



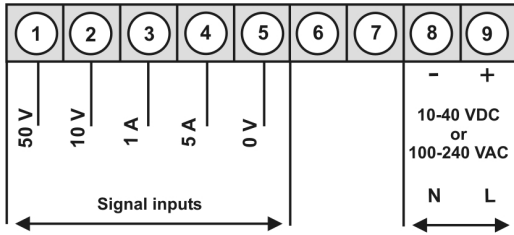
### **M3 – 5-digit digital panel meter in 96x48 mm (BxH) AC current / AC voltage signals rms-value (TRMS) 50 VAC, 10 VAC, 1 AAC, 5 AAC**

- 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, 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
- 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 USB adapter
- on demand: devices for working temperatures of -20°C...60°C or -40°C...70°C

**ORDER NUMBER**  
(without options)

**EUR**

• **AC current, AC voltage (RMS-value)**



Supply 100-240 VAC, DC ±10%

Supply 10-40 VDC, 18-30 VAC

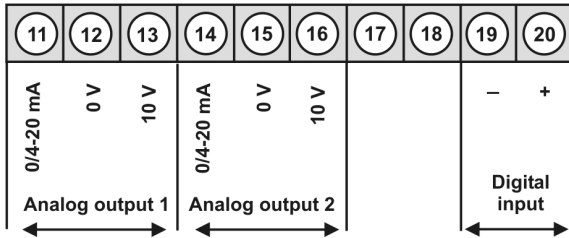
**M3-1VR5B.0004.S70xD**

**275.30**

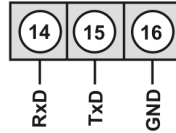
**M3-1VR5B.0004.W70xD**

**291.20**

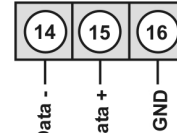
Options:



alternative to analog output 2

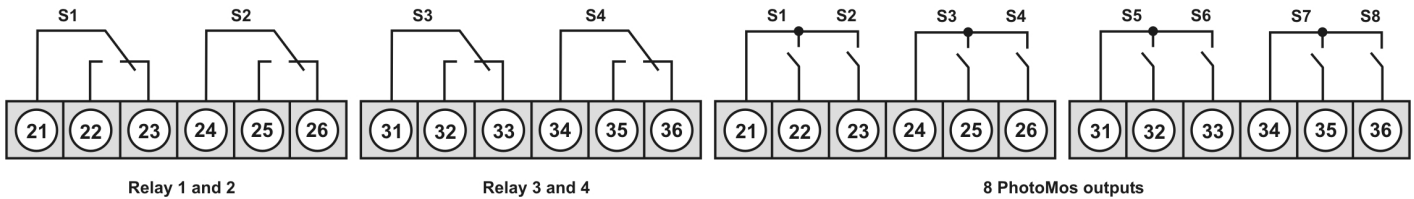


or



Interface RS232  
(Modbus protocol)

Interface RS485  
(Modbus protocol)



• **Order key options**

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

**EUR**

D	Dimension/physical unit, customer-specific settings	20.00
2	2 relay outputs	35.00
4	4 relay outputs	69.90
8	8 PhotoMos-outputs	95.30
1	without keypad, operation via PC software PM-TOOL	10.60
X	Analog output 0/4-20 mA, 0-10 VDC galv. isolated	127.10
Y	2 analog outputs galv. isolated	254.20
3	Interface RS232 galv. isolated	58.30
4	Interface RS485 galv. isolated	58.30
I	Digital input galv. isolated	10.60
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. V.

• **Parameterisation software**

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

**ORDER NUMBER**

**EUR**

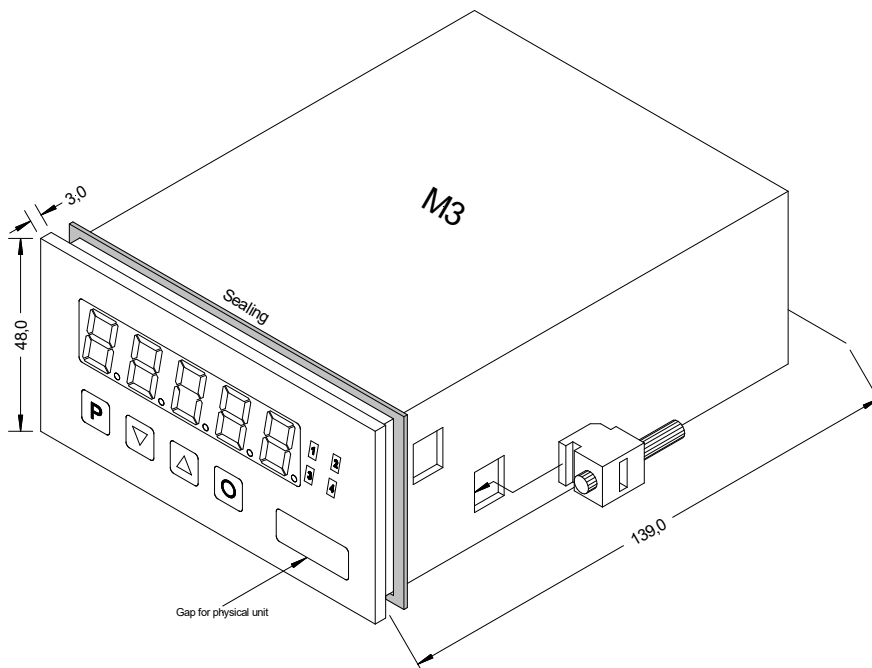
**PM-TOOL-MUSB4**

**94.30**

• **Technical data**

<b>Dimensions</b>	Housing	B96 x H48 x D120 mm, (incl. plug-in terminal D = 139 mm)			
	Panel cut-out	92.0 <sup>+0.8</sup> x 45.0 <sup>+0.6</sup> mm			
	Fixing	screw elements for insulation thickness up to 15 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 <sup>2</sup>			
<b>Display</b>	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			
<b>Measuring input</b>	Measuring range	50 VAC	/ 10 VAC	/ 5 AAC	/ 1 AAC
	Input resistance	Ri at ~200 kΩ	/ Ri at ~40 kΩ	/ Ri at ~0.05 Ω	/ Ri 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			
	<b>Output</b>	Relays	with change-over contact 250 V / 5 AAC, 30 V / 5 ADC		
Switching cycles		10 * 10 <sup>5</sup> at 5 AAC, 5 ADC contact rate, 10 * 10 <sup>6</sup> 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			
<b>Digital input</b>	Input galv. isolated	< 2.4 V OFF; >10 V ON; max. 30 VDC, Ri ~ 5 kΩ			
<b>Interface</b>	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			
<b>Power pack</b>	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)			
<b>Memory</b>	EEPROM	Data life ≥ 100 years at 25°C			
<b>Ambient conditions</b>	Working temperature	0 to +60°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-	1	V	R	5	B.	0	0	0	4.	S	7	0	x	D	
<b>Basic type M-Line</b>																	<b>Dimension</b>
																	<input type="checkbox"/> D physical unit
<b>Installation depth</b> 139 mm (incl. plug-in terminal)			<input type="checkbox"/> 3														<b>Version</b>
																	<input type="checkbox"/> x internal version
<b>Housing size</b> 96x48x120 mm (BxHxD)																	<b>Switching points</b>
			<input type="checkbox"/> 1														<input type="checkbox"/> 0 no switching point
<b>Display type</b> V, A				<input type="checkbox"/> V													<input type="checkbox"/> 2 2 relay outputs
																	<input type="checkbox"/> 4 4 relay outputs
<b>Display colours</b>																	<input type="checkbox"/> 8 8 PhotoMos outputs
Blue					<input type="checkbox"/> B												<b>Protection class</b>
Green					<input type="checkbox"/> G												<input type="checkbox"/> 1 Without keypad, operation via PM-TOOL
Red					<input type="checkbox"/> R												<input type="checkbox"/> 7 IP65 / plug-in terminal
Red/Green/Orange					<input type="checkbox"/> T												<b>Voltage supply</b>
Orange					<input type="checkbox"/> Y												<input type="checkbox"/> S 100-240 VAC
<b>Number of digits</b> 5-digit																	<input type="checkbox"/> W 10-40 VDC galv. isolated
																	<b>Measuring input</b>
<b>Digit height</b> 14 mm																	<input type="checkbox"/> 4 AC current, AC voltage
																	<b>Analog output</b>
<b>Digital input</b>																	<input type="checkbox"/> 0 without
without					<input type="checkbox"/> 0												<input type="checkbox"/> X 1x 0-10 VDC, 0/4-20 mA
1 digital input					<input type="checkbox"/> I												<input type="checkbox"/> Y 2x 0-10 VDC, 0/4-20 mA
Interface RS232					<input type="checkbox"/> 3	galv. isolated											<b>Sensor supply</b>
Interface RS485					<input type="checkbox"/> 4	galv. isolated											<input type="checkbox"/> 0 without
Interface RS232					<input type="checkbox"/> C	incl. digital input											
Interface RS485					<input type="checkbox"/> D	incl. digital input											