



## **M3 – 5-digit digital panel meter in 96x24 mm (BxH) Direct current / direct voltage signals 0/4-20 mA, 0-10 VDC**

- red display from -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 galvanic isolated
- 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
- navigation keys for the triggering of Hold, Tara, display change, setpoint setting, alarm actuation
- flexible alarm system with adjustable delay times
- volume measurement (Totaliser)
- 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: 1 or 2 relay outputs
- optional: sensor supply
- optional: 1 independently scalable analog output
- optional: galv. insulated 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

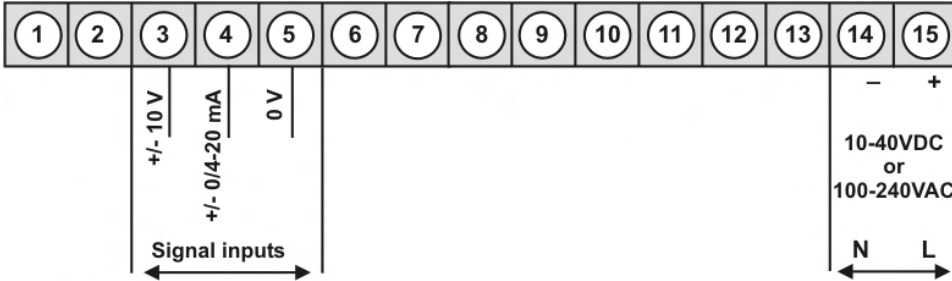
• Direct current, direct voltage

Supply 100-240 VAC, DC ± 10%

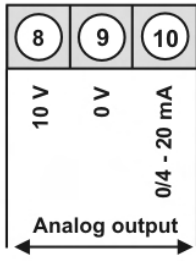
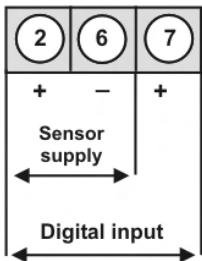
M3-3VR5B.0001.S70BD

Supply 10-40 VDC, 18-30 VAC

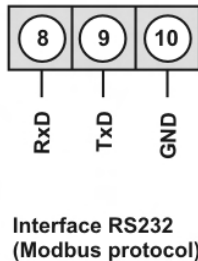
M3-3VR5B.0001.W70BD



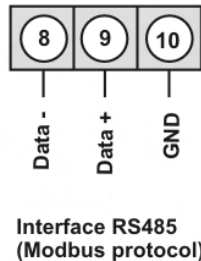
Options:



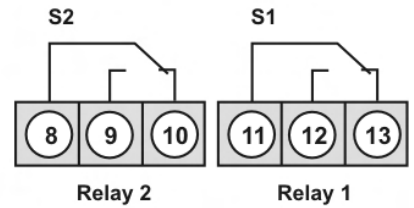
or



or



or



Alternative to analog output

• Product key options

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

EUR

1	1 relay output (with option analog output only 1 output is possible)
2	2 relay outputs
1	without keypad, operation on the back
X	Analog output 0/4-20 mA, 0-10 VDC
2	Sensor supply 10 VDC / 50 mA incl. digital input
3	Sensor supply 24 VDC / 50 mA incl. digital input
3	Interface RS232 galv. isolated
4	Interface RS485 galv. isolated
1	Digital input galv. isolated
B	Blue
G	Green
Y	Orange
T	Tricolour (Red-Green-Orange)

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

• Parameterisation software

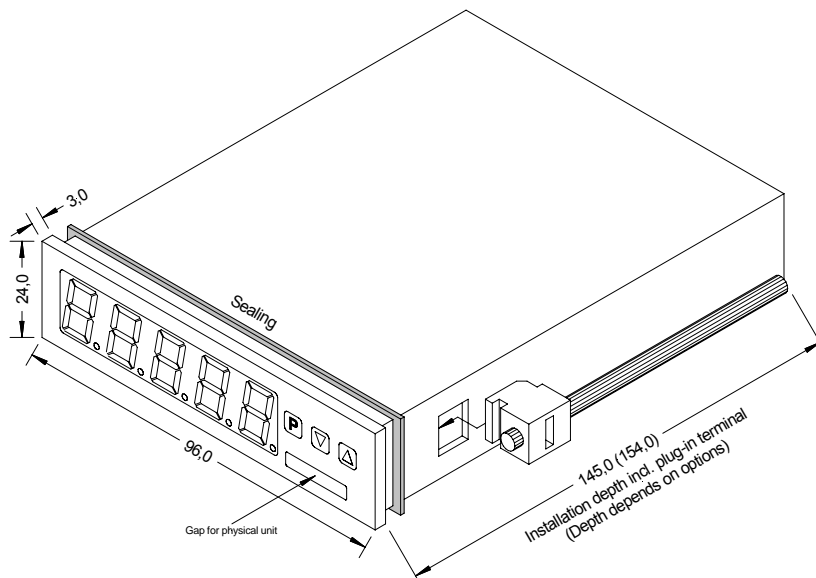
PC based configuration software PM-Tool for devices without keypad, for a simple adjustment of standard devices, incl. CD & USB-adapter. Programming is made via an interface on the back.

PM-TOOL-MUSB4

## • Technical data

<b>Dimensions</b>	Housing	B96 x H24 x D120 mm, (incl. plug-in terminal D= 145 mm cable outlet at the back)	
	Panel cut-out	92.0 <sup>+0.3</sup> x 22.2 <sup>+0.3</sup> mm	
	Fixing	screw elements for a wall thickness up to 3 mm	
	Housing material	PC Polycarbonate, black	
	Sealing material	EPDM, 65 Shore, black	
	Protection class	at the front IP65 Standard, at the back IP00	
	Weight	approx. 250 g	
	Connection	plug-in terminal; wire cross section up to 2.5 mm <sup>2</sup>	
<b>Display</b>	Display	5-digit	
	Digit height	14 mm	
	Segment colour	red (Standard), optional in green, orange, blue or tricolour (red/green/orange)	
	Range of display	-19999 to 99999	
	Threshold value	optical display flashing	
	Overflow	horizontal bars at the top	
	Underflow	horizontal bars at the bottom	
	Display time	0.1 to 10.0 seconds	
<b>Measuring input</b>	Span	-12...12 V	/ -22...24 mA
	Metering range	0-10 VDC	/ 0/4-20 mA
	Input resistance	Ri with ~200 kΩ	/ Ri with ~100 Ω
	Measuring fault	0.1% of measuring range, ± 1 Digit	/ 0.1% 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	
	<b>Output</b>	Relay	with change-over contact 250 V / 5 AAC, 30 V / 5 ADC
Switching cycle		30 * 10 <sup>3</sup> at 5 AAC, 5 ADC ohm resistive burden, 10 * 10 <sup>6</sup> mechanically Separation according to DIN EN50178 / Specific values according to DIN EN 60255	
Analog output		0-10 VDC / burden ≥ 10 kΩ, 0/4-20 mA / burden ≤ 500 Ω, 16 Bit	
Sensor supply		24 VDC / 50 mA 10 VDC / 50 mA	
<b>Digital input</b>	Input galv. insulated	< 2.4 V OFF; >10 V ON; max. 30 VDC, R <sub>i</sub> ~ 5 kΩ	
<b>Interface</b>	Protocol	Modbus with ASCII or RTU-protocol	
	RS232	9.600 Baud, no parity, 8 DataBit, 1 StopBit, pipeline length max. 3 m	
	RS485	9.600 Baud, no parity, 8 DataBit, 1 StopBit, pipeline length max. 1000 m	
<b>Power pack</b>	Supply	100-240 VAC 50/60 Hz, DC ± 10 % (max. 10 VA)	
		10-40 VDC galv. isolated, 18-30 VAC 50/60 Hz (max. 10 VA)	
<b>Memory</b>	EEPROM	data preservation ≥ 100 years at 25°C	
<b>Ambient condition</b>	Working temperature	0 to + 50 °C	
	Storing temperature	-20 to + 80 °C	
	Climatic density	relative humidity 0-85% on years average without dew	
<b>CE-sign</b>	Conformity to directive 2004/108/EG		
<b>EMV</b>	EN 61326, EN 55011		
<b>Safety standard</b>	According to low voltage directive 2006/95/EG, EN 61010; EN 60664-1		

## Housing:



• Order key

	M	3-	3	V	R	5	B.	0	0	0	1.	W	7	0	B	D	
<b>Standard type M-Line</b>																	<b>Dimension</b> <input type="checkbox"/> D physical unit (on demand)
<b>Installation depth</b> 145 mm incl. plug-in terminal (154 mm)			<input type="checkbox"/> 3														<b>Version</b> <input type="checkbox"/> B B
<b>Housing size</b> 96x24x120 mm (BxHxT)			<input type="checkbox"/> 3														<b>Switching points</b> <input type="checkbox"/> 0 without <input type="checkbox"/> 1 1 relay output <input type="checkbox"/> 2 2 relay outputs
<b>Display type</b> V, A				<input type="checkbox"/> V													<b>Protection class</b> <input type="checkbox"/> 1 without keypad, operation via PM-TOOL <input type="checkbox"/> 7 IP65 / plug-in terminal
<b>Display colours</b> Blue Green Red Red/Green/Orange Orange					<input type="checkbox"/> B <input type="checkbox"/> G <input type="checkbox"/> R <input type="checkbox"/> T <input type="checkbox"/> Y												<b>Supply voltage</b> <input type="checkbox"/> S 100-240 VAC <input type="checkbox"/> W 10-40 VDC
<b>Number of digits</b> 5-digits					<input type="checkbox"/> 5												<b>Measuring input</b> <input type="checkbox"/> 1 Direct voltage, direct current
<b>Digit height</b> 14 mm					<input type="checkbox"/> B												<b>Analog output</b> <input type="checkbox"/> 0 without <input type="checkbox"/> X 1x 0-10 VDC, 0/4-20 mA
<b>Digital input</b> without 1 digital input Interface RS232 Interface RS485 Interface RS232 Interface RS485						<input type="checkbox"/> 0 <input type="checkbox"/> I galv. isolated <input type="checkbox"/> 3 galv. isolated <input type="checkbox"/> 4 galv. isolated <input type="checkbox"/> C incl. digital input <input type="checkbox"/> D incl. digital input											<b>Sensor supply</b> <input type="checkbox"/> 0 without <input type="checkbox"/> 2 10 VDC / 50 mA (incl. digital input) <input type="checkbox"/> 3 24 VDC / 50 mA (incl. digital input)