

LMI Digi-Pulse™ flow monitor series FM-PRO/FM-300



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-XXX-9 Series transmitters are wired to be plugged directly into the receptacles of Series AA9, B9 and C9 pump housings. The Digi-Pulse™ Flow Monitor is adjustable to any desired pulsating flow rate within its range.

Performances

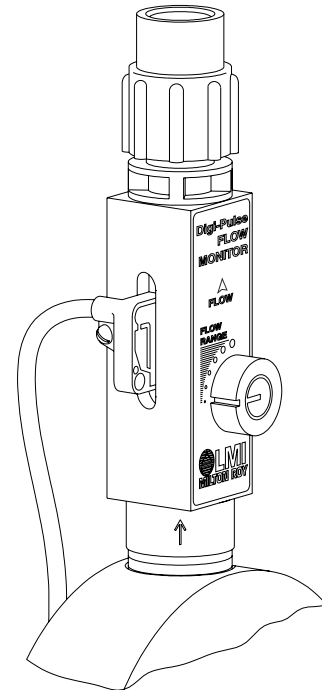
- Corrosion resistant ultra high molecular weight Polyethylene
- Senses pulsating metering pump flow
- Adjustable, in-line
- Usable as adjustable Flow Switch for non-pulsating flow
- Economical
- Flow Monitor FM-PRO (9) for Liquipro™ liquid ends and flow monitor FM-300 (9) for liquid ends with 1/2" check balls

Configurations

Liquid Ends	Pumps	AA9 / B9 / C9	Other
	Liquipro™		FM-PRO-9
25T (M) - 26 (M) - 35 T (M) - 36 (M)		FM-301-9	FM-301
24 - 25 (P) - 34 - 35 (P)		FM-302-9	FM-302

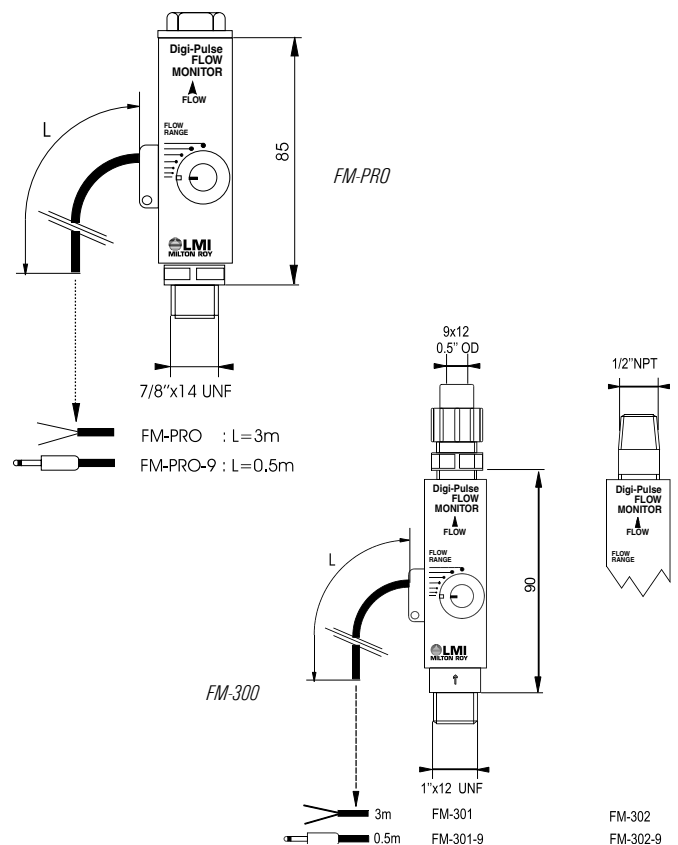
Specifications

- **Flow Range:**
 - Stroke capacity: 0.5 - 16 ml
 - Max. LMI pump output: 95 l/h (FM-300)
- **Max. Pulse (stroke) Rate:** 100 per minute
- **Max. Pressure:** 10 bar
- **Transmitter:**
 - Reed Switch (No Flow = N.O. Switch Condition)
 - Polarity Independent
 - Minimum pulse width: 15 ms
- **Max. Load:** 100 mA AC or DC, 36 V max.
- **Cable Length:**
 - FM-300, FM-PRO: 3 m - 2 wires 0.35 mm²
 - FM-300-9, FM-PRO-9: 0.5 m with audio jack Ø3.5 mm
- **Body Material:** UHMW PE (ultra high molecular weight polyethylene)
- **Valve Fitting:** Carbon Fiber Reinforced PVDF (FM-300)
- **Magnets:** PVDF coated
- **Seals & O-Rings:** Polyprel® (TFE copolymer)



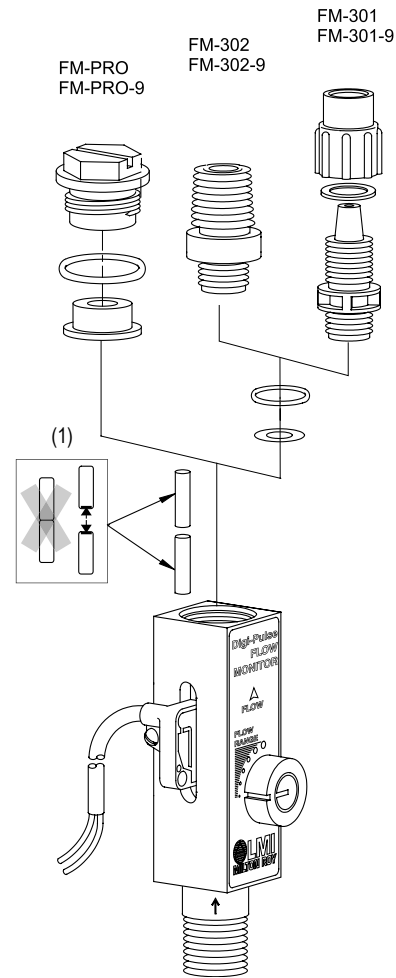
LMI Digi-Pulse™ flow monitor

Dimensions (in mm)



Instructions

1. With your pump turned off, remove discharge valve housing, screw the lower valve fitting of the Digi-Pulse™ Flow Monitor to the discharge side of the pump head.
2. M-PRO: Remove the red caplug from the top of the Digi-Pulse™. Be sure to save the O-ring seal and spacer. Attach your valve housing 3FV or 4FV to the top of the Digi-Pulse™.
FM-300: Attach tubing to top of valve housing.
3. FM-XXX: Connect the Digi-Pulse™ cable to your counter, computer, or other recording device (polarity is not critical). If cable extension is desired, consult factory.
FM-XXX-9: Plug the cable directly into the receptacle in the Series AA9/B9/C9 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.



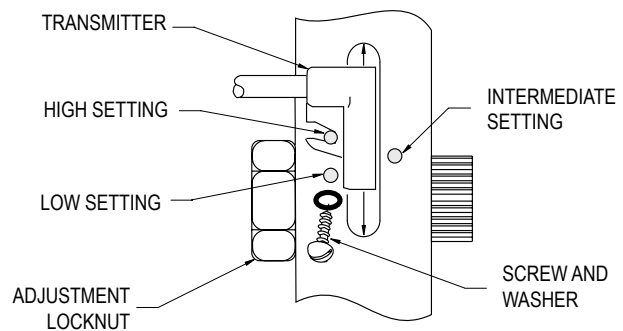
⁽¹⁾ If replacement is necessary, be sure to position them so they repel each other.

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° (82°C) 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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