Installation Instruction For:

ENVIROMUX-IMD(-P) INFRARED MOTION SENSOR
ENVIROMUX-IMD-CM(P) CEILING MOUNT MOTION SENSOR
ENVIROMUX-IMD-TAA(2) INFRARED MOTION SENSOR-TAA COMPLIANT
ENVIROMUX-GBS(-P) GLASS BREAK DETECTION SENSOR
ENVIROMUX-CMD(-P) CARBON MONOXIDE DETECTOR

The ENVIROMUX Sensors listed above are intended for connection to an NTI ENVIROMUX-MINI / -MINI-LXO / -SEMS-16(U) / -16D / -5D/-2D for use in detecting changes in the environment inside a server room. When properly connected, the sensors will provide signals to the ENVIROMUX that with proper configuration will result in alert messages being sent to the administrator of the ENVIROMUX. Each sensor has screw terminals for easy user connections.

The sensors used with the ENVIROMUX-16D/-5D/-2D and ENVIROMUX-SEMS-16(U) can be powered by the ENVIROMUX and don’t require an external power supply. Sensors models without the “–P” are used for these models (i.e. ENVIROMUX-IMD).

Sensors used with the ENVIROMUX-MINI / -MINI-LXO require an external power supply. To include a 12VDC AC adapter order models with “-P” (i.e. ENVIROMUX-IMD-P).

Access Screw Terminals
See the images below for instruction to open the case for each model to access the screws terminals.

- **ENVIROMUX-IMD(-P)**: Remove screw to open case.
- **ENVIROMUX-IMD-TAA(2)**: Loosen screw (approx. 5-10 turns) to open case.
- **ENVIROMUX-IMD-CM(P)**: Insert screwdriver to slot and twist to open case.
- **ENVIROMUX-GBS(-P)**: Push tab to open case.
- **ENVIROMUX-CMD(-P)**: Insert screwdriver to slot, pry gently up, and release tab to open case.
Installation with External Power Supply (ENVIROMUX-MINI/ENVIROMUX-MINI-LXO)

1. Connect two 16-26 awg wires (not supplied) from any set of dry contacts (see below) on the ENVIROMUX-MINI (set 1, 2, 3, or 4) or ENVIROMUX-MINI-LXO (set 1-5).

2. Connect the other end of those two wires to the switch terminals “C” and “N.O.” (“ALARM” on some models) on the sensor.
   (Apply one wire to each terminal, it doesn’t matter which wire goes on which terminal.)

   Note: On some sensors (i.e. ENVIROMUX-GBS), the switch terminals are “C” and N.C.” . Therefore the “Normal Status” in configuration will be “Closed” instead of “Open” (see image on page 6).

3. Connect the AC adapter wire labeled “PLUS 12” to the “+12” marked in the images below for each sensor.

4. Connect the AC adapter wire labeled “NEG” to the terminal labeled “—” (negative) as shown in the images below for each sensor.
5. Be sure to tighten terminals to secure each conductor to the terminal block.
6. Mount the sensor as needed according to the type of sensor being connected.
Using RJ45 Sensor Socket

If an RJ45 Sensor socket is available, a contact sensor can be connected to it using a CAT5 cable. Connect the CAT5 cable as indicated in the image below. Connect the white/orange and orange (ALARM) wires to the contact terminals of the sensor.

![Schematic for wiring Contact Sensor to RJ45 Socket]

If the sensor does not have a tamper feature, or you do not wish to use it, simply omit the connection to pin 5.

**APPLICATION NOTE:** The wire gauge specified for connection is 16-26 awg. The maximum 24AWG cable length that can be used on an ENVIROMUX-CMD (Carbon Monoxide Detector) is 500 feet. To increase the maximum distance to up to 1000 feet, order 22 awg 4-conductor communications cable (NTI# COMM4-BULK22-STRND) and the compatible RJ45 plug (NTI # 5E-PLG-AWG22).

Using DIGITAL IN Terminals

The ENVIROMUX-16D and ENVIROMUX-SEMS-16(U) have 8 sets of terminals for connecting contact sensors. The ENVIROMUX-5D / 2D have 5 sets.

1. Connect two 16-26 awg wires (not supplied) to the “+” and “−” (“+” and “−” on the ENVIROMUX-5D / 2D) of any set of “Digital In” terminals (see next page) on the ENVIROMUX.
2. Connect the other end of those two wires to the switch terminals “C” and “N/O” ("ALARM" on some models) on the sensor. (Apply one wire to each terminal, it doesn’t matter which wire goes on which terminal.)

3. Connect two more 18-22 awg wires (not supplied) between the “12V” and “ ” (ground) terminals and the “+12” and “NEG” terminals on the sensor.

   Note: If the “AUX PWR” terminals on the ENVIROMUX-2D / -5D are already powering another sensor, then an external power supply may be required to power the new sensor, with power connections made as explained on pages 2-3. If the combined power consumption of the two sensors exceeds 500mA, then an external power supply will be required.

4. Be sure to tighten terminals to secure each conductor to the terminal block.
5. Mount the sensor as needed according to the type of sensor being connected.

Operation

1. If the sensor includes an AC adapter, connect the AC adapter to a 120VAC power source. If the sensor is powered by an ENVIROMUX, the sensor will be powered any time the ENVIROMUX is ON. Each sensor has an LED that will illuminate to indicate the sensor is functioning. Refer to the instructions that accompany each sensor for proper LED indications.

2. Configure the ENVIROMUX to report signals from the connected dry contact sensor as alert detection occurs. (Refer to ENVIROMUX manual for details on configuration- see also examples on next page.) When an alert condition is detected, the switch terminals on the sensor will close to generate an alert message from the ENVIROMUX.

For maintenance and testing instruction, see the instructions that are included from the sensor manufacturer for each sensor.
Example of sensor configuration in ENVIROMUX-2D or ENVIROMUX-MINI-LXO using DIGITAL IN terminals
Example of sensor configuration in ENVIROMUX-16D/-5D/-2D using RJ45
Example of sensor configuration in ENVIROMUX-SEMS-16 using RJ45

**Digital Input Configuration**

- **Type:** Digital Input

  - **Description:** Digital Input #1
  - **Group:** Group # 0

  **Normal Status**
  - Normal Status: Open

  **Sampling**
  - Sampling Period: 20 Sec
  - Add reading to log file every: 60 Min

  **Alert Timing**
  - Alert Delay: 30 Sec
  - Notify again after: 30 Min

  **Alert Notifications**
  - Enable E-mail Alerts
  - Enable Syslog Alerts
  - Enable Siren Alerts

  **Outputs**
  - Associate output: None
  - On alert: the output contact
  - On return to normal: the output contact

Example of sensor configuration in ENVIROMUX-SEMS-16 using DIGITAL IN terminals
Example of sensor configuration in ENVIROMUX-MINI

### Power Requirements

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Current Draw @12VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVIROMUX-IMD</td>
<td>15mA</td>
</tr>
<tr>
<td>ENVIROMUX-IMD-CM</td>
<td>15mA</td>
</tr>
<tr>
<td>ENVIROMUX-IMD-TAA</td>
<td>11mA</td>
</tr>
<tr>
<td>ENVIROMUX-IMD-TAA2</td>
<td>9mA</td>
</tr>
<tr>
<td>ENVIROMUX-GBS</td>
<td>35mA</td>
</tr>
<tr>
<td>ENVIROMUX-CMD</td>
<td>40mA</td>
</tr>
</tbody>
</table>

**NOTE:** Alert hysteresis must be set to 1 second for ENVIROMUX-IMD-(P) and ENVIROMUX-IMD-CM(P) models

### Warranty Information

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at (800) 742-8324 (800-RGB-TECH) or (330) 562-7070 or visit our website at [http://www.networktechinc.com](http://www.networktechinc.com) for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.

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