

**ENVIROMUX® Series**

**Installation Instruction For:**

- ENVIROMUX-IMD(-P) INFRARED MOTION SENSOR**
- ENVIROMUX-IMD-CM(P) CEILING MOUNT MOTION SENSOR**
- ENVIROMUX-IMD-TAA 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)**



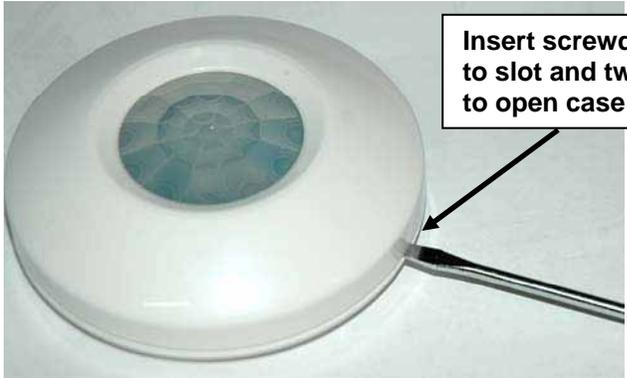
Remove screw to open case

**ENVIROMUX-IMD-TAA**



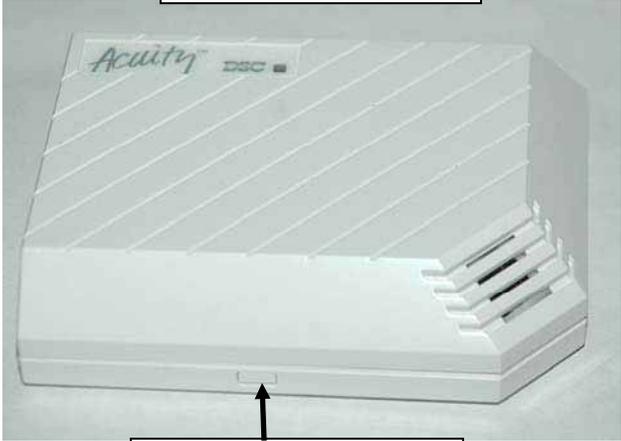
Loosen screw (approx. 10 turns) to open case

**ENVIROMUX-IMD-CM(P)**



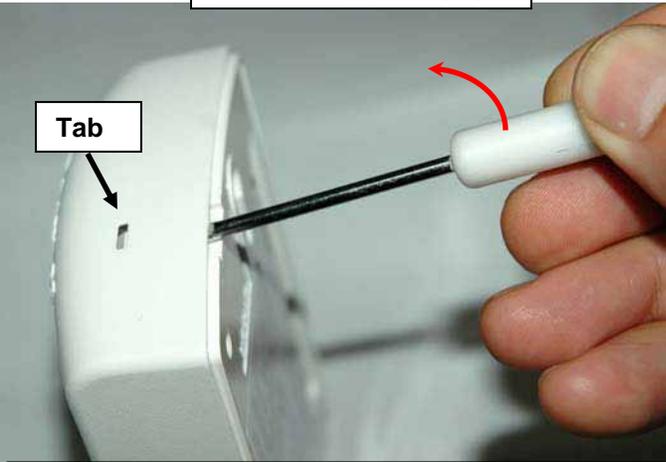
Insert screwdriver to slot and twist to open case

**ENVIROMUX-GBS(-P)**



Push tab to open case

**ENVIROMUX-CMD(-P)**

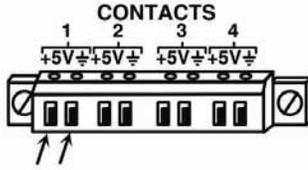


Insert screwdriver to slot, pry gently up, and release tab to open case

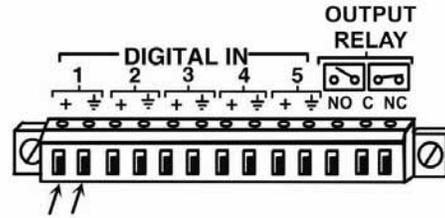
## Installation-with External Power Supply (ENVIROMUX-MINI/ENVIROMUX-MINI-LXO)

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.

**VIEW OF CONTACTS ON ENVIROMUX-MINI**

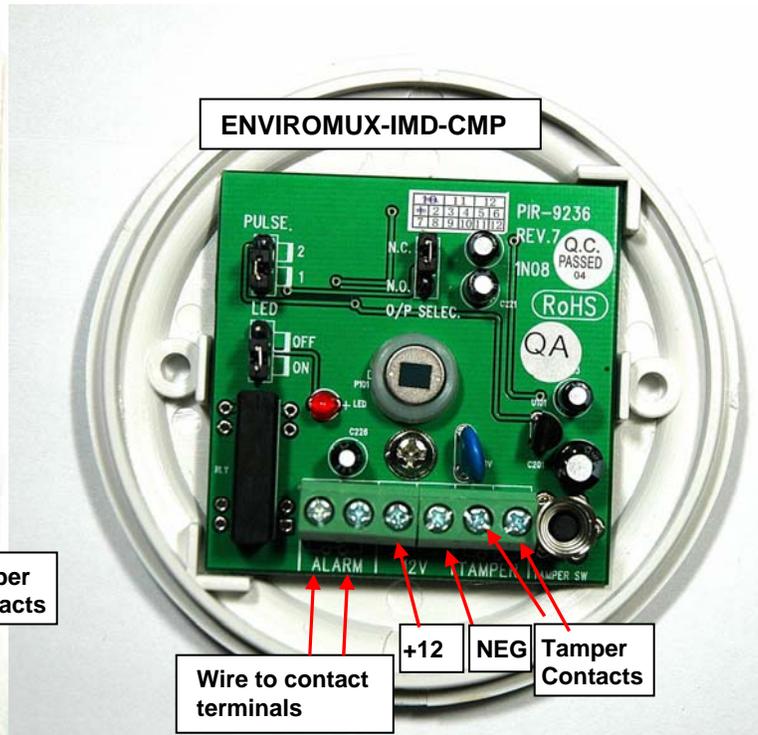
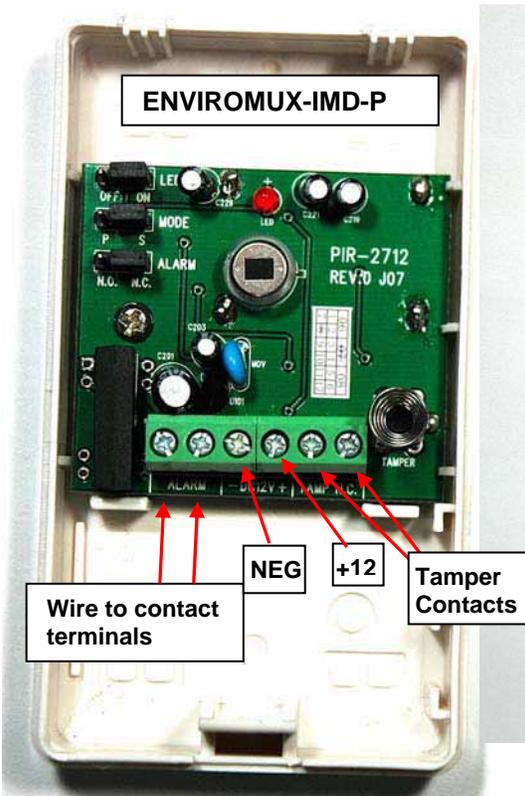
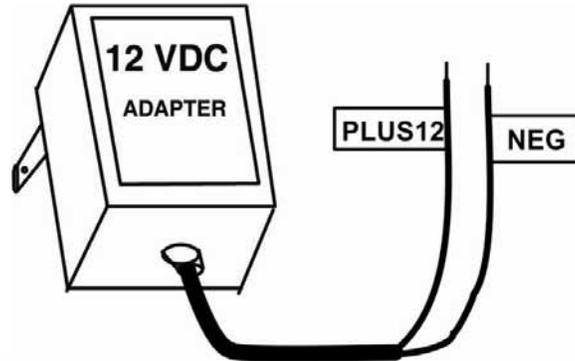


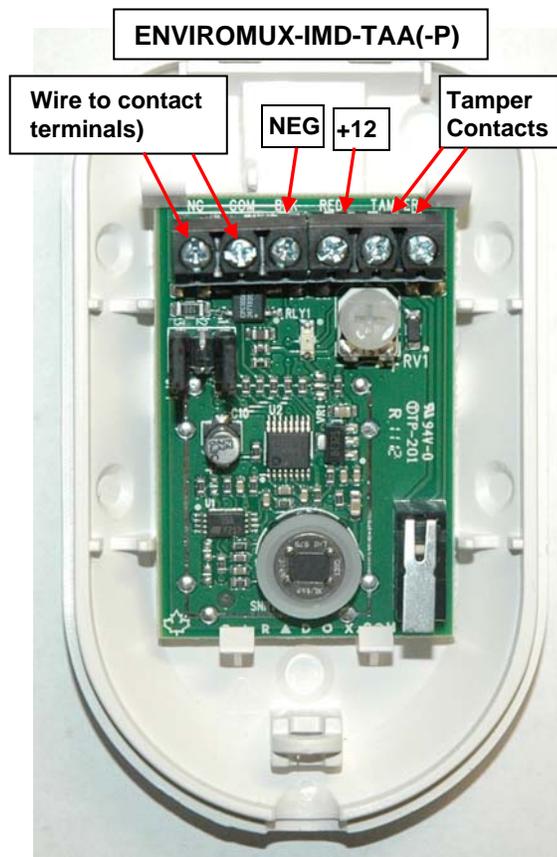
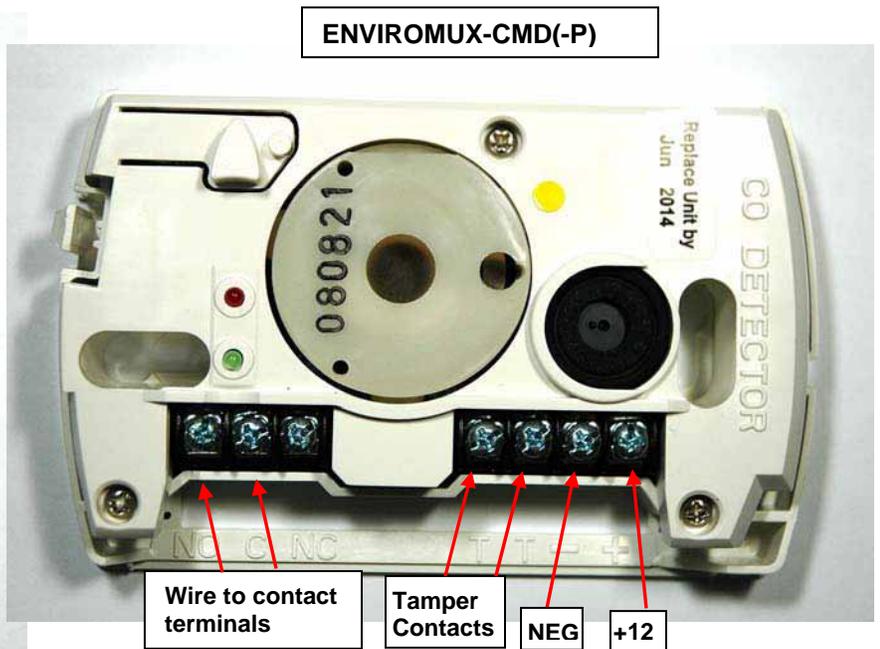
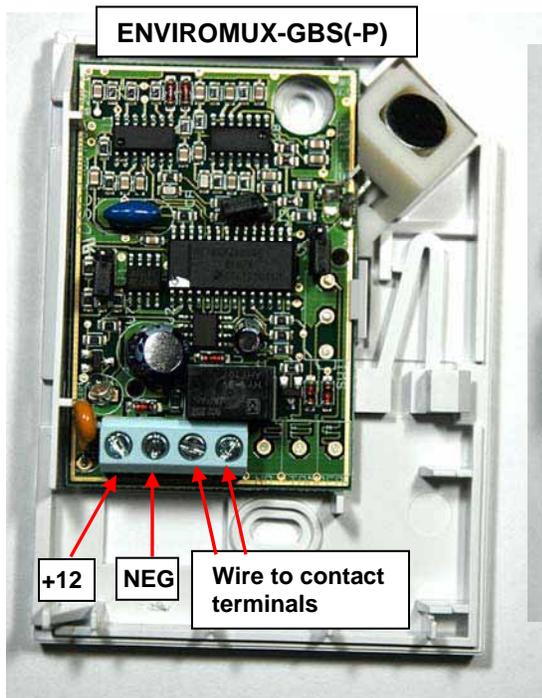
**VIEW OF CONTACTS ON ENVIROMUX-MINI-LXO**



**CONNECT THE SENSOR "C" AND "N/O" TERMINALS TO ANY SET OF CONTACTS ON THE ENVIROMUX-MINI (1-4) OR ENVIROMUX-MINI-LXO (1-5)**

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.



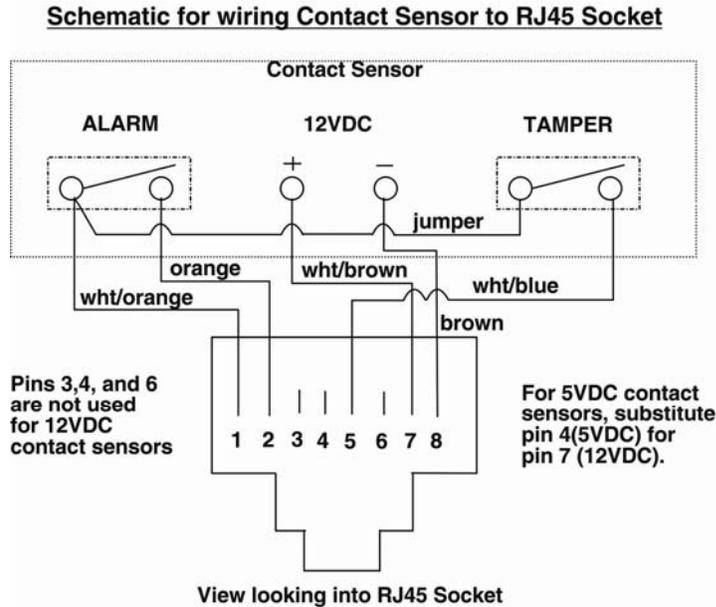


5. Be sure to tighten terminals to secure each conductor to the terminal block.
6. Mount the sensor as needed according to the type of sensor being connected.

# Installation- ENVIROMUX-16D / -5D / -2D / -SEMS-16(U)

## Using RJ45 Sensor Socket

If an RJ45 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.



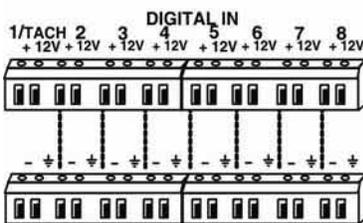
If the sensor does not have a tamper feature, or you do not wish to use it, simply omit the connection to pin 5.

**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).

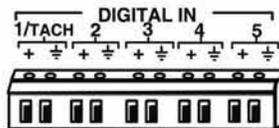
## Using DIGITAL IN Terminals

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

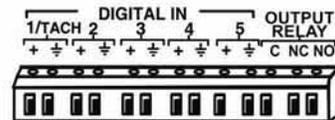
### Terminals on ENVIROMUX-16D



### Terminals on ENVIROMUX-5D

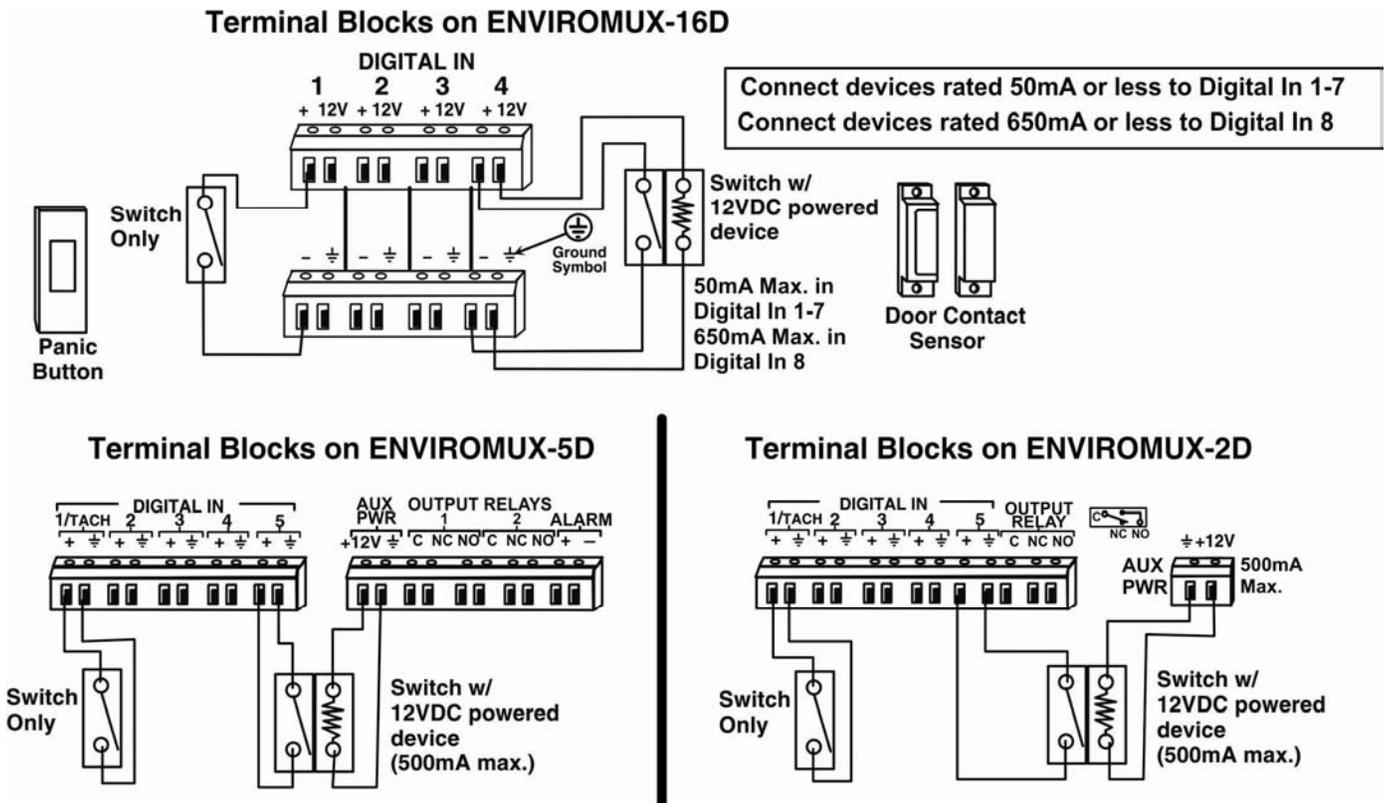


### Terminals on ENVIROMUX-2D



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.

- 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.)



- Connect two more 18-22 awg wires (not supplied) between the “12V” and “ $\perp$ ” (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.

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

## Operation

- 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.
- 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.

## Digital Input Configuration

<b>Digital Input Settings</b>	
<b>Description</b>	<input type="text" value="Test Switch 1"/> Descriptive name for the digital input
<b>Normal Status</b>	<input type="text" value="Open"/> <input type="button" value="v"/> Select the normal status for the digital input
<b>Refresh Rate</b>	<input type="text" value="1"/> <input type="text" value="Sec"/> <input type="button" value="v"/> The refresh rate at which the digital input view is updated
<b>Group Settings</b>	
<b>Schedule Settings</b>	
<b>Alert Settings</b>	
<b>Disable Alerts</b>	<input type="checkbox"/> Disable alert notifications for this digital input
<b>Alert Delay</b>	<input type="text" value="5"/> <input type="text" value="Sec"/> <input type="button" value="v"/> Duration the digital input must be out of normal status before alert is generated
<b>Notify Again Time</b>	<input type="text" value="6"/> <input type="text" value="Hr"/> <input type="button" value="v"/> Time after which alert notifications will be sent again
<b>Notify on return to normal</b>	<input checked="" type="checkbox"/> Send a notification when this digital input returns to normal status
<b>Auto acknowledge</b>	<input checked="" type="checkbox"/> Automatically acknowledge alert when digital input returns to normal status
<b>Enable Syslog Alerts</b>	<input checked="" type="checkbox"/> Send alerts for this digital input via syslog
<b>Enable SNMP Traps</b>	<input type="checkbox"/> Send alerts for this digital input via SNMP traps
<b>Enable E-mail Alerts</b>	<input type="checkbox"/> Send alerts for this digital input via e-mail
<b>E-mail Subject</b>	<input type="text" value="Test Switch 1"/> Subject of e-mails sent for alerts
<b>Select IP Camera</b>	<input type="text" value="None Available"/> <input type="button" value="v"/> Select IP camera for image capture on alert
<b>Attach IP camera capture to e-mail</b>	<input type="checkbox"/> Attach captured image from selected IP camera to alert e-mail
<b>Save image to USB</b>	<input type="checkbox"/> Save captured image from selected IP camera to USB Flash
<b>Enable SMS Alerts</b>	<input checked="" type="checkbox"/> Send alerts for this digital input via SMS
<b>Enable Siren/Beacon alarm</b>	<input type="checkbox"/> Turn on the siren/beacon alarm when digital input goes to alert
<b>Associated Output Relay</b>	<input type="text" value="None"/> <input type="button" value="v"/> Name of the output relay that can be controlled by this digital input
<b>Output Relay status on alert</b>	<input type="text" value="Inactive"/> <input type="button" value="v"/> Status of the output relay when going to alert
<b>Output Relay status on return from alert</b>	<input type="text" value="Inactive"/> <input type="button" value="v"/> Status of the output relay when returning from alert
<b>Data Logging</b>	
<input type="button" value="Save"/>	
<b>Alert Simulation</b>	
<input type="button" value="Simulate Alert"/> <input type="button" value="Clear Alert"/>	

Example of sensor configuration in ENVIROMUX-2D or ENVIROMUX-MINI-LXO using DIGITAL IN terminals

# Motion Detector 16 Configuration (Type: Motion Detector)

<b>[-] Sensor Settings</b>	
<b>Description</b>	<input type="text" value="Motion Detector 16"/> Descriptive name for the sensor
<b>Normal Status</b>	<input type="text" value="Closed"/> <span>▼</span> Select the normal status for the sensor
<b>Enable Tamper Alert</b>	<input checked="" type="checkbox"/> Enable tamper alert notifications for this sensor
<b>Tamper Normal Status</b>	<input type="text" value="Closed"/> <span>▼</span> Select the tamper contact normal status
<b>Refresh Rate</b>	<input type="text" value="1"/> <input type="text" value="Sec"/> <span>▼</span> The refresh rate at which the sensor view is updated
<b>[+] Group Settings</b>	
<b>[+] Schedule Settings</b>	
<b>[+] Critical Alert Settings</b>	
<b>[+] Data Logging</b>	
<input type="button" value="Save"/>	
<b>Alert Simulation</b>	
<input type="button" value="Simulate Alert"/> <input type="button" value="Clear Alert"/>	

**Example of sensor configuration in ENVIROMUX-16D/ -5D/ -2D using RJ45**

## Motion Detector Sensor Configuration

Type: Motion Detector RJ45 Connector: # 7

Description: Undefined #7 Group: Group # 0

Disable alerts for this sensor

**Normal Status**

Normal Status: Closed

Enable Tamper Alert Tamper Normal Status: Open

**Sampling**

Sampling Period: 1 Sec  Add to Data Log File

Add Reading to Log File Every: 60 Min

**Alert Timing**

Alert Delay: 0 Sec Notify again after: 30 Min

Notify when return to normal

**Alert Notifications**

Enable E-mail Alerts  Enable SNMP Traps  Enable SMS Alerts

Enable Syslog Alerts  Enable Siren Alerts  Enable Alarm Beacon

**Outputs**

Associate Output: 4 On alert: close the output contact

On return to normal: open the output contact

Block output command on tamper alert

Apply Status Remove

**Example of sensor configuration in ENVIROMUX-SEMS-16 using RJ45**

## Digital Input Configuration

Type: Digital Input

Description: Digital Input#1 Group: Group # 0

Disable alerts for this sensor

**Normal Status**

Normal Status: Open

**Sampling**

Sampling Period: 20 Sec  Add to Data Log File

Add reading to log file every: 60 Min

**Alert Timing**

Alert Delay: 30 Sec Notify again after: 30 Min

Notify when return to normal

**Alert Notifications**

Enable E-mail Alerts  Enable SNMP Traps  Enable SMS Alerts

Enable Syslog Alerts  Enable Siren Alerts  Enable Alarm Beacon

**Outputs**

Associate output: None On alert: open the output contact

On return to normal: open the output contact

Apply Status Remove

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

## Dry Contact Sensor Configuration

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

Name:

**Thresholds**

Alert when:

Automatically acknowledge alert when condition clears

E-mail

Notify addresses:

(separate by commas, max 112 characters)

SMS

Cell Phone Number:

Message to send with alerts (optional):  
  
(max 160 characters, only first 140 will be shown on GSM messages.)

Disable alerts for this sensor

**Alert Timing**

Alert hysteresis:

Notify again after:

Max notifications per alert:  (0 is unlimited)

Notify on return to normal

**Alert Methods**

SNMP

Notify address:

Syslog

Notify address:

GSM Modem Status:

Test Alerts:

**Example of sensor configuration in ENVIROMUX-MINI**

## 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> for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.

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### **CHANGES**

The material in this guide is for information only and is subject to change without notice. Network Technologies Inc reserves the right to make changes in the product design without reservation and without notification to its users.