



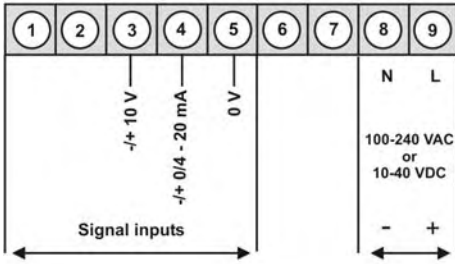
MB2 – 5-digit digital panel meter in 96x96 (BxH) with bargraph 270° standard signal 0/4-20 mA, 0-10 VDC

- red display of -19999...99999 digits
- red 55 dots bargraph
- adjustable bars or dot operation or operation with permanent display of plate centre
- small installation depth: 56 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 triggering of Hold, Tara, display change, setpoint setting, alarm actuator
- 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
- 2 relay outputs
- optional: sensor supply
- optional: 1 independently scalable analog output
- optional: digital input for the triggering of Hold, Tara, display change, setpoint setting, alarm actuator
- optional: interface RS232 or RS485
- accessories: pc-based configuration-kit PM-TOOL with CD & USB adapter
- on demand: devices for working temperatures of -25°C...60°C

ORDER NUMBER
(without options)

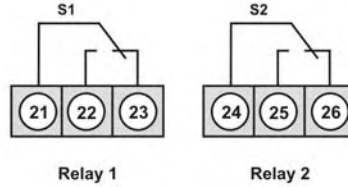
EUR

• **Direct current, direct voltage**

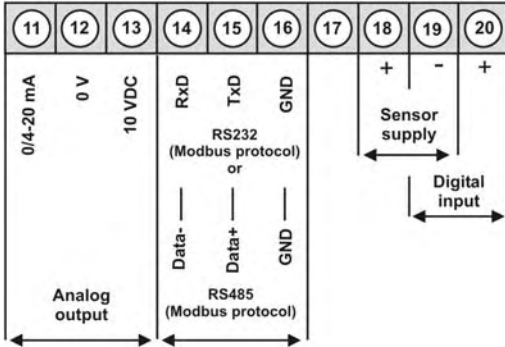


Supply 100-240 VAC DC \pm 10% **MB2-2VR5RR.0001.S72AD** **360,00**

Supply 10-40 VDC, 18.30 VAC **MB2-2VR5RR.0001.W72AD** **360,00**



Options:



Advice:
Using Namur sensors with a nominal voltage of approx. 8 V, a sensor supply of 12 VDC needs to be provided.

• **Order key options**

M	B	2-	2	V	R	5	R	R.	0	0	0	1.	S	7	2	A	D
M	B	2-	2	V	R	5	R	R.	0	0	0	1.	W	7	2	A	D

EUR

1	without keypad, programming on the back side via interface	on demand
X	Analog output 0/4-20 mA, 0-10 VDC	120,00
2	Sensor supply 10 VDC / 20 mA incl. digital input	60,00
3	Sensor supply 24 VDC / 50 mA incl. digital input	60,00
3	Interface RS232 galv. insulated	70,00
4	Interface RS485 galv. insulated	70,00
I	Digital input galv. insulated	10,00
B	Blue display	on demand
G	Green display	on demand
Y	Orange display	on demand

Please state physical unit, e.g. bar.

• **Parameterisation software**

ORDER NUMBER

EUR

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.

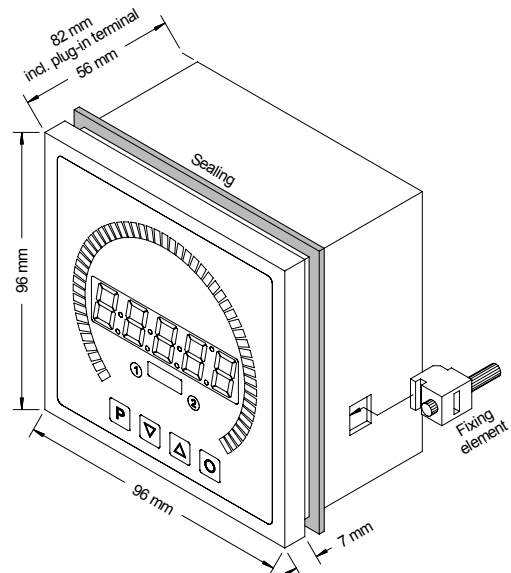
PM-TOOL-MUSB4

89,00

• **Technical data**

Dimensions	Housing	B96 x H96 x D56 mm, (incl. plug-in terminal D = 82 mm)	
	Panel cut-out	91.0 ^{+0.6} x 91.0 ^{+0.6} 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	front side IP65 standard, back side IP00	
	Weight	approx. 330 g	
	Connection	plug-in terminal; cable cross-section up to 2.5 mm ²	
Display	Display	5-digit	
	Digit height	14 mm	
	Segment colour	red (Standard), optional available in green, orange, blue and tricolour, too	
	Display range	-19999 up 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	
	Bargraph	55 dots	
	Alignment	270°	
Bargraph colour	red		
Measuring input	Measuring span	-12...12 V	/ -22...24 mA
	Measuring range	0-10 VDC	/ 0/4-20 mA
	Input resistance	R _i with ~200 kΩ	/ R _i with ~100 Ω
	Measuring error	0.1% of measuring range, ± 1 Digit / 0.1% of measuring range, ± 1 Digit	
	Drift of temperature	100 ppm/K	
	Measuring time	0.1 ... 10.0 seconds	
	Measuring principle	U/F-conversion	
	Resolution	approx. 18 Bit at 1 second measuring time	
Output	Relay	with change-over contact 250 V / 5 AAC, 30 V / 5 ADC	
	Switching cycles	30 * 10 ³ at 5 AAC, 5 ADC ohm resistive burden, 10 * 10 ⁶ mechanically Division according to DIN EN50178 / Characteristics 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 / 50mA 10 VDC / 20 mA		
Digital input	Input galv. insulated	< 2,4 V OFF; 10 V ON; max. 30 VDC, R _i ~ 5 kΩ	
Interface	Protocol	Modbus with ASCII or RTU-protocol	
	RS232	9.600 Baud, no parity, 8 Databit, 1 StopBit	
	Cable length	max. 3m	
	RS232	9.600 Baud, no parity, 8 Databit, 1 StopBit	
Cable length	max. 1000m		
Power pack	Supply	100-240 VAC 50/60 Hz / DC +/- 10 % (max. 15 VA) 10-40 VDC / 18-30 VAC 50/60 Hz (max. 15 VA)	
	EEPROM	Data life ≥ 100 years	
Ambient conditions	Working temperature	0 to + 50 °C	
	Storing temperature	-20 to + 80 °C	
	Weathering resistance	relative humidity 0-85% on years average without dew	
CE-sign	conformity according to directive 2004/108/EG		
EMV	EN 61326, EN 55011		
Safety standard	according to low voltage directive 2006/95/EG, EN 61010; EN 60664-1		

Housing:



• Order key

	M	B	2-	2	V	R	5	R	R.	0	0	0	1.	W	7	2	A	D	
Basic type M-Line																			Dimension
Bargraph device	B																		D physical unit (free selectable)
Installation depth																			Version
82 mm, incl. plug-in terminal																			A A
Housing size																			Setpoints
B96xH96xD56 mm	2																		2 2 setpoints
Display type																			Protection class
V, A	V																		7 IP65/plug-in terminal
Bargraph colour																			Volatge supply
Red	R																		S 100-240 VAC
																			W 10-40 VDC, galvanic insulated
Resolution																			Measuring input
55 points	5																		1 Direct voltage, direct current
Design																			Analog output
270° round	R																		0 without
																			X 0-10 VDC, 0/4-20 mA
Digital display																			Sensor supply
5-digit, 14 mm, red	R																		0 without
Digital input																			2 10 VDC / 20 mA, incl. digital input
without	0																		3 24 VDC / 50 mA, incl. digital input
1 x digital input	1																		
Interface RS232	3																		
Interface RS485	4																		