input type="checkbox"/> S 100-240 VAC
Green																	Measuring input
Red																	<input type="checkbox"/> 4 AC voltage, AC current
Red/Green/Orange																	Analog output
Orange																	<input type="checkbox"/> 0 without
																	<input type="checkbox"/> X 1x 0-10 VDC, 0/4-20 mA
																	<input type="checkbox"/> Y 2x 0-10 VDC, 0/4-20 mA
Number of digits 5-digit																	Special measuring input H
																	<input type="checkbox"/> H 300 VAC, 600 VAC, 1 AAC, 5 AAC
Digit height 14 mm																	
Digital input																	
without																	
1 digital input																	
Interface RS232																	
Interface RS485																	
Interface RS232																	
Interface RS485																	