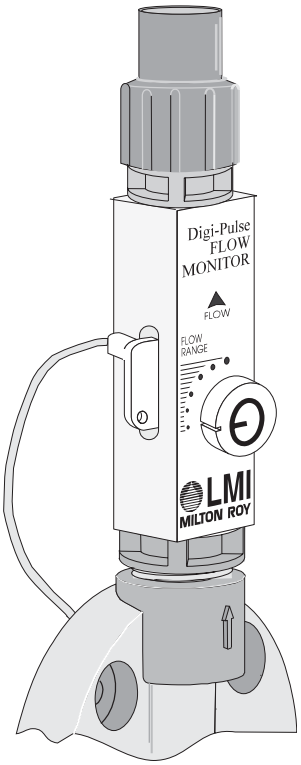
Information Sheet

Digi-Pulse™ Flow Monitor
Series FM-PRO



- Corrosion resistant PVDF
- Senses pulsating metering pump flow
- Adjustable, in-line
- Flow range:

ml/stroke	Max. LMI Pump Output
0.05 - 5.0	7.9 GPH (30.0 l/h)

- Usable as Adjustable Flow Switch for non-pulsating flow
- Economical
- For LMI Pumps with LiquiPro heads (300 & 400 Series Liquid Ends)

Pulsating flow of your pump can be monitored and transmitted using the LMI Digi-Pulse™ Flow Monitor. Designed to electrically signal a low flow or no flow condition, you can be assured of your pumping performance; an advantage when working with pulsating or very low flows. A transmitter can be connected to a remote counting or recording device. The FM-PRO-9 transmitter is wired to be plugged directly into the receptacle, mounted in the Series A9 pump housing. The Digi-Pulse™ Flow Monitor is adjustable to any desired pulsating flow rate within its range.

SPECIFICATIONS

Flow Range	**ml/stroke** 0.05 - 5.0	**Max. LMI pump output** 7.9 GPH (30.0 l/h)
Max. Pulse (stroke) Rate	100 per minute	
Max. Pressure	150 psi (10 Bar)	
Transmitter	Reed Switch (No Flow = N.O. Switch Condition) Polarity Independent Minimum pulse width 15 msec	
Max. Load	100 mA AC or DC, 36V max.	
Cable Length	10 ft (3 m) ***(except FM-PRO-9)*** FM-PRO-9: Cable Length 20" (0.5 m)	
Body Material	PVDF	
Valve Fitting Material	Carbon Fiber Reinforced PVDF ***(where supplied)***	
Seals & O-Rings	Polyprel® (TFE copolymer)	

CONFIGURATIONS

Model No.	Connection
FM- PRO	Supplied **without** valve fitting (for use w/ 3FV's or 4FV's)
FM-PRO-9	Supplied **without** valve fitting (for use with w/ 3FV's or 4FV's and Series A9 pump)
FM -PRO1	Supplied w/ PVDF valve connection for 1/4" OD tubing
FM -PRO2	Supplied w/ PVDF valve connection for 3/8" OD tubing
FM -PRO3	Supplied w/ PVDF valve connection for 1/2" OD tubing (or 9 x 12 mm)
FM -PRO4	Supplied w/ 1/4" NPT male PVDF valve housing
FM -PRO5	Supplied w/ 1/4" OD fitting and Metric Tubing Adapter Kit for: 3 x 6 mm PE Tubing; or 4 x 6 mm PE Tubing
FM -PRO6	Supplied w/ 3/8" OD fitting and Metric Tubing Adapter Kit for: 6 x 8 mm PE Tubing; or 6 x 12 mm PE Tubing

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Instruction Sheet

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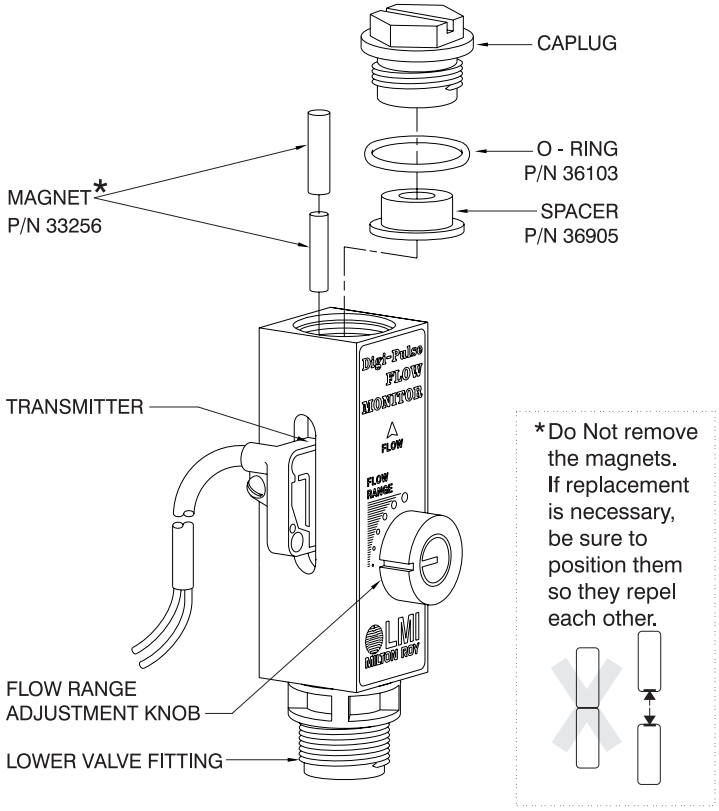
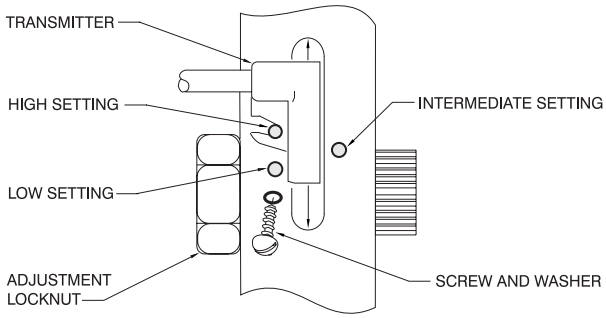
1. With your pump turned off, screw the lower valve fitting of the Digi-Pulse™ Flow Monitor to the discharge side of the pump head.
2. Remove the red Caplug from the top of the Digi-Pulse™. ***Be sure to save the O-ring seal and spacer.*** Attach your 3FV or 4FV to the top of the Digi-Pulse™.
3. Connect the Digi-Pulse™ cable to your counter, computer, or other recording device (polarity is not critical). If cable extension is desired, consult factory. Plug the FM-PRO-9 cable directly into the receptacle in the Series A9 pump housing.
4. Loosen the locknut of the flow-range knob of the flow monitor and set the knob to the largest dot. Start the pump and adjust it (calibrate, if necessary) for proper output to satisfy your system requirements.



5. With the pump running, gradually turn the adjustment knob of the flow monitor counter-clockwise ↺ until the sensor just begins to trigger your electronic device.
   This will be the most sensitive setting of the Digi-Pulse™, given your pump setting and fluid properties. Every stroke of the pump will output enough volume of solution to cause the Digi-Pulse™ flow monitor to register a pulse. If the flow drops below the initial pump setting, the Digi-Pulse™ will no longer register strokes to your electronics, indicating some type of pump failure or low-level condition.
6. Tighten the adjustment locknut without altering the adjustment position.

Note:
After the initial pump and Digi-Pulse™ setup is complete, any adjustment of the stroke length of the pump (output per stroke) will require a readjustment of the Digi-Pulse™ flow monitor (repeat steps 4 - 6 above).

To change the flow range setting:
A set screw holds the transmitter body in a notch on the side of the flow monitor. Remove the screw and washer and slide or turn the transmitter 180° to an alternate position and tighten the screw and washer in the hole to secure the transmitter. The Digi-Pulse™ Flow Monitor comes factory set at the **"LOW"** setting which should accommodate most applications. However, the **"INTERMEDIATE"** or **"HIGH"** settings may be appropriate for a particular application if the sensor does not trigger in the **"LOW"** setting.



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