



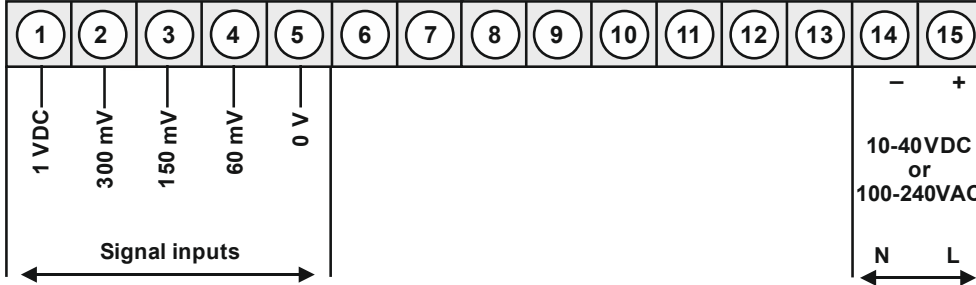
### **M3 – 5-digit digital panel meter in 96x24 mm (BxH) Direct voltage signals – Shunt 60 mV, 150 mV, 300 mV, 1000 mV**

- 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
- 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: 1 or 2 relay outputs
- optional: 1 independently scalable analog output
- optional: interface RS232 or RS485
- accessories: pc-based configuration-kit PM-TOOL with USB adapter
- on request: devices for working temperatures of -20°C...60°C or -40°C...70°C

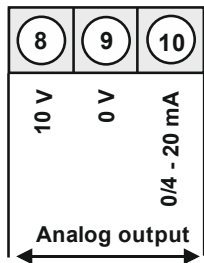
• **Direct voltage (Shunt)**

Supply 100-240 VAC, DC ± 10% **M3-3VR5B.0002.S70xD** 270.10

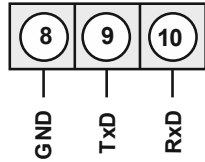
Supply 10-40 VDC, 18-30 VAC **M3-3VR5B.0002.W70xD** 270.10



**Options:**

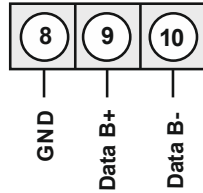


or



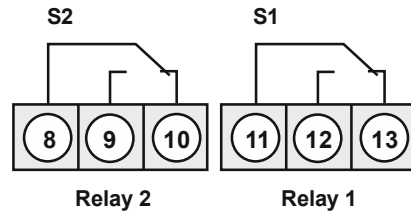
**Interface RS232**  
(Modbus protocol)

or



**Interface RS485**  
(Modbus protocol)

or



Relay 2

Relay 1

Alternatively to analog output

• **Product key options**

M	3-	3	V	R	5	B.	0	0	0	2.	S	7	0	x	D
M	3-	3	V	R	5	B.	0	0	0	2.	W	7	0	x	D

**EUR**

D	Dimension/physical unit, customer-specific settings	20.00
1	1 relay output (with option analog output only 1 switching point is possible)	21.10
2	2 relay outputs	31.80
1	without keypad, operation via PC software PM-TOOL	10.60
X	Analog output 0/4-20 mA, 0-10 VDC	105.90
3	Interface RS232 galvanic isolated	68.80
4	Interface RS485 galvanic isolated	68.80
B	Blue	46.60
G	Green	10.10
Y	Orange	10.10
T	Tricolour (Red-Green-Orange)	31.80

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

• **Parameterisation software**

PC based configuration software PM-Tool for devices without keypad, for a simple adjustment of standard devices, incl. USB-adaptor. Programming happens via an interface on the back.

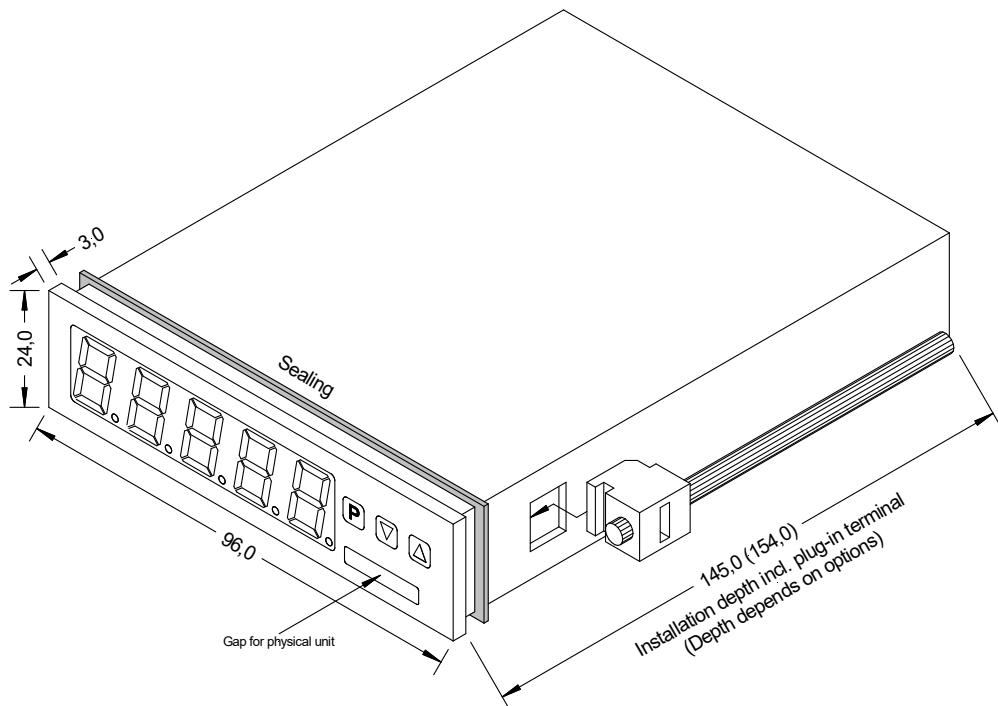
**PM-TOOL-MUSB4**

**94.30**

• **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>+0.8</sup> x 22.2 <sup>+0.3</sup> mm			
	Fixing	screw elements for a wall thickness up to 10 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	-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 ~30 kΩ	/ Ri at ~60 kΩ	/ Ri at ~200 kΩ
	Measuring fault	0.5% of measuring range, ± 1 digit / 0.5% 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 1 sec measuring time			
<b>Output</b>	Relay	with change-over contact 250 V / 2 AAC, 30 V / 2 ADC			
	Switching cycle	30 * 10 <sup>3</sup> at 2 AAC, 2 ADC resistive burden, 10 * 10 <sup>6</sup> mechanically			
	Analog output	Separation according to DIN EN50178 / Specific values according to DIN EN 60255 0-10 VDC / burden ≥ 10 kΩ, 0/4-20 mA / burden ≤ 500 Ω, 16 bit			
<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 (max. 10 VA)			
<b>Memory</b>	EEPROM	Data preservation ≥ 100 years at 25°C			
<b>Ambient condition</b>	Working temperature	0°C 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 2014/30/EU				
<b>EMV</b>	EN 61326, EN 55011				
<b>Safety standard</b>	According to low voltage directive 2014/35/EU, EN 61010; EN 60664-1				

**Housing:**



• Order key

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