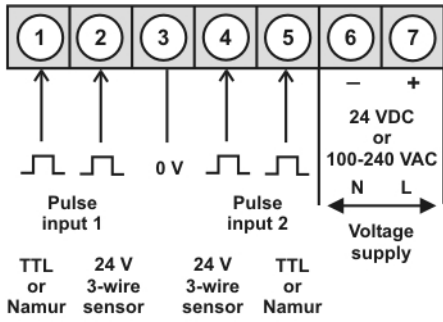




**M3 – 5-digit digital panel meter in 48x24 mm (BxH)  
Frequency 0.01 Hz to 999.99 kHz / 0.01 Hz to 9.999 kHz / 0-2.5000 kHz  
Connection for Namur, 3-wire NPN/PNP, position survey via  
incremental encoder (HTL- or TTL-output)**

- red display from -19999...99999 digits (optional green, orange or blue display)
- installation depth: 90 mm without plug-in terminal
- multi voltage power supply unit 100-240 VAC
- adjustment via factory default or directly on the sensor signal
- min/max-memory with adjustable permanent display
- 30 additional adjustable support points
- display flashing at threshold exceedance / threshold undershooting
- Schmitt-Trigger-input
- digital frequency filter for contact bounce suppression and interference suppression
- frequency filter with different pulse-duty factor
- navigation keys for the triggering of Hold, Tara, display change, setpoint setting, alarm actuator
- flexible alarm system with adjustable delay times
- volume measuring (totaliser) for frequencies up to 1 kHz (pulse precisely)
- mathematical functions like reciprocal value, square root, square, 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
- pluggable screw terminal
- optional: 2 PhotoMos-outputs
- optional: sensor supply
- optional: 1 independently scalable analog output
- optional: galv. isolated digital input for the triggering of Tara, Hold, display change
- accessories: pc-based configuration-kit PM-TOOL with USB adapter
- on request: devices for working temperatures of -20°C...50°C or -40°C...70°C without condensation

- Frequency (0.01 Hz to 999.99 kHz)
- Frequency (0.01Hz to 9.9999 kHz for transmitter / 0 to 2.5000 kHz for position survey)



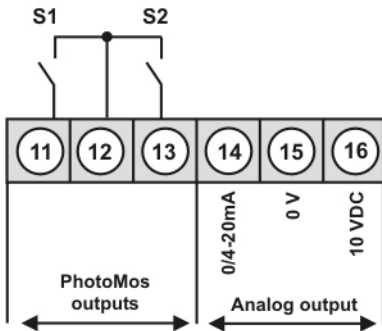
Supply 24 VDC ± 10%

M3-7FR5A.0007.770xD 238.30

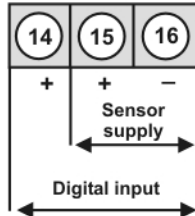
Supply 100-240 VAC, DC ± 10%

M3-7FR5A.0007.S70xD 248.90

Options: devices for a supply of 24 VDC



alternatively to analog output  
for devices with position survey (required)

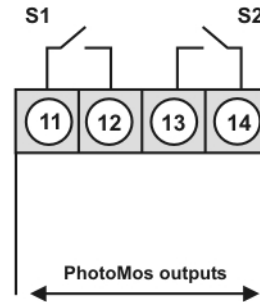


alternatively to pulse input 2



pulse output max. 10 kHz

Options: devices for a supply of 100-240 VAC



• Product key options: devices with a supply of 24 VDC

M	3-	7	F	R	5	A.	0	0	0	7.	7	7	0	x	D
---	----	---	---	---	---	----	---	---	---	----	---	---	---	---	---

EUR

D	Dimension/physical unit, customer-specific settings	20.00
2	2 PhotoMos outputs	31.80
1	Without keypad, operation via parameterisation software PM-TOOL	10.60
X	Analog output 0/4-20 mA, 0-10 VDC galvanic isolated	127.10
2	Sensor supply 10 VDC / 20 mA incl. digital input	53.00
3	Sensor supply 24 VDC / 50 mA incl. digital input	53.00
K	Sensor supply 24 VDC / 50 mA incl. digital input and pulse output	58.30
I	Digital input galvanic isolated	21.20
B	Blue	46.60
G	Green	10.10
Y	Orange	10.10

• Product key options: devices with a supply of 100-240 VAC

M	3-	7	F	R	5	A.	0	0	0	7.	S	7	0	x	D
---	----	---	---	---	---	----	---	---	---	----	---	---	---	---	---

EUR

D	Dimension/physical unit, customer-specific settings	20.00
2	2 PhotoMos outputs	31.80
1	Without keypad, operation via parameterisation software PM-TOOL	10.60
B	Blue	46.60
G	Green	10.10
Y	Orange	10.10

Please state physical unit on demand in your order, e.g. U/min.

• 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.

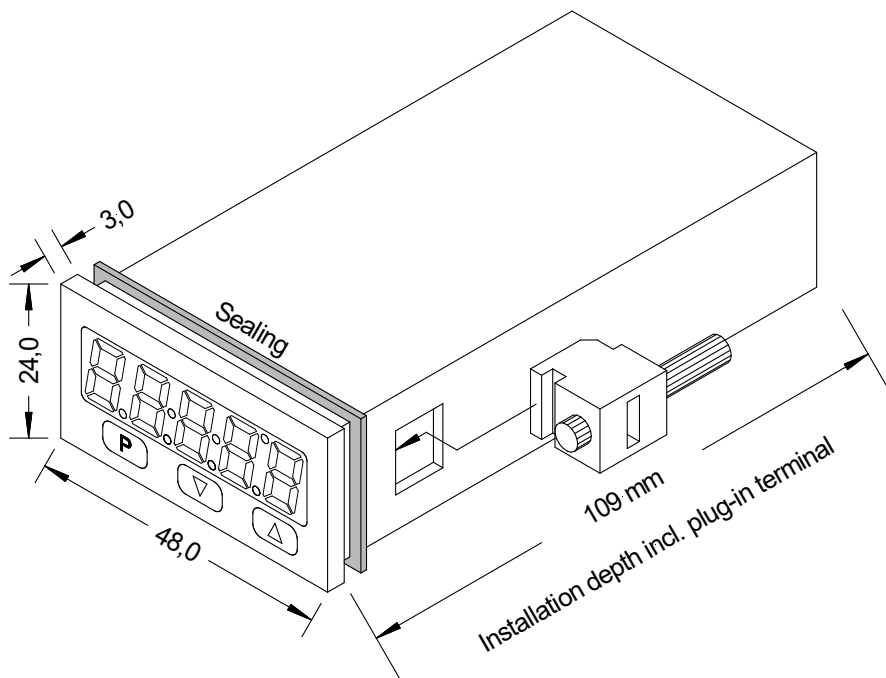
PM-TOOL-MUSB4

94.30

• **Technical data**

<b>Housing dimension</b>	Housing	B48 x H24 x T90 mm, (with plug-in terminal D= 109 mm)
	Panel cut-out	45.0 <sup>+0.6</sup> x 22.2 <sup>+0.3</sup> mm
	Fixing	screw elements for wall thicknesses up to 5 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. 200 g
	Connection	plug-in terminal; wire cross section up to 2.5 mm <sup>2</sup>
<b>Display</b>	Display	5-digit
	Digit height	10 mm
	Segment colour	red (Standard), optional available in green, orange and blue
	Display range	-19999 to 99999
	Limit values	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>	Signal	Pulse input, TTL, Namur, 3-wire initiator PNP/NPN
	Input resistance	Ri at 24 V / 4 kΩ HTL level >15 V / < 4 V TTL level >4.6 V / <1.9 V
	Input frequency	0.01 Hz...999.99 kHz, 0.01 Hz...9.9999 kHz with rev counter, 0...2.5000 kHz with position recording
	Measuring fault	0.05% of measuring range, ± 1 digit
<b>Output</b>	PhotoMos	Closer contacts: 30 VDC/AC, 0.4 A
	Pulse output	max. 10 kHz
	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 / 20 mA
<b>Digital input</b>	Input galv. isolated	<2.4 V OFF; >10 V ON; max. 30 VDC, Ri ~ 5 kΩ
<b>Power pack</b>	Supply	100-240 VAC 50/60 Hz / DC ± 10% (max. 5 VA) 24 VDC ± 10%, galvanic isolated (max. 4 VA)
<b>Memory</b>	EEPROM	Data life ≥ 100 years at 25°C
<b>Ambient conditions</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 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-	7	F	R	5	A.	0	0	0	7.	7	7	0	x	D
<b>Standard type M-Line</b>															
<b>Installation depth</b> 109 mm (incl. plug-in terminal) [ 3 ]															
<b>Housing size</b> 48x24x90 mm (BxHxD) [ 7 ]															
<b>Display type</b> Frequency [ F ]															
<b>Display colours</b> Blue [ B ] Green [ G ] Red [ R ] Orange [ Y ]															
<b>Number of digits</b> 5-digit [ 5 ]															
<b>Digit height</b> 10 mm [ A ]															
<b>Digital input</b> without [ 0 ] 1 digital input [ I ]															
<b>Dimension</b> [ D ] physical unit															
<b>Version</b> [ x ] internal version															
<b>Switching points</b> [ 0 ] no switching point [ 2 ] 2 PhotoMos-outputs															
<b>Protection class</b> [ 1 ] without keypad, operation via PM-TOOL [ 7 ] IP65 / pluggable terminal															
<b>Supply voltage</b> [ 7 ] 24 VDC galv. isolated [ S ] 100-240 VAC															
<b>Measuring input</b> [ 7 ] Pulse, Namur, 3-wire PNP/NPN															
<b>Analog output</b> [ 0 ] without [ X ] 0-10 VDC, 0/4-20 mA															
<b>Sensor supply</b> [ 0 ] without [ 2 ] 10 VDC / 20 mA, incl. digital input [ 3 ] 24 VDC / 50 mA, incl. digital input [ K ] 24 VDC / 50 mA, incl. digital input and pulse output max. 10 kHz															