

MFD-P1 Sensor

Media Flow Detector for Pressure-Type Abrasive Blasting Machines

Features

- For non-ferrous media
- Requires little maintenance due to no moving parts
- Operates from 24 Vdc
- Relay contact output
- Push-button setup
- LED indicators
- CE compliant



Description

The MFD-P1 Sensor uses a charge-coupled amplifier that is connected to a sensing ring placed in the flow path of the abrasive blasting media. Each particle passing the ring shares a minute charge with the ring, converting it to a voltage used to activate the output relay contact.

Setup is simple. The zero and span functions are automatic—pushing the “zero” button acquires zero for the no-flow condition and pushing the “flow” button sets the sensor gain and activates the relay. The relay contact will transfer whenever the flow is 50-100% of the programmed setting.

The MFD-P1 is enclosed in a 3.6" x 1.5" x 1.5" aluminum housing and is attached to a sensing ring in its mounting base. The mounting base is available in various sizes to fit most abrasive blast machine configurations. The 6-pin plug allows for easy connection of the sensor to the power supply and machine controls. The sensor is placed in the blast hose near the mixing chamber. LEDs on the top of sensor indicate green for “Flow OK” or red for “No Flow”. The internal relay is activated during green “Flow OK”.

Specifications

Size	ID: 0.75"
Output	Form “A” relay contact 30 Vdc @ 1 A
Input	24 Vdc @ 0.060a
LED Indicators	Yellow: Power okay Red: No flow Green: Flow Okay All LEDs blinking: No signal acquired or unstable flow

Cable Ordering Information

Cable is ordered separately. Three lengths are available:

Length	P/N
6' / 1.8 m	940010
12' / 3.5 m	940011
15' / 4.5 m	940012

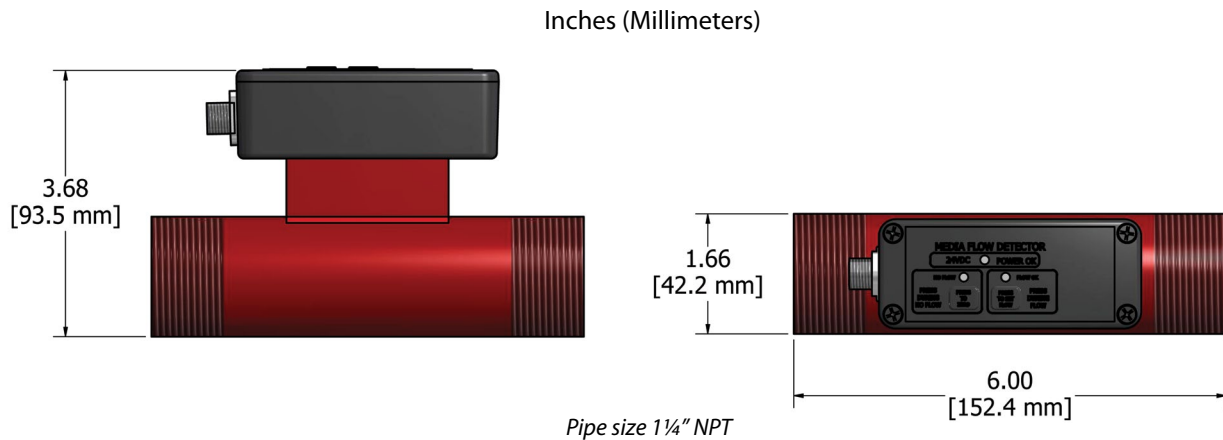


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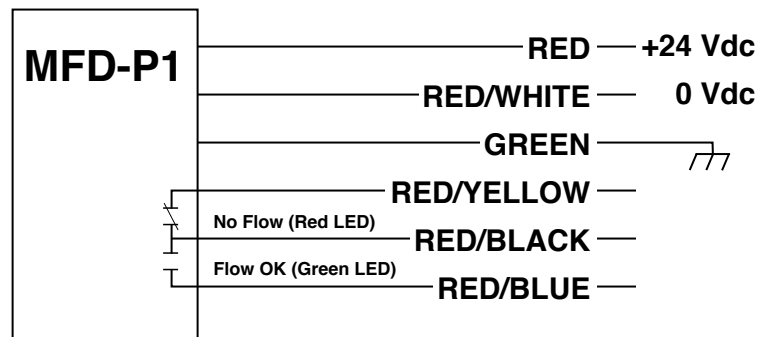
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Dimensions



Cable Connections



Relays shown in the off-state (no-flow state)

Operating Instructions

1. Apply 24 Vdc power - the yellow power LED should be on.
2. **Calibrate No-Flow:** Airflow should be on when acquiring the no-flow signal (no media should be flowing). Push the "No-Flow" button. The red LED will blink momentarily as it acquires the no-flow signal and then will stay on until the Flow signal is acquired in the next step.
3. **Calibrate Flow:** With airflow and media flowing normally, push the "Flow" button. The green LED will blink momentarily as it acquires the flow signal and then stays on whenever the flow is greater than 50% of the acquired signal level. The red LED for No-Flow will go off and the relay will transfer to the on-state. If the media flow is too low for a signal acquisition, all three LEDs will blink. Check to be sure enough media is flowing and go back to step #2.
4. **Alarm:** Whenever the flow signal is less than 50% of the acquired flow signal (for at least 4-seconds), the red LED will come on (for no-flow), the green LED (for Flow-OK) will go off, and the relay will transfer to the off-state.

Note: Whenever power is removed from the unit, the relay will transfer to the off-state but no LEDs will be on.



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Shot Peening Control

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