

OUTDOOR ENVIRONMENT MONITORING SYSTEM

Provides early warnings before critical events turn into disaster.



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

- **Wireless GSM or 3G Alerts**
- **Monitors Threats:**
 - **Temperature (Frost)**
 - **Irrigation Water Pressure**
 - **Humidity**
 - **Liquid Detection**
- **No Expensive Software Required**

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 or 3G 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
 - ◆ Humidity sensor requires proper installation to protect it from the elements.
 - 1 liquid detection sensor
 - 4 digital inputs sensitive to contact closure
- Built-in GSM or 3G modem for sending text messages when alerts occur.
- Hinged door secured by two latches and a 0.12" diameter eyelet for securing with user-supplied lock.
- Easily configured via HTTP web page.
- 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 / 3G Modem

- Sends SMS text messages to a cell phone or pager (GSM modem only) when a sensor goes out of range of a configurable threshold.
- Supports one configurable authorized phone number for sending SMS text messages.
- ENVIROMUX-MINI-O: features built-in GSM modem
 - Requires mini SIM card supporting SMS messaging (not included)
 - Protocols: AT commands
 - Quad band: 850/900/1800/1900 MHz
- ENVIROMUX-MINI-O3G: features built-in 3G modem
 - Supports third generation (3G) digital cellular standards.
 - Requires mini SIM card supporting 3G SMS messaging (not included)
 - Protocols: AT commands
 - Quad band EDGE/GPRS/GSM: 850/900/1800/1900 MHz

Power

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

Dimensions

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



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Specifications (Continued)

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).

Regulatory Approvals

- CE, RoHS
- Enclosure: IP65, NEMA 3

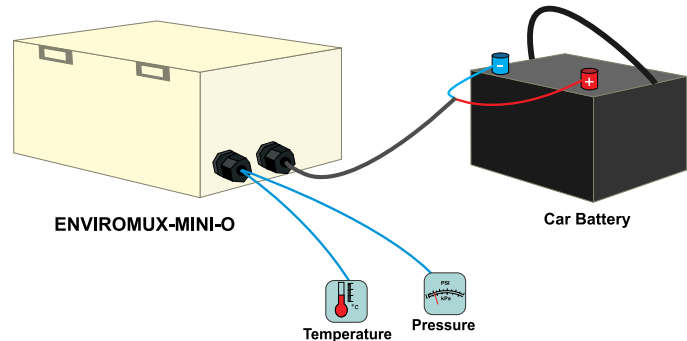
Warranty

- Two years



The Outdoor Environment Monitoring System box opened

Configuration and Cable Illustration



Outdoor Environment Monitoring System

NTI Part #	Modem
ENVIROMUX-MINI-O	GSM
ENVIROMUX-MINI-O3G	3G

Environmental Sensors

Outdoor Temperature Sensor



ENVIROMUX-TO-x

- For use with ENVIROMUX-MINI-O.
- Applications from -4°F to 212°F (-20°C to 100°C).
- High resistance to external influences on the cable due to digital output signal.
- Accurate to within $\pm 0.9^\circ\text{F}$ ($\pm 0.5^\circ\text{C}$).
- Re-calibration is not necessary after initial set-up.
- Available length: 3/7/10/25 feet.

Outdoor Sensor Cable



- Outdoor 2-wire sensor cable.
- Color-coded red and black PVC insulation.
- Sunlight-resistant gray PVC jacket.
- 22 AWG stranded tinned copper conductors.
- Operating temperature: -4°F to 221°F (-20°C to 105°C).
- Use to connect the ENVIROMUX-PSxx Pressure Switch Sensor to the ENVIROMUX-MINI-O.
- Available lengths: 3/6/10/25/50/100 feet.
- Regulatory approvals: RoHS, UL

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: ± 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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