Micaflex P ver 4
Differential pressure transmitter with microcontroller

MF-P ver 4

NOTE !
Read through the entire manual before you begin installation and programming.

APPLICATION
MF-P is a pressure transmitter designed for measuring of low positive, negative and differential pressure.

MOUNTING
MF-P is designed for wall mounting but can be fitted with an optional frame kit, MFM-PANEL, for recessed mounting in a wall or through a cabinet door.

MF-P is screwed to the wall using four screws, max ø 4mm. Location of screw holes are shown on the reverse of the enclosure.

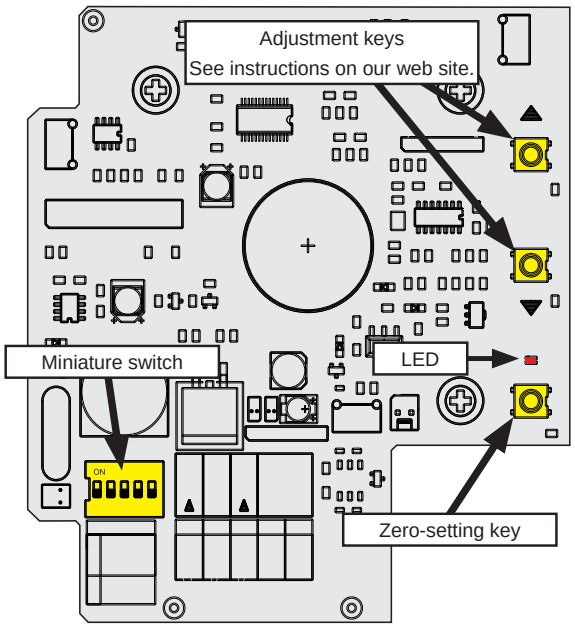
PRESSURE CONNECTIONS
Pressure connection can be made with mounting kit VR-DR or HT-plastic tube 8/6 mm.

- Connect positive pressure to **[+]** connection.
- Connect negative pressure to **[-]** connection.

NOTE! Leave unused connections open to the atmosphere.

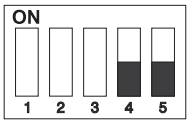
For differential pressure measurement, the highest pressure is connected to the **[+]** connection. If the transmitter has a pressure range with zero-crossing (i.e -50...50 Pa) the high pressure connection **[+]** is connected to the measuring area and the low pressure connection **[-]** is connected to the reference area.

OUTPUT SIGNAL SELECTION
Volt and mA signal have different wiring terminals. Verify that the correct output is connected.

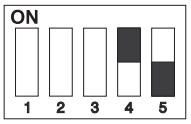


ZERO ADJUSTMENT
Switch on the main supply and wait at least 60 sec. Set the manifold valve in position calibration (if there is no valve, loosen the pressure tubes from the MF-P). Remove the cover to access the Zero-setting key on the main circuit board. Check that the miniature switch no 2 is in position ”OFF”. Press down the Zero-setting key, the LED starts flashing. Keep the key pressed until the LED turns off. Release the key and the zero-setting is finished.

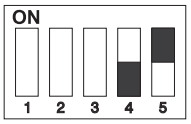
SETTING OF DAMPING
MF-P offers a possibility to set different damping (time constant). At delivery of MF-P, the damping is set to 1,5 seconds damping. Setting is adjusted with the miniature switch no 4 and 5 (the switch is situated on the bottom left edge of the main circuit board).



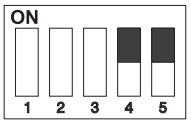
0.05 s



0.70 s



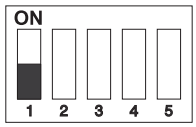
1.50 s



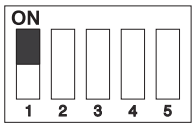
2.20 s

HALF MEASURING RANGE
Set the miniature switch no 1 in position ”OFF” for full measuring range (100%) or in position ”ON” for half measuring range (50%).

NOTE! The accuracy is always for the full range.



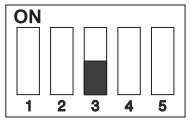
100%



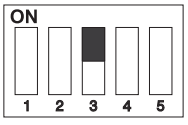
50%

ADJUSTING THE MEASURING RANGE
The measuring range can be adjusted to correct a measuring deviation. Instruction can be found on our website, www.micatrone.com.

FORCED OUTPUT SIGNAL
Max output signal (10 Volt and 20 mA) is obtained when miniature switch no 3 is set to position ”ON”. This function can be used to check the receiving system.



Normal mode



Forced mode 10Volt / 20mA

TECHNICAL DATA

Supply voltage:	24 ± 15% VAC, 20...32 VDC 24, 115, 230 VAC (with transformer) 50/60 Hz
Power consumption:	Max 3 VA (24 VAC) Max 2 W (24 VDC) Max 8 VA (230 VAC)
Range:	-50...+50 (-25...+25) Pa 0...50 (0...25) Pa 0...100 (0...50) Pa 0...200 (0...100) Pa 0...500 (0...250) Pa 0...1 (0...0,5) kPa 0...2 (0...1,0) kPa 0...5 (0...2,5) kPa Other ranges on request. Measuring range in brackets at half the measuring range.
Overload:	Max 50 kPa
Accuracy:	< ± 0,5 % of the full range plus ± 0,5 Pa
Temperature drift:	< ± 0,5 % /10 °C
Damping:	Selectable time constants of 0.05, 0.7, 1.5 and 2.2 s.
Output signal:	4...20 mA max R_L = 400 Ohm 0...10 Volt R_i = 0 Ohm Both mA and Volt signal can be used simultaneously. 0 ... 20 mA can be ordered. Inverted signal can be ordered.
Ambient temp.:	0...50°C
Degree of protec.:	IP 65, ABS plastic
El. connections,	
- solid conductor:	1 x 2,5 mm² / terminal
- stranded conductor:	1 x 1,5 mm² / terminal
Cable entries:	2 pcs threaded holes M16x1,5 (cable glands not included)
Pressure. conn.:	8/6 mm HT-plastic tube
Dimensions:	WxHxD = 122x120x90 mm
Weight:	0.55 kg

EMC/LVD/ROHS II

AB Micatrone declare under sole responsibility that MF-P is in conformity with the essential requirements in the EMC-, the LVD- and the RoHS II directive. The full text of Manufacturers declaration of conformity is available on Micatrones website.

SERVICE

MF-P normally needs no service, but we recommend to check the zero point once a year.

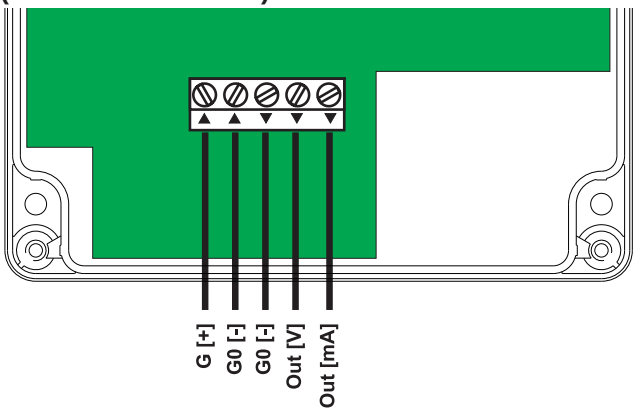
CLEANING

MF-P should be cleaned with a soft cloth and a light detergent. Do not use scouring powder or solvent.

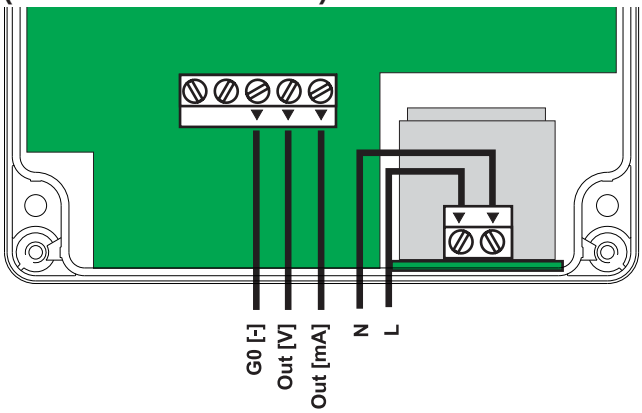
TRANSFORMER (OPTIONAL)

The output signal is normally not galvanically separated from the supply voltage. To obtain galvanic separation between the output signal and the supply voltage on a standard transmitter, the apparatus must be equipped with a plug-in transformer. Plug-in transformer can be obtained for 24, 115 or 230 VAC.

CONNECTION 24 VAC / 20...32 VDC
(without transformer)



CONNECTION 24 / 115 / 230 VAC
(with built-in transformer)



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