

# OUTDOOR ENVIRONMENT MONITORING SYSTEM

Provides early warnings before critical events turn into disaster.



- **Wireless GSM Alerts**
- **Monitors Threats:**
  - **Temperature (Frost)**
  - **Irrigation Water Pressure**
  - **Humidity**
  - **Liquid Detection**
- **No Expensive Software Required**

**ENVIROMUX-MINI-O with ENVIROMUX-TO-7 Temperature Sensor**

## Features & Applications

The ENVIROMUX® Outdoor Environment Monitoring System monitors environmental conditions, such as temperature, water pressure, humidity, water leakage and more. When a sensor goes out of range of a configurable threshold, the system will notify you via SMS messages from the built-in GSM modem. It comes in a sealed, weatherproof, lockable enclosure, making it suitable for harsh environments. The system is ideally suited to alert crop growers of frost events and irrigation system failures.

- Sensors supported:
  - 2 temperature/humidity sensors
  - 1 liquid detection sensor
  - 4 digital inputs sensitive to contact closure
- Built-in GSM modem for sending text messages when alerts occur.
- Easily configured via HTTP web page.
- Hinged door secured by two latches and a 0.12" diameter eyelet for securing with user-supplied lock.
- Weatherproof enclosure.
  - Designed to IP65 and NEMA 3 specifications.
  - Includes wall-mounting and pipe-mounting brackets.
- Ideal for informing crop growers of critical environmental conditions.
  - Use the ENVIROMUX-TO-x outdoor temperature sensor to be alerted when frost events occur.
  - Use the ENVIROMUX-PS50 or ENVIROMUX-PS150 pressure switch sensor to be notified if an irrigation pump stops working or if irrigation system lines become clogged.

## Specifications

### Temperature Inputs

- Two female RJ45 connectors for connecting outdoor temperature sensors.

### Water Detection Cable Input

- One screw terminal pair for connecting liquid detection sensor.
  - Additional water detection sensors can be connected to the dry contact closures.
- Output voltage: +5V DC.
- Current limited to 10mA
- Maximum resistance to close contact: 300K Ohm

### Dry Contact Closures

- Four screw terminal pairs for connecting dry contact devices.
- Potential-free.
- Output voltage: +5 V DC
- Current limited to 10 mA
- Maximum resistance to close contact: 300K Ohm

### Ethernet Port

- One female RJ45 connector.
- 10 Base-T Ethernet interface.
- Configuration is done via HTTP web page.
  - Supports Microsoft Internet Explorer 6.0 and higher.

### GSM

- Sends SMS text messages to a pager or cell phone when a sensor goes out of range of a configurable threshold.
- GSM modem with antenna built into system.
- Convenient push-push SIM card holder
  - Mini SIM card supporting SMS messaging required (not included).
- Protocols: AT commands
- Supports one configurable authorized phone number for sending SMS text messages.
- Auto PIN feature, no need to enter SIM card PIN after restart
- Quad band: 850/900/1800/1900 MHz
- SMS: Text mode

### Power

- Accepts 10-18 VDC (12 VDC nominal)
- 10 AWG wires with brass terminals for connection of automotive/marine battery.



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### Dimensions

- WxDxH (in.): 6.8x4.3x10.8

### Environmental

- Operating temperature: -4°F to 131°F (-20°C to 55°C).
- Storage temperature: -20°F to 185°F (-30°C to 85°C).



The Outdoor Environment Monitoring System box opened

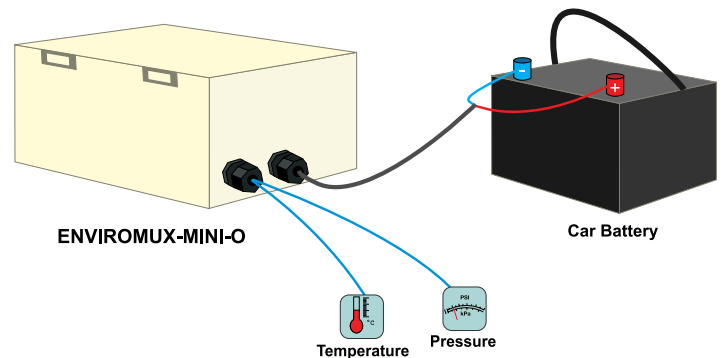
### Regulatory Approvals

- CE, RoHS
- Enclosure: IP65, NEMA 3

### Warranty

- Two years

### Configuration and Cable Illustration



## Environmental Sensors

### Outdoor Temperature Sensor



ENVIROMUX-TO-x

- For use with ENVIROMUX-MINI-O.
- Applications from -4°F to 167°F (-20°C to 75°C).
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within  $\pm 1.8^\circ\text{F}$  ( $\pm 1^\circ\text{C}$ ).
- Re-calibration is not necessary after initial set-up.
- Available length: 3/7/10/25 feet.

### Pressure Switch Sensor



ENVIROMUX-PS50

- Diaphragm-actuated, pressure-indicating gauge with built-in electrical switch for tripping alarms and/or shutdown devices.
- For use with ENVIROMUX-MINI-O.
- Be notified if an irrigation pump stops working or if irrigation system lines become clogged.
- Measurement range:
  - ENVIROMUX-PS50: 0 to 50 psi
  - ENVIROMUX-PS150: 0 to 150 psi
- Maximum pressure:
  - ENVIROMUX-PS50: 100 psi
  - ENVIROMUX-PS150: 300 psi
- Accuracy:  $\pm 1.5$  psi
- Polycarbonate, break-resistant case and lens.
- Process connection: 1/8-27 NPTM brass
- Accuracy and protection from moderate overpressure is assured by unitized diaphragm chamber.
- Built-in pulsation dampener helps eliminate pointer flutter and is removable for cleaning.
- Operating temperature: -40°F to 150°F (-40°C to 66°C)
- Process temperature: -40°F to 250°F (-40°C to 121°C)
- Screw terminal for connecting sensor to ENVIROMUX-MINI-O.



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