

DM-2 Diaphragm Monitor System

The Yamada® DM-2 Diaphragm Monitoring System is designed to protect your Yamada Pump and the environment against damage from corrosive, aggressive, or other harmful pumped fluids. Powered by standard line current, the DM-2 automatically disrupts air supply pressure to the pump and / or activates an indicator the moment a diaphragm leak is detected.

Advantages

- **Detects Diaphragm Leaks Instantly:** Sensitive moisture probes respond quickly to liquid in the pump air chamber keeping 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 automatically stop the pump and / or 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 breach. Remote control enclosure is standard in NEMA 4X (watertight) and measures just 2-½" W x 3-¾" L x 2-¼" D (dimensional drawing on back). 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.



Applications

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



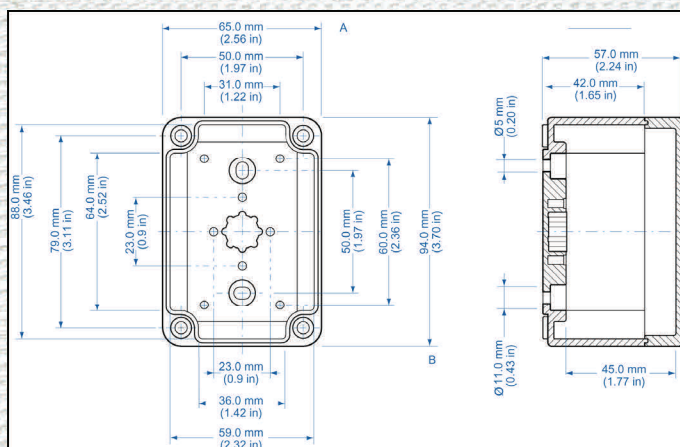
Principles of Operation

The DM-2 Diaphragm Monitoring System senses liquid entering the non-wetted portion of the Yamada Pump via a leaking diaphragm. A sensitive electronic 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, collects at the bottom of the air chamber where the probe is located, 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. The DM-2 Diaphragm Monitoring System can be factory installed on any Yamada industrial or FDA NDP-20, 25, 50, 50 & 80, or DP-10 Series pump. The system operates on either DC (with transformer) or AC power.

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

Performance Specifications

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| Materials of Construction | ABS Plastic |
| Enclosure | NEMA 4X/IP66 |
| Mounting | Flat Surface, #10 Fasteners |
| Weight | 8.1 oz. |
| Power Supply (Standard Unit) | 1 Phase, 50/60 hertz, AC or DC, 12 or 24 volt |
| Optional Transformer | 1 Phase, 50/60 hertz, 120/12VAC |
| Operating Temperature Range | 0°F to 125°F |
| Sensitivity Range | 0-100,000Ω (0-5 Volt) |
| Cable Length (Probes) | Standard-2', Optional-up to 100' |
| Cable Power and Alarm (User to Supply) | 4-Wire, 18 Gauge, Non-Shielded |



| | |
|--------------------------------------|------------|
| R2 | R1 |
| Left | Right |
| Sensitivity Adjustment | |
| | |
| LT | RT |
| Diaphragm Failure | |
| Right Moisture Probe (Red) | RS |
| Left Moisture Probe | LS |
| Common (alarm or pump shutoff relay) | COM |
| Normally Closed | NC |
| Normally Open | NO |
| 12/24 VAC/DC | V+ |
| Ground (green) | G |

Label:

