



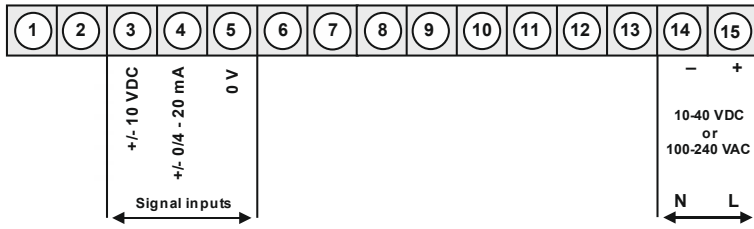
MB3 – 3-digit digital panel meter in 96x24 mm with bargraph Direct current/direct voltage signals 0/4-20 mA, 0-10 VDC

- red 3-digit digital display -199...999 Digits (optional green display)
- 30-points-bargraph tricolour
- adjustable bargraph or dot operation or operation with permanent display of the midpoint
- installation depth: 120 mm without plug-in screw terminal
- multi voltage power supply units 100-240 VAC, alternatively 10-40 VDC, galvanic isolated
- display adjustment via factory setting or directly via sensor signal
- min/max-memory with adjustable permanent display
- 30 additional adjustable supporting 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 time
- volume metering (Totaliser)
- mathematic functions like reciprocal value, root extraction, squaring and rounding
- sliding averaging
- programming interlock via access code
- protection class IP65 at the front
- plug-in screw terminal
- optional: 1 or 2 relay outputs
- optional: sensor supply
- optional: 1 independently scalable analog output
- optional: galv. isolated digital input for the triggering of Tara, Hold or display change
- optional: interface RS232 or RS485
- accessories: PC-based configuration-kit PM-TOOL with USB-adapter
- on demand: devices for working temperatures of -40°...+70°C (MB30...)

ORDER NUMBER
(without options)

EUR

• **Direct current, direct voltage**



horizontal

MB3-3VT3HR.0001.S70xD

291,20

vertical

MB3-3VT3VR.0001.S70xD

291,20

Supply 100-240 VAC

horizontal

MB3-3VT3HR.0001.W70xD

291,20

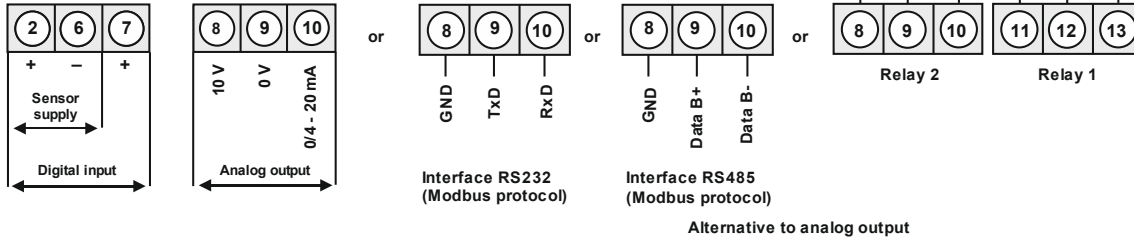
vertical

MB3-3VT3VR.0001.W70xD

291,20

Supply 10-40 VDC

Options:



• **Product key options**

| | | | | | | | | | | | | | | | | | |
|---|---|----|---|---|---|---|---|----|---|---|---|----|---|---|---|---|---|
| M | B | 3- | 3 | V | T | 3 | H | R. | 0 | 0 | 0 | 1. | S | 7 | 0 | x | D |
| M | B | 3- | 3 | V | T | 3 | V | R. | 0 | 0 | 0 | 1. | S | 7 | 0 | x | D |
| M | B | 3- | 3 | V | T | 3 | H | R. | 0 | 0 | 0 | 1. | W | 7 | 0 | x | D |
| M | B | 3- | 3 | V | T | 3 | V | R. | 0 | 0 | 0 | 1. | W | 7 | 0 | x | D |

Device with a supply of 100-240 VAC

EUR

Device with a supply of 10-30 VDC

| | | |
|---|---|-------|
| D | Dimension/physical unit, customer-specific settings | 20,00 |
| 1 | 1 relay output (only 1 switching output possible with option analog output) | 21,20 |
| 2 | 2 relay outputs | 31,80 |
| X | Analog output 0/4-20 mA, 0-10 VDC | 95,30 |
| 2 | Sensor supply 10 VDC / 50 mA incl. digital input | 37,10 |
| 3 | Sensor supply 24 VDC / 50 mA incl. digital input | 37,10 |
| I | Digital input | 10,60 |
| 3 | Interface RS232 galv. isolated | 68,80 |
| 4 | Interface RS485 galv. isolated | 68,80 |
| G | Green display, 8 mm height | 10,60 |

Please state physical unit in order, e.g. %.

ORDER NUMBER

EUR

• **Parameterisation software**

Parameterisation 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.

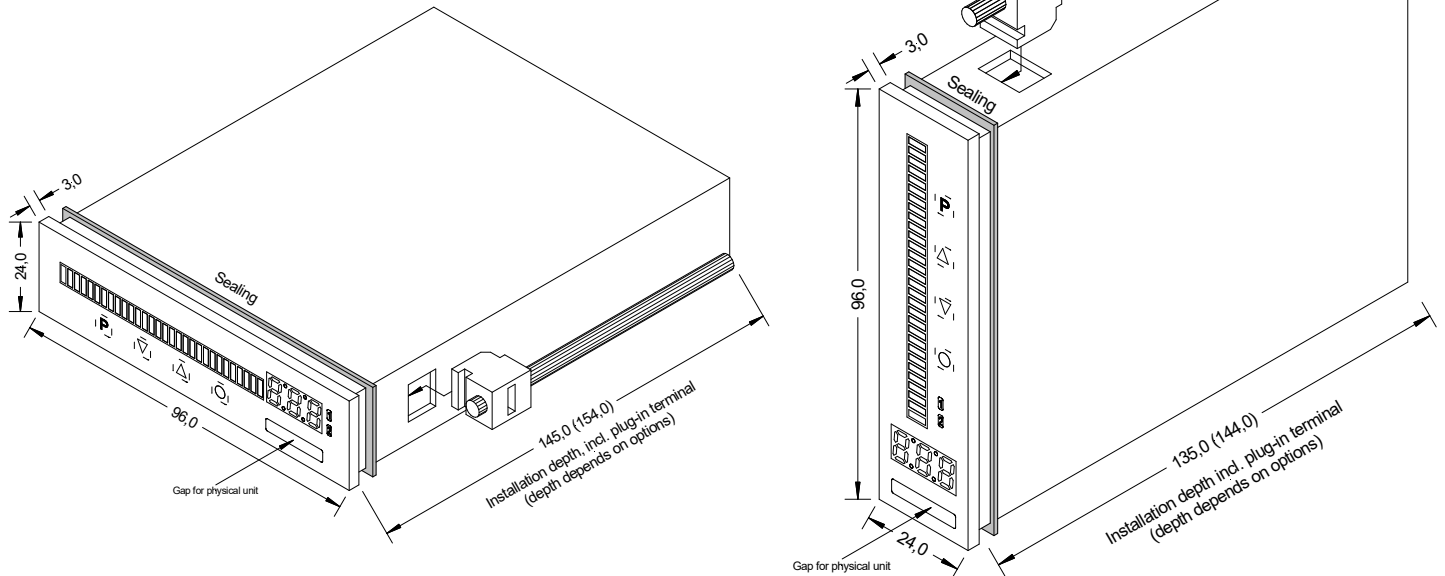
PM-Tool-MUSB4

94,30

• **Technical data**

| | | | |
|---------------------------|--|---|--------------------|
| Dimensions | Housing | B96 x H24 x T120 mm (T=144 mm incl. plug-in terminal) | |
| | Panel cut-out | 92.0 ^{+0.8} x 22.0 ^{+0.3} mm | |
| | Fixing | screw elements for a wall thickness of up to 3 mm | |
| | Housing material | PC Polycarbonate, colour black UL94V-0 | |
| | Sealing material | EPDM, 65 Shore | |
| | Protection class | IP65 standard at the front IP00 at the back | |
| | Weight | approx. 200 g | |
| | Connection | plug-in terminal; wire cross section up to 2.5 mm ² | |
| | Display | Display | 3-digit, 8 mm high |
| | | Display | -199...999 |
| Bargraph | | 30 digit, tricolour | |
| Segment colour | | red, optional green | |
| Overflow | | flashing of the two upper bargraph elements | |
| Underflow | | flashing of the two lower bargraph elements | |
| Display time | | 0.01...10.0 seconds | |
| Measuring input | Measuring span | -12...12 V / -22 mA...24 mA | |
| | Measuring range | 0...10 V / 0/4...20 mA | |
| | Input resistance | R _i at ~200 kΩ / R _i at ~100 Ω | |
| | Measuring error | 0.1% of measuring range, ± 1 digit / 0,1% of measuring range, ± 1 Digit | |
| | Temperature drift | 100 ppm/K | |
| | Measuring time | 0.1...10.0 seconds | |
| | Measuring principle | U/F-converter | |
| | Resolution | approx. 18 bit at 1 second measuring time | |
| Output | Relay | with change-over contact 250 V / 2 AAC, 30 V / 2 ADC | |
| | Switching cycle | 30 * 10 ³ at 2 AAC, 2 ADC ohm resistive load, 10 * 10 ⁶ mechanically Separation according to DIN EN50178 / Specific values 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 / 50 mA 10 VDC / 50 mA | |
| Digital input | Input | < 2.4 V OFF; >10 V ON; max. 30 VDC R _i ~ 5 kΩ | |
| Interface | Protocol | manufacturer-specific 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 / DC ±10 % (max. 10 VA) 10-40 VDC, galvanic isolated, 18-30 VAC 50/60 Hz (max. 10 VA) | |
| | | | |
| Memory | EEPROM | Data life ≥ 100 years at 25°C | |
| Ambient conditions | Working temperature | 0 to +50°C | |
| | Storing temperature | -20 to +80°C | |
| | Climatic density | relative humidity 0-85% on years average without dew | |
| CE-marking | Conformity according to directive 2014/30/EU | | |
| EMV | EN 61326, EN 55011 | | |
| Safety standard | according to directive 2014/35/EU | | |
| | EN 61010; EN 60664-1 | | |

Housing:



• Order key

| | M | B | 3- | 3 | V | T | 3 | H | R. | 0 | 0 | 0 | 1. | W | 7 | 2 | x | D | |
|---------------------------------|---|---|----|---|---|---|---|---|----|---|---|---|----|---|---|---|---|---|---|
| Standard type M-Line | | | | | | | | | | | | | | | | | | | Dimension |
| | | | | | | | | | | | | | | | | | | | D physical unit |
| Bargraph display | | B | | | | | | | | | | | | | | | | | Version |
| | | | | | | | | | | | | | | | | | | | x Internal version |
| Installation depth | | | | | | | | | | | | | | | | | | | Switching points |
| 144 mm (incl. plug-in terminal) | | | | 3 | | | | | | | | | | | | | | | 0 no switching point |
| Housing size | | | | | | | | | | | | | | | | | | | 1 1 switching point |
| B96xH24xD120 mm | | | | | 3 | | | | | | | | | | | | | | 2 2 switching points |
| Display type | | | | | | | | | | | | | | | | | | | Protection class |
| V, A | | | | | V | | | | | | | | | | | | | | 1 without keypad, operation on the back |
| Bargraph colours | | | | | | | | | | | | | | | | | | | 7 IP65 / plug-in terminal |
| Tricolour (red, green, orange) | | | | | | T | | | | | | | | | | | | | Supply voltage |
| Resolution | | | | | | | | | | | | | | | | | | | S 100-240 VAC |
| 30 points | | | | | | | | | | | | | | | | | | | W 10-40 VDC, galv. isolated |
| Adjustment | | | | | | | | | | | | | | | | | | | Measuring input |
| horizontal | | | | | | H | | | | | | | | | | | | | 1 Direct voltage, direct current |
| vertical | | | | | | | V | | | | | | | | | | | | Analog output |
| Digital display | | | | | | | | | | | | | | | | | | | 0 none |
| 3-digit, 8 mm, green | | | | | | | | | | | | | | | | | | | x 0-10 VDC, 0-20 mA, 4-20 mA |
| 3-digit, 8 mm, red | | | | | | | | | | | | | | | | | | | Sensor supply |
| Digital input | | | | | | | | | | | | | | | | | | | 0 without |
| none | | | | | | | | | | | | | | | | | | | 2 10 VDC / 50 mA, incl. digital input |
| 1x digital input | | | | | | | | | | | | | | | | | | | 3 24 VDC / 50 mA, incl. digital input |