

Microprocessor based differential pressure controller

- Pressure control
- Flow control

Data sheet: MD-1294Gb_2001-03-22
Supersedes:

MicaFlex MF-PFC

Application

MF-PFC is a programmable controller for pressure and flow. The control function is specially developed for the control of pressure and flow in different ventilation applications.

- Built in pressure sensor
- Two outputs for volt or mA, programmable for actual value and for control
- SPC-input for e.g. compensation of outdoor temperature or remote control
- SPD-input, digital input for start, stop or change between two set points

With each MF-PFC follows a calibration protocol.

Installation

MF-PFC is designed to be placed on a wall or recessed mounting through a wall or cabin-door. When recessed mounting, a mounting kit, MFM-Panel is used.

Design

MF-PFC is equipped with an alphanumeric 2-line display with 32 signs. Setting and programming is made with four keypads on the front. Indication is possible of two parameters simultaneously.

MF-PFC has two analogue outputs which via the menu system may be used for output of actual pressure/flow value or control.

The output is possible to set between 0/2...10 VDC or 0/4...20 mA.

The output is possible to scale from 10...100 % of the selected range.

Power supply

MF-PFC is designed for power supply 24 VAC or 20...32 VDC.

For other supply voltages or for galvanic separation there are transformers (external) available as options.

Alarm

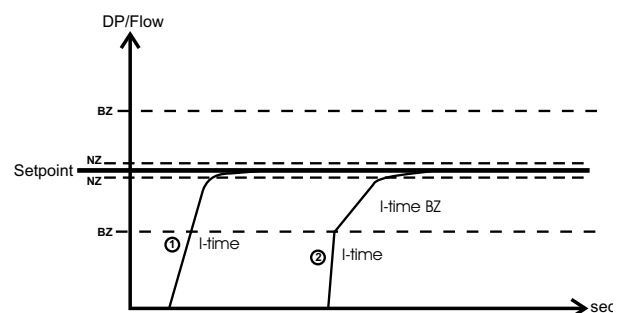
MF-PFC is as standard equipped with a visible alarm for pressure or flow. Normal status is indicated by a green LED and alarm with a red LED.

Red diode is lit when preset alarm level is exceeded and after preset time delay the diode will change to flashing.



Control function

MF-PFC has a PI-controller specially developed for pressure or flow control. The P-function may be switched off, this is recommended in order to avoid the risk of oscillating. To achieve a stable control the neutral zone may also be programmed. Two programmable I-times makes it possible to achieve less risk of oscillating when the controller goes into the neutralzone. Within a programmable zone (BZ) a longer I-time is possible to set and outside a shorter. This is very useful when you want to avoid system oscillating coming from small pressure or flow changes in a room or similar, but at the same time there is a demand for a quick response if the pressure or flow passes a critical limit.



1) 1 pcs I-time 2) 2 pcs I-times

Technical data

Indicator: Alphanumeric, 2-line, 32 signs

Pressure range:
-50...+50 Pa
0...100 Pa
0...200 Pa
0...500 Pa
0...1 kPa
0...2 kPa
0...5 kPa
Other pressure ranges available on request

Measurement error:

<± 0,5 % of pressure range

Temperature drift:

<± 0,5 % /10 °C

Damping: 0...9,9 sec.

Output:

Two analogue outputs
0/2...10 VDC, 0/4...20 mA
selectable and scaleable
SPD potentialfree closing
SPC 0/2...10 VDC, 0/4...20 mA

Input:

Ambient temperature:

0...50 °C

Alarm:

Two separate alarms,
(visible) high & low
Red alarm indication

Power-supply:

24 VAC ±15 %
20...32 VDC

Power consumption:

3 VA

Housing-class:

IP 65, ABS plastic

EI-connection: Max 2 x 1.5 mm² per terminal

Cable-entry:

2 pcs Pg 11 / Pr 18,6
(cable conn. not included)

Dimensions: WxHxD 120 x 122 x 90mm

Weight: 0,7 kg

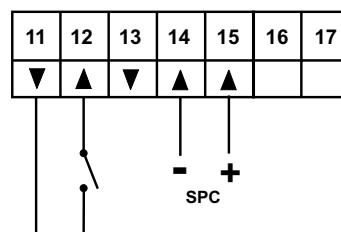
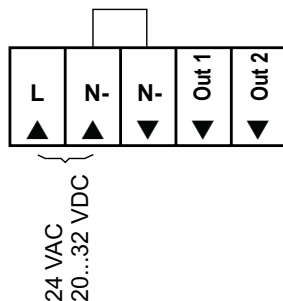
Service

Check the zero-point every 6 months.

Accessories

- Mounting kit VR-DR
- HT-plastic tubing 8/6 yellow, per meter or roller 50 m
- Manifold valve 2-TK
- MFM-Panel (wall/cabin-door) mounting kit
- Mounting kit for DIN-rail
- External transformer 24 ,115, 230 VAC

Electrical connection:



11 + 15V 15 Signal input V/mA
12 SPD [16] Not used
13 Digital ground [17] Not used
14 Analogue ground

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