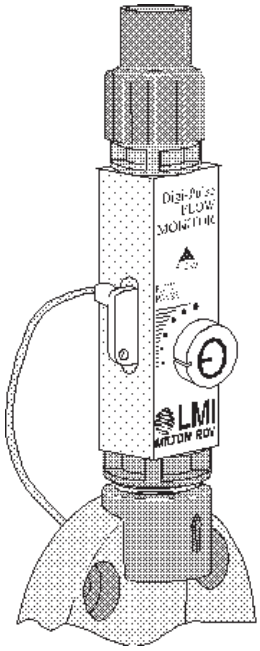
Information Sheet

DIGI-PULSE™ Flow Monitor
Series FM-PRO and FM-ROY



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

ml/stroke	Max. LMI Pump Output
0.1 - 5.0	7.9 GPH (30.0 l/h)

- Usable as Adjustable Flow Switch for non-pulsating flow
- Economical
- For LMI Pumps with 300, 400, 700, 800 and 900 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 flow monitor input, mounted in the Series B9 or C9 pump housing. Plug the FM-ROY-9 directly into the flow monitor input (4-pin connection) on the ROYTRONIC® EXCEL Series A+9 and A+N metering pump housing. The FM-ROY is adjustable to any desired pulsating flow rate within its range.

SPECIFICATIONS

Flow Range	ml/stroke 0.1 - 5.0	Max. LMI pump output 7.9 GPH (30.0 l/h)
Max. Pulse (stroke) Rate	240 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) FM-PRO, FM-ROY 20" (0.5m) FM-PRO-9, FM-ROY-1, FM-ROY-9	
Body Material	PVDF	
Valve Fitting Material	Carbon Fiber Reinforced PVDF (where supplied)	
Seals & O-Rings	POLYPREL® (PTFE copolymer)	

CONFIGURATIONS

Model No.	Connection
FM- PRO	Supplied with single ball lower valve fitting (for use with legacy 3FVs OR 4FVs)
FM-PRO-9	Supplied with single ball lower valve fitting (for use with legacy 3FVs or 4FVs and Series B9 or C9 pumps)
FM -ROY	Supplied with double ball lower valve fitting (for use with new 4FVs and ROYTRONIC® Series A metering pumps)
FM -ROY-1	Supplied with double ball lower valve fitting (for use with new 4FVs and B9 and C9 pumps)
FM -ROY-9	Supplied with double ball lower valve fitting (for use with new 4FVs and ROYTRONIC® EXCEL A+9 and A+N metering pumps)

Accessory:

Right Angle Adapter Assembly P/N 49216 is designed for tight corners and orients the DIGI-PULSE™ Flow monitor series FM-PRO or FM-ROY vertically when used with AUTOPRIME™ Liquid Ends.

LMI MILTON ROY

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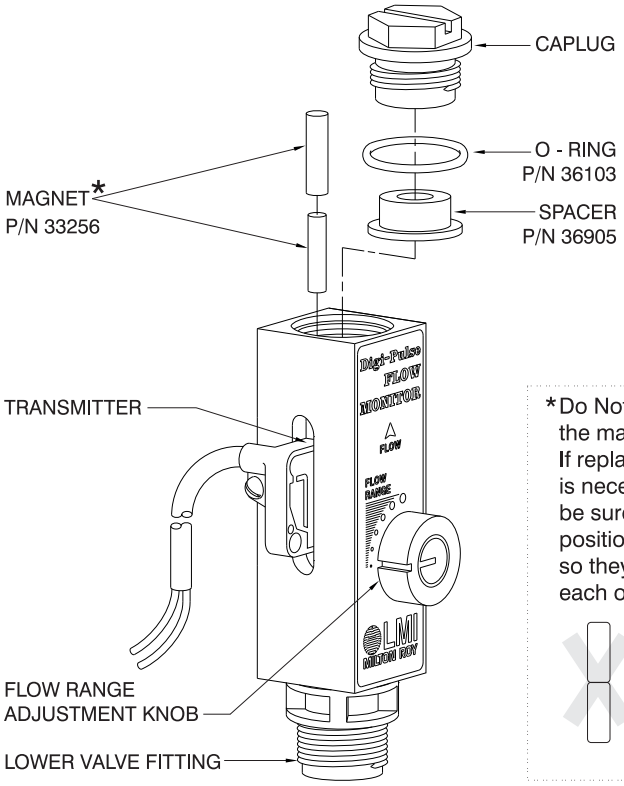
Instruction Sheet

DIGI-PULSE™ Flow Monitor
Series FM-PRO and FM-ROY

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 B9 or C9 pump housing. Plug the FM-ROY-9 directly into the flow monitor input (4-pin connection) within the ROY-TRONIC® EXCEL Series A+9 and A+N metering pump housing.

Note: *The FM-PRO is designed for a single ball fitting. The FM-ROY is designed for a double ball fitting.*

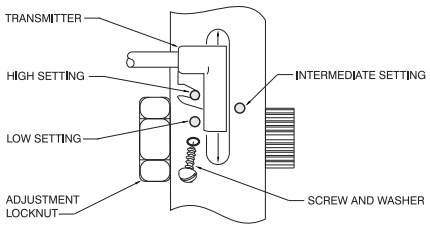


*Do Not remove the magnets. If replacement is necessary, be sure to position them so they repel each other.

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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