



M3 – 5-digit digital panel meter 96x48 (BxH) Direct voltage / direct current signals 50 VDC, 300 VDC, 600 VDC, 1 ADC

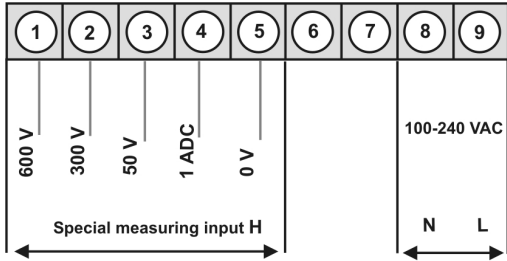
- red display of -19999...99999 digits (optional green, orange, blue or tricolour display)
- installation depth: 120 mm without plug-in screw terminal
- multi voltage power supply unit 100-240 VAC
- adjustment via factory setting or directly on the sensor signal
- min/max-memory with adjustable permanent display
- 30 additional adjustable support points
- display flashing at threshold value exceedance / undercut
- zero keys for the triggering of Hold, Tara, display change, setpoint setting, alarm actuation
- 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
- 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

• **Direct voltage, direct current – special measuring input H**

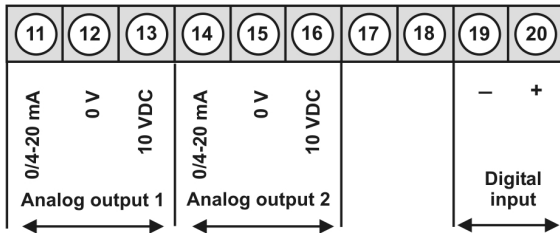
Supply 100-240 VAC, DC ±10%

M3-1VR5B.0H01.S70xD

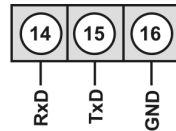
291.20



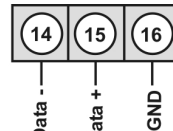
Options:



alternative for analog output 2

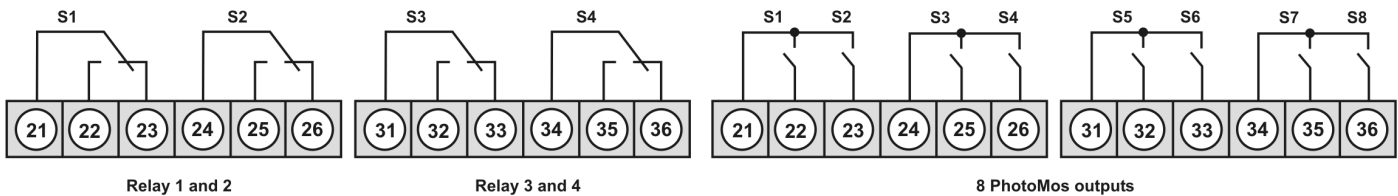


or



Interface RS232
(Modbus protocol)

Interface RS485
(Modbus protocol)



• **Order key options**

| M | 3- | 1 | V | R | 5 | B. | 0 | H | 0 | 1. | S | 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.

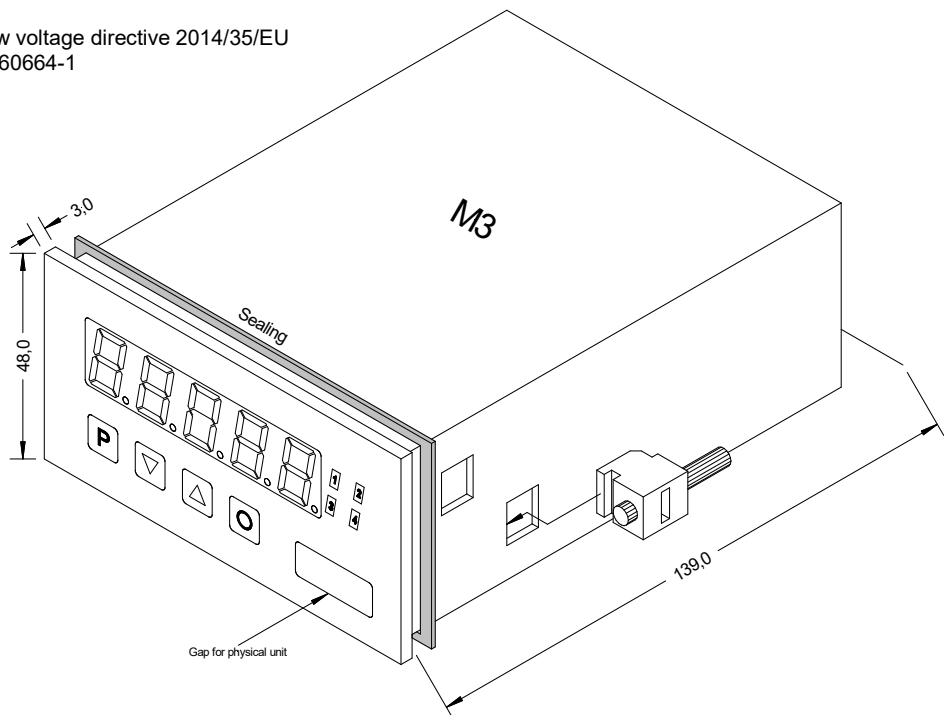
PM-TOOL-MUSB4

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 seconds |
| Messeingang | Measuring span | -600...600 VDC / -300...300 VDC / -50...50 VDC / -1...1 ADC |
| | Mesuring range | 0...600 VDC / 0...300 VDC / 0...50 VDC / 0...1 ADC |
| | Input resistance | Ri at ~ 2 MΩ / Ri at ~ 1 MΩ / Ri at ~ 200 kΩ / Ri at ~ 0,2 Ω |
| | Measuring fault | 0.5% of final |
| | Temperature drift | 100 ppm/K |
| | Measuring time | 0.1 ... 10.0 seconds |
| | Measuring principle | U/F- conversion |
| | Resolution | approx. 18 bit at 1 sec measuring time |
| Output | Relays | with change-over contact 250 V / 5 AAC, 30 V / 5 ADC |
| | Switching cycles | 10 * 10 ⁵ at 5 AAC, 5 ADC contact rate, 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 |
| | Sensor supply | 24 VDC / 50 mA; 10 VDC / 20 mA |
| Digital input | Input galv. isolated | < 2.4 V OFF; 10 V ON; max. 30 VDC, Ri ~ 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) |
| 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 | Conformity to directive 2014/30/EU | |
| EMV | 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 | V | R | 5 | B. | 0 | H | 0 | 1. | 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"/> 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 V, A | | | | <input type="checkbox"/> V | | | | | | | | | | | | | | Protection class |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> 1 Without keypad, operation via PM-TOOL |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> 7 IP65 / plug-in terminal |
| Display colours Blue Green Red Red/Green/Orange Orange | | | | | <input type="checkbox"/> B <input type="checkbox"/> G <input type="checkbox"/> R <input type="checkbox"/> T <input type="checkbox"/> Y | | | | | | | | | | | | | Voltage supply |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> S 100-240 VAC |
| Number of digits 5-digit | | | | | | | | | | | | | | | | | | Measuring input |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> 1 Direct voltage, direct current |
| Digit height 14 mm | | | | | | | | | | | | | | | | | | Analog output |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> 0 without |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> X 1x 0-10 VDC, 0/4-20 mA |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> Y 2x 0-10 VDC, 0/4-20 mA |
| Digital input without 1 digital input Interface RS232 Interface RS485 Interface RS232 Interface RS485 | | | | | <input type="checkbox"/> 0 <input type="checkbox"/> I <input type="checkbox"/> 3 galv. isolated <input type="checkbox"/> 4 galv. isolated <input type="checkbox"/> C incl. digital input <input type="checkbox"/> D incl. digital input | | | | | | | | | | | | | Special measuring input H |
| | | | | | | | | | | | | | | | | | | <input type="checkbox"/> H 50 V, 300 V, 600 V, 1 A |