

# **DM-2 Diaphragm Monitor System**

The Yamada® DM-2 Diaphragm Monitoring System is designed to protect your pump and its environment against damage from corrosive, aggressive, or otherwise harmful fluids pumped. Powered by standard line current, the DM-2 can automatically shut off the air supply to the pump and / or activate an indicator (whistle or alarm) the moment a diaphragm leak is detected. Alternate indicators not supplied by Yamada.



### **Applications**

- When positive head pressure is on the pump fluid inlet.
- When pumping hazardous or toxic fluids for working & environmental safety.
- Expensive fluids.

### **Advantages**

- Detects Diaphragm Leaks Instantly: Sensitive moisture probes respond quickly to liquid in the pump air chamber to help keep leaks from causing pump damage or product contamination.
- Automatic Shutdown or Alarm Capability: The DM -2 can be connected to a solenoid valve, alarm, or control system to not only stop the pump but also alert the operator the moment the leak is detected.
- Compact and Simple: Moisture probes are easily located at the bottom of each pump air chamber. Lights displaying LT or RT, indicate a diaphragm Remote control enclosure is standard in NEMA 4X (watertight) and measures just 2-1/2" W x 3 -3/4" L x 2-1/4" D. The enclosure can be easily mounted to any flat surface.
- Sensitivity and Inspection: The DM-2 is adjustable to provide the required sensitivity for a particular fluid pumped. The system can easily be inspected via simple probe removal from the pump air chamber and immersing in the fluid pumped.















# **Principles of Operation**

The DM-2 Diaphragm Monitoring System senses liquid entering the non-wetted portion of the Yamada Pump via a leaking diaphragm. A sensitive moisture sensor, which operates on the principal of fluid conductance, is installed at the lowest point of each air chamber. In the event of a diaphragm rupture, liquid enters the airside of the pump and begins to collect at the bottom of the air chamber where the probe is located. This liquid is detected by the sensor and a signal is transmitted to a remote master control. The controller, in turn, activates any connected alarm system, solenoid valve, or electronic device. Diaphragm Monitoring System can be factory installed on any Yamada industrial or FDA, NDP-20/25/40/50/80, or DP-10 Series pump. It can also be used on the NDP-5/15, NDP-20(PP) and NDP-25(PP) center bodies, typically installed after the exhaust of the pump. The system operates on either DC (with transformer) or AC power.

#### **Performance Specifications**

Materials of Construction: ABS Plastic

Enclosure: NEMA 4X / IP66

Mounting: Flat Surface, #10 Fasteners

Weight: 8.1 oz.

Power Supply: 1 Phase, 50/60 Hertz, AC or DC, 12 or 24 Volt

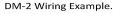
Optional Transformer: 1 Phase, 50/60 Hertz

120/12 VAC

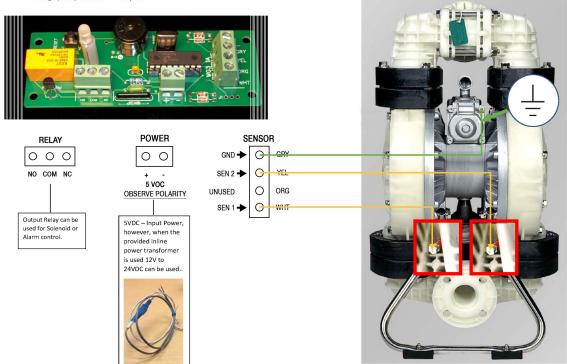
Operating Temperature Range: 0° to 125°F Sensitivity Range: 0-100,000 Ω (0-5 Volt) Cable Length (probes): Standard 2', Optional up to 100'

Cable Power & Alarm (user to supply): 4-Wire, 18 Gauge, Non-Shield

NOTE: DM-2 is to be utilized when pumping electrically conductive fluids ONLY.



Note: Wire Gauge (AWG) 18 thru 24 is acceptable





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