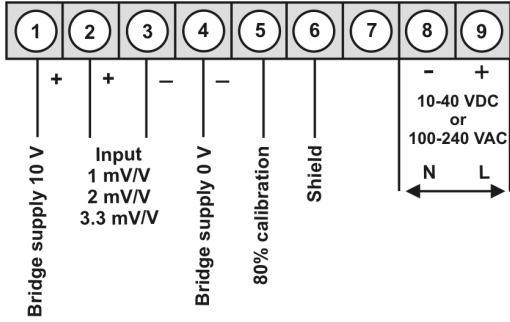




M3 – 5-digit digital panel meter in 96x48 mm (BxH) DMS-amplifier with an 80% calibration for 350 Ω melt pressure sensors

- 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 or sensor alignment
- standard digital input for Hold, Tara or sensor alignment
- flexible alarm system with adjustable delay times
- mathematical functions like reciprocal value, square root, square and rounding
- sliding averaging
- brightness control
- 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: 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

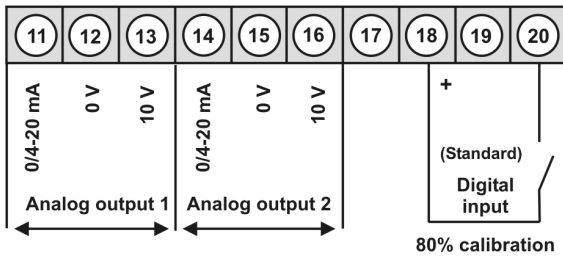
• **DMS-4-wire with calibration**



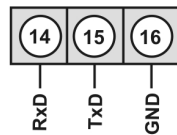
Supply 100-240 VAC, DC ±10%
Supply 10-40 VDC, 18-30 VAC

M3-1MR5B.020X.S70xD **291.20**
M3-1MR5B.020X.W70xD **301.80**

Options:

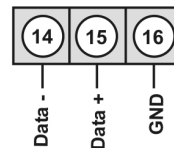


alternative to analog output 2

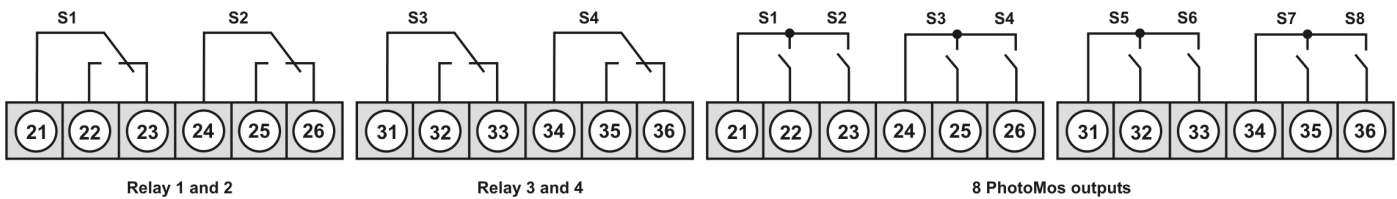


Interface RS232
(Modbus protocol)

or



Interface RS485
(Modbus protocol)



• **Order key options**

M	3-	1	M	R	5	B.	0	2	0	X.	S	7	0	x	D
M	3-	1	M	R	5	B.	0	2	0	X.	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
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. Nm.

• **Parameterisation software**

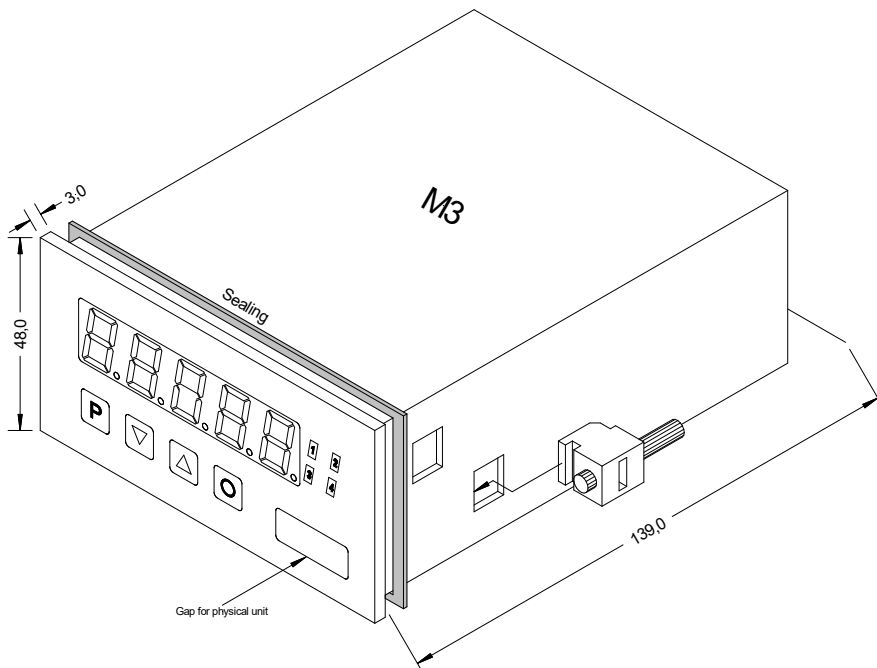
PC based configuration software PM-Tool for devices without keypad, for a simple adjustment of standard devices, incl. USB-adapter. Programming happens via an interface on the back.

PM-TOOL-MUSB4 **94.30**

• **Technical data**

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 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 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 sec	
Measuring input	Sensor sensitivity	1 mV/V, 2 mV/V, 3.3 mV/V, free to 4 mV/V with 80% calibration
	Sensor alignment	always required
	Measuring fault	0.2% of measuring range in controlled electromagnetic environment 1 % of measuring range in industrial environment with a strong disturbing source
	Drift of temperature	100 ppm/K
	Measuring time	0.1 ... 10.0 seconds
	Measuring principle	U/F-converter
	Resolution	approx. 18 bit at 1 second measuring time, 3.3 mV/V of measuring range
Output	Relay	with change-over contact 250 V / 5 AAC, 30 V / 5 ADC
	Switching cycle	30 * 10 ³ at 5 AAC, 5 ADC ohm resistive burden, 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
	Bridge supply	10 VDC / 20-40 mA / 250-500 Ω
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) 10-40 VDC, galvanic isolated, 18-30 VAC 50/60 Hz (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 EMV	Conformity to directive 2014/30/EU	
	EN 61326, EN 55011	
Safety standard		according to low voltage directive 2014/35/EU, EN 61010; EN 60664-1

Housing:



• Order key

	M	3-	1	M	R	5	B.	0	2	0	X.	S	7	0	x	D	
Basic type M-Line																	Dimension
																	<input type="checkbox"/> D physical unit
Installation depth 139 mm (incl. plug-in terminal)			<input type="checkbox"/> 3														Version
																	<input type="checkbox"/> x internal version
Housing size 96x48x120 mm (BxHxD)																	Switching points
			<input type="checkbox"/> 1														<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 Melt pressure sensors				<input type="checkbox"/> M													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"/> B													<input type="checkbox"/> S 100-240 VAC, DC ±10%
Green				<input type="checkbox"/> G													<input type="checkbox"/> W 10-40 VDC galv. isolated, 18-30 VAC
Red				<input type="checkbox"/> R													
Red/Green/Orange				<input type="checkbox"/> T													
Orange				<input type="checkbox"/> Y													
Number of digits 5-digit																	
																	<input type="checkbox"/> 5
Digit height 14 mm																	
																	<input type="checkbox"/> X Strain gauge 1.1 to 3.3 mV/V
Digital input																	Analog output
without																	<input type="checkbox"/> 0 without
Interface RS232																	<input type="checkbox"/> X 1x 0-10 VDC, 0/4-20 mA
Interface RS485																	<input type="checkbox"/> Y 2x 0-10 VDC, 0/4-20 mA
																	<input type="checkbox"/> 2 10 VDC / 20-40 mA (incl. digital input)