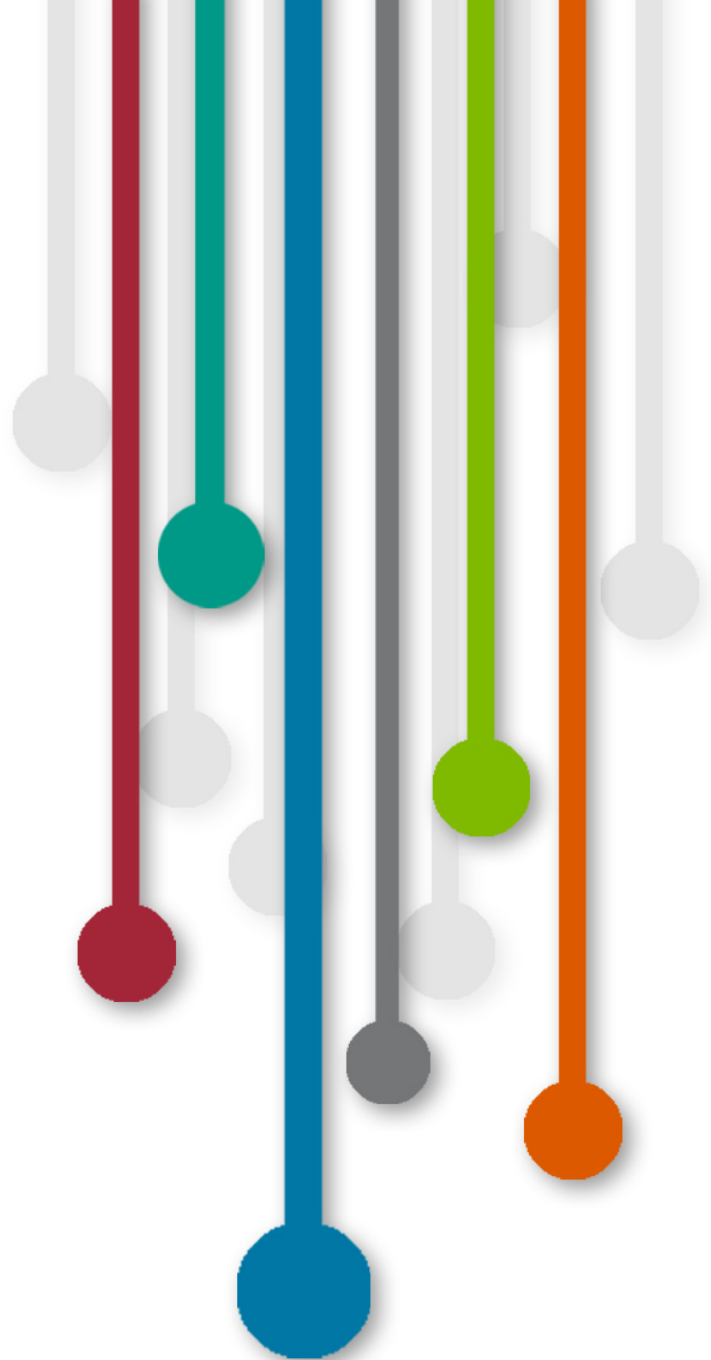


# An Introduction



## Training **Agenda**

- Product **Overview**
- The 4 “i”s
- Product **Features**
- **Value** to your Business
- **Installing** the System
- **Testing** the System
- **Maintaining** the System



# Overview



## What is i<sup>4</sup>?



# Integration

Intelligence

Instant Inspection

Installation Ease



### CO and Smoke in **ONE** device

- **Reduce** devices on the wall or ceiling
- **Increase** CO sales
- **Simplify** installations



## i<sup>4</sup> Integration

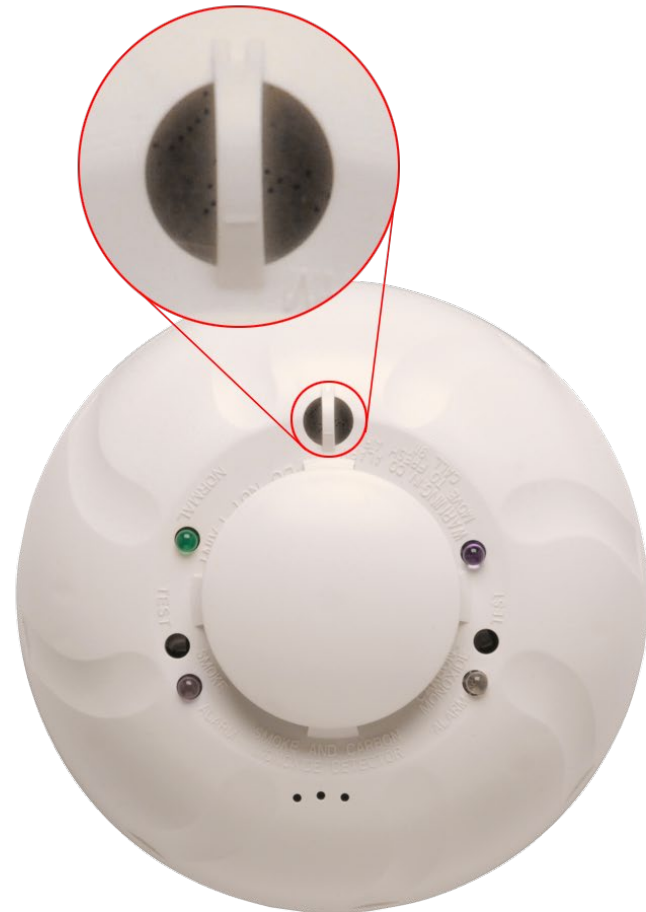
### i<sup>4</sup> Module

- **Integrates** up to 12 devices to the panel
- **Adds** functionality
- **Simplifies** retrofits
- **Compatible** with i<sup>3</sup> Series smoke detectors
  - Thermal with sounder models (2WTA-B and 4WTA-B)



## **Sounder**

- 85 dB



## Built-in **Sounder**

### **Sounder**

- 85 dB
- Temp 3 for smoke



## Built-in **Sounder**

### **Sounder**

- 85 dB
- Temp 3 for smoke
- Temp 4 for CO

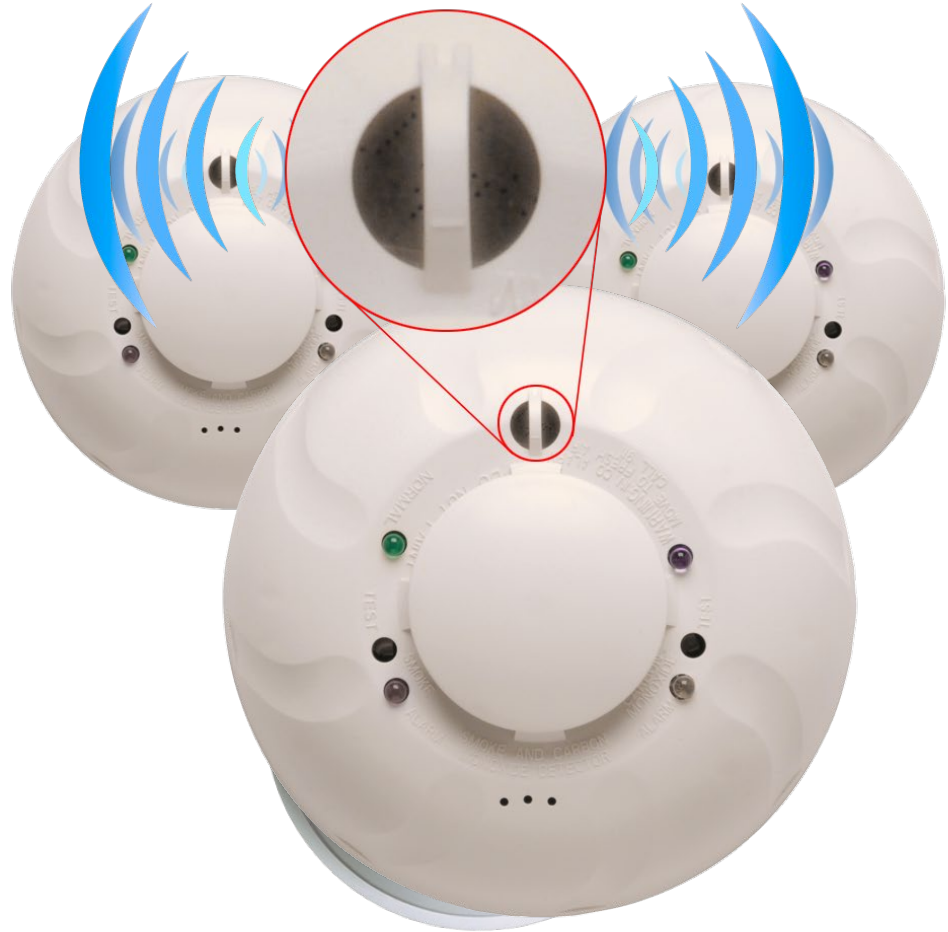


## Built-in **Sounder**

### **Sounder**

- 85 dB
- Temp 3 for smoke
- Temp 4 for CO

**All detectors sound in unison when in alarm**



## Grow Your CO Sales

### Easier sale

- **Overcomes** homeowner objections
- **Allows** a holistic Life Safety sales approach with homeowners



## Increase Customer Retention

- Customers less likely to **cancel their security service**
- **Extends RMR**



Integration

# Intelligence

Instant Inspection

Installation Ease



### i<sup>4</sup> Detector

- **Transmits** distinct CO or smoke alarm signal to the panel
- **Uses** only 2 or 4 wires
- **Photoelectric** smoke detection with smoothing algorithms and drift compensation
- **Electrochemical** CO cell

**Reduces nuisance alarms**



Integration

Intelligence

# Instant Inspection

Installation Ease



## i<sup>4</sup> Instant Inspection

- **EZ Walk feature** (2-wire systems) allows loop verification
- **RealTest<sup>®</sup>** functional CO test
- **External IR LED** allows extended range sensitivity reading with SENS-RDR sensitivity tester



## LED Indication

**Green LED (Blink only)**  
Power/Operational



## LED Indication

### **Green LED (Blink only)**

Power/Operational

### **Red LED (Solid/Blink)**

Smoke Alarm/Trouble



## LED Indication

### **Green LED (Blink only)**

Power/Operational

### **Red LED (Solid/Blink)**

Smoke Alarm/Trouble

### **Blue LED (Solid/Blink)**

CO Alarm/Trouble



## LED Indication

### **Green LED (Blink only)**

Power/Operational

### **Red LED (Solid/Blink)**

Smoke Alarm/Trouble

### **Blue LED (Solid/Blink)**

CO Alarm/Trouble

### **Purple LED (Detector only)**

IR Sensitivity



## LED Indication

### **Green LED (Blink only)**

Operational

### **Red LED (Solid/Blink)**

Smoke Alarm/Trouble

### **Blue LED (Solid/Blink)**

CO Alarm/Trouble or RealTest

### **Purple LED (Detector only)**

IR Sensitivity Reading

### **Yellow LED (Module only)**

EZ Walk or Wiring Fault



### CO Cell

- 6-year CO cell life
- CO end-of-life timer with chirp
- Field replaceable



Integration

Intelligence

Instant Inspection

**Installation Ease**



### Two devices in one

- Use less junction boxes
- Up to 75% less wire than two separate devices
- Lower installation time and cost



## Cost-Effective Installation

Realize **greater profit**  
on every installation

- **More CO sales** at less cost to you



## Installation Example

- 6 smokes
- 3 CO detectors
- 1 zone

**All sounders activated**



## Current Solution

23 Parts



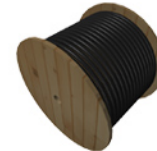
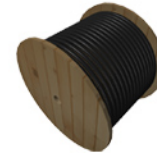
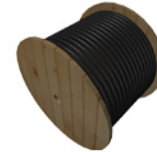
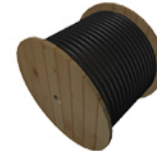
CO Detectors



Smoke Detectors



Junction Boxes



Wire



Module

## 15 Parts



## i<sup>4</sup> Total Installation Cost

| Line Item    | Cost Reduction |
|--------------|----------------|
| Devices      | -9%            |
| Wire         | -57%           |
| Labor        | -17%           |
| <b>Total</b> | <b>-27%</b>    |

## i4 Value Calculator

### Value Calculator

- What's it do?
- What's it do?
- What's it do?

**i4** Combination CO/Smoke Solution  
**Value Calculator**

Completing this form will provide an estimate of potential savings you can achieve using the i4 Detector over other defined configurations. Your actual project savings and costs may vary.

**Assumptions (Common)**

|                                |       |
|--------------------------------|-------|
| Wire Cost (per foot)           |       |
| Labor Rate (per hour)          |       |
| Dealer Markup to Homeowner (%) | 0.00% |

**Assumptions (Current Solution)**

|                                    |    |
|------------------------------------|----|
| <b>Smoke Detectors</b>             |    |
| Number of Detectors                |    |
| Cost of Detectors                  |    |
| Install Time of Detector (minutes) | 10 |
| Number of Wires (to each detector) | 2  |
| Wire Run Distance (each detector)  | 30 |
| <b>Carbon Monoxide Detectors</b>   |    |
| Number of Detectors                |    |
| Cost of Detectors                  |    |
| Install Time of Detector (minutes) | 12 |
| Number of Wires (to each detector) | 6  |
| Wire Run Distance (each detector)  | 30 |

**Assumptions (i4 Solution)**

|                                    |        |
|------------------------------------|--------|
| <b>i4 Detectors</b>                |        |
| Number of Detectors                | 0      |
| Cost of Detectors                  |        |
| Install Time of Detector (minutes) | 10     |
| Number of Wires (to each detector) | 2      |
| Wire Run Distance (each detector)  | 30     |
| <b>i4 Module</b>                   |        |
| Number of Modules                  | 1      |
| Cost of Modules                    |        |
| Install Time of Module (minutes)   | 20     |
| Number of Wires (to each module)   | 8      |
| Wire Run Distance (each module)    | 3      |
| <b>Smoke Detectors</b>             |        |
| Number of Detectors                | 0      |
| Cost of Detectors                  | \$0.00 |
| Install Time of Detector (minutes) | 10     |
| Number of Wires (to each detector) | 2      |
| Wire Run Distance (each detector)  | 30     |

**Cost & Profit Estimate (Current Solution)**

|                  |        |
|------------------|--------|
| Smoke Detectors  | \$0.00 |
| CO Detectors     | \$0.00 |
| Wire             | \$0.00 |
| Labor            | \$0.00 |
| Total            | \$0.00 |
| Homeowner Pays   | \$0.00 |
| Profit to Dealer | \$0.00 |

**Cost & Profit Estimate (i4 Solution)**

|                  |        |
|------------------|--------|
| i4 Detectors     | \$0.00 |
| i4 Module        | \$0.00 |
| Smoke Detectors  | \$0.00 |
| Wire             | \$0.00 |
| Labor            | \$0.00 |
| Total            | \$0.00 |
| Homeowner Pays   | \$0.00 |
| Profit to Dealer | \$0.00 |

**Summary**

|                           |        |
|---------------------------|--------|
| Part Savings              | \$0.00 |
| Total Savings/Profit Gain | \$0.00 |

[systemsensor.com/i4](http://systemsensor.com/i4)  
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**RESET**

**SYSTEM SENSOR**  
advanced ideas. advanced solutions.™

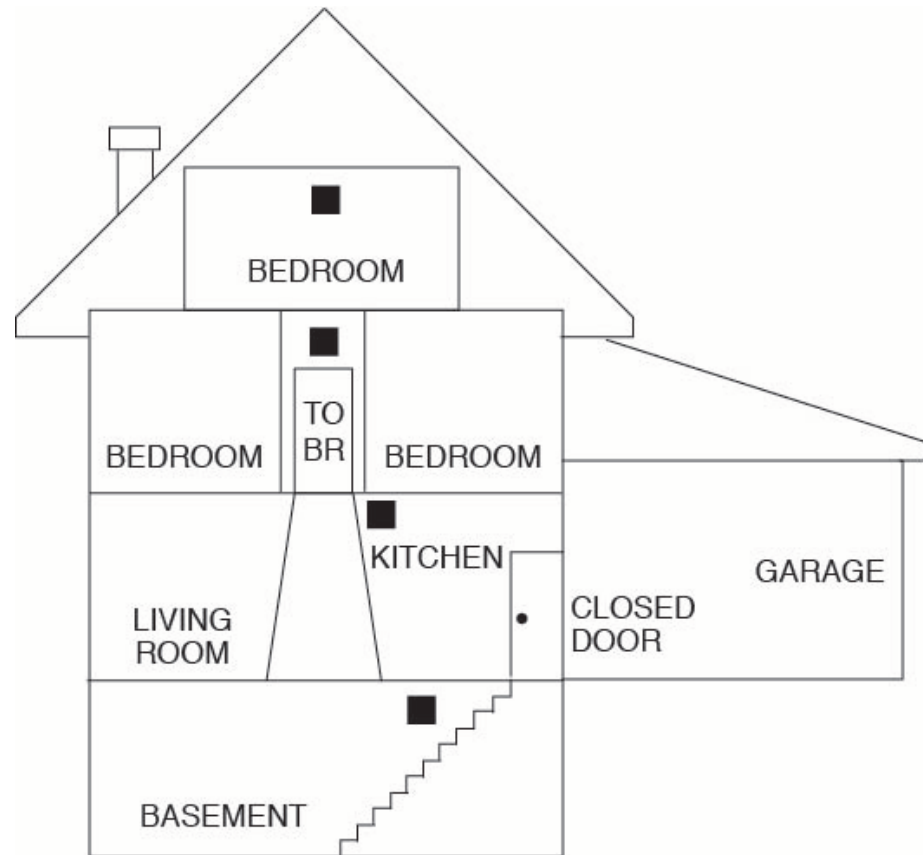


# Installation



## CO/Smoke Detector **Placement – Do's**

- On **every** floor
- Within 10 feet of all **sleeping areas**
- In any room that contains a **fuel-burning appliance**



■ – CARBON MONOXIDE/SMOKE ALARM  
LOCATION FOR MULTI-LEVEL RESIDENCE

## CO/Smoke Detector **Placement – Do's**

On the **wall** or **ceiling**:

- Wall: No less than **4 inches down** from ceiling
- Ceiling: At least **12 inches** from any wall. In a vaulted location, **3 feet** from the peak

Consult **NFPA 72** & **local AHJ** for placement & spacing



## CO/Smoke Detector **Placement – Don'ts**

- Within 10 feet of any **cooking appliance**
- Directly above a **sink, stove** or **oven**
- Next to a **door** or **window**
- Where **airflow can be obstructed** by **furniture** or **curtains**
- **Outside** or in a **garage**
- Where **dirt** or **dust** can collect and **block the sensor**

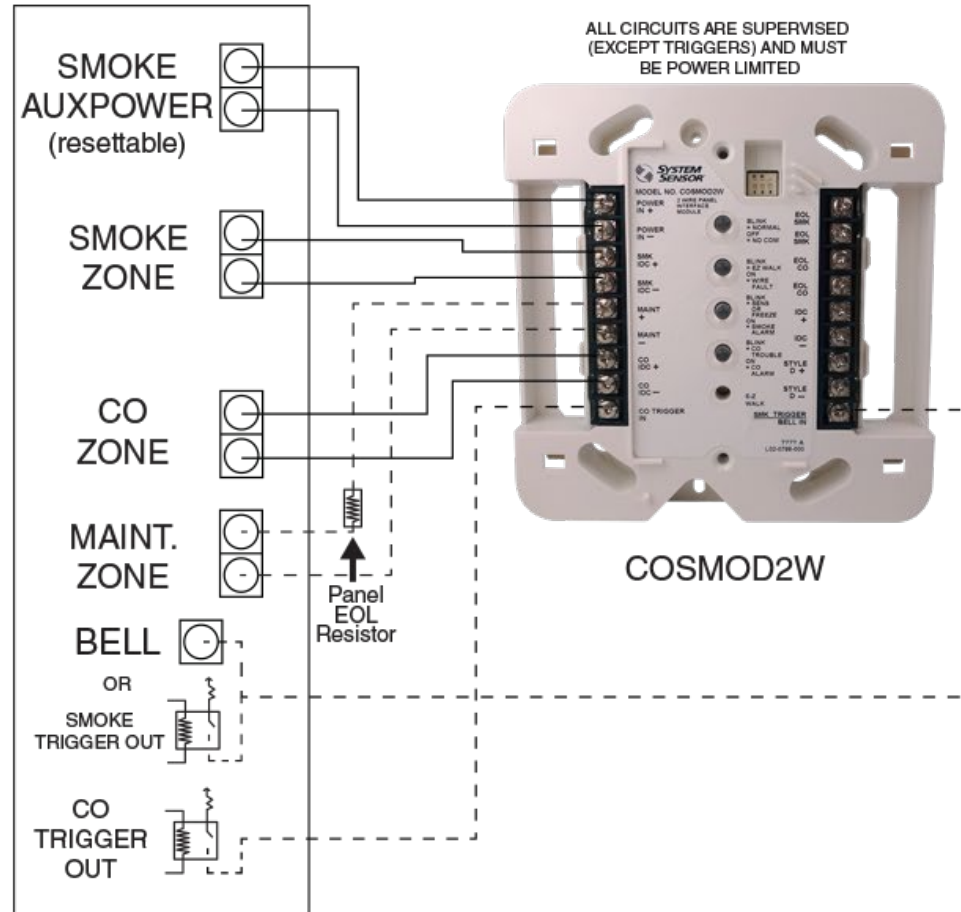


## i<sup>4</sup> Interface Module **Placement – Do's**

- Within **20 feet** of the panel and in the same room
- Wiring **must be** enclosed in conduit for UL 864 applications
- Can be mounted inside a metal enclosure



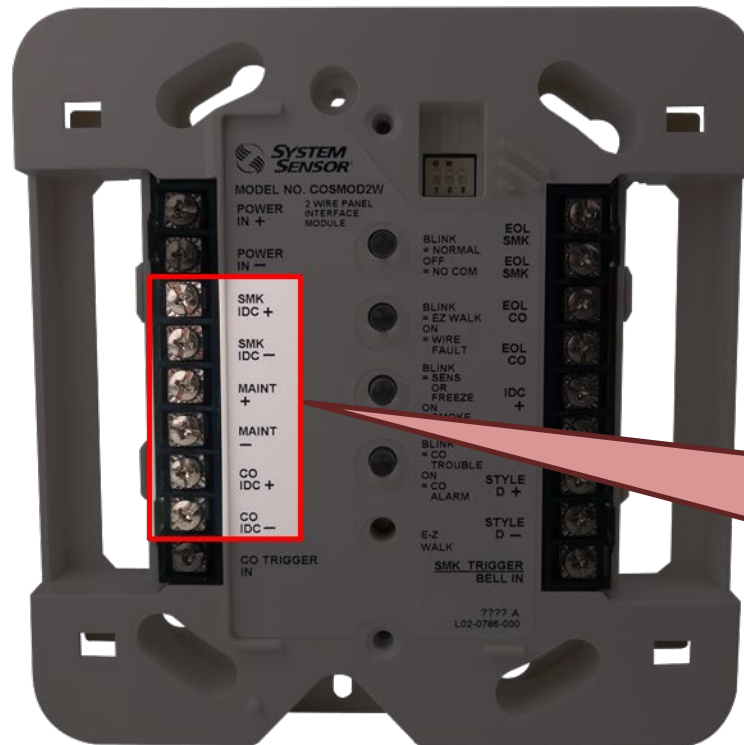
## Wiring: **Module to Panel**



## Wiring: **Module to Panel**



## Wiring: **Module to Panel**

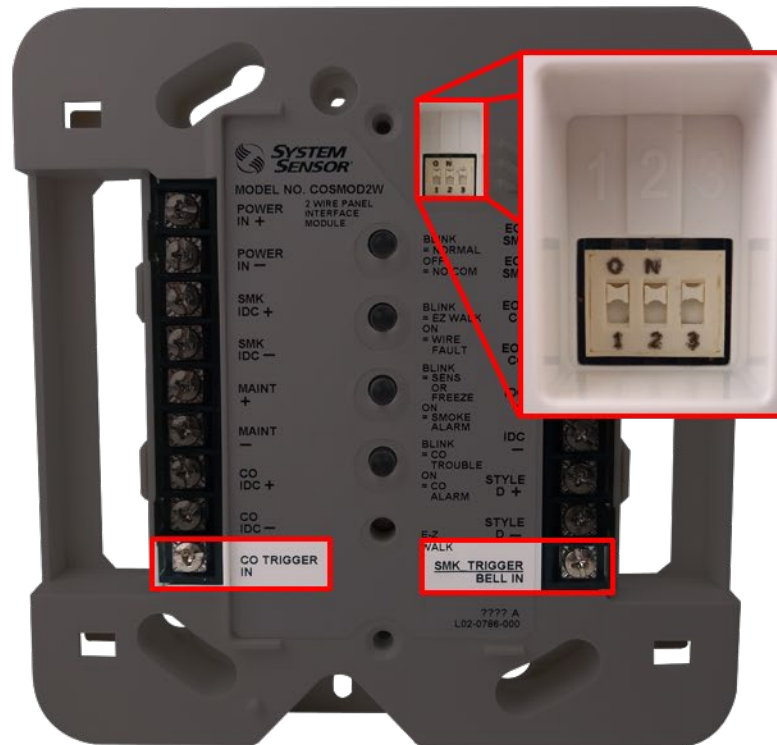


Clean  
Replace  
Freeze Trouble

## Wiring: **Module to Panel**

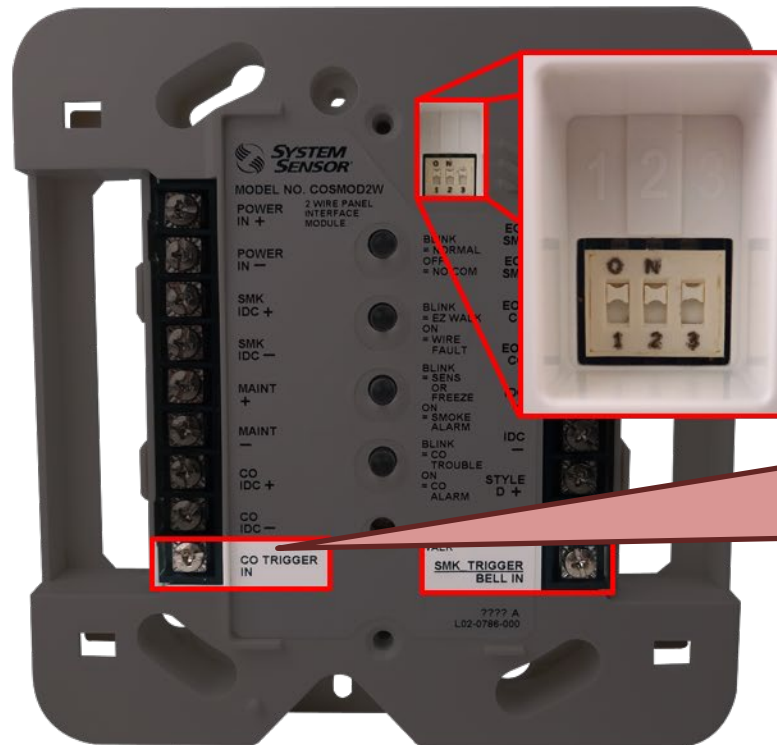


## Wiring: **Module to Panel**



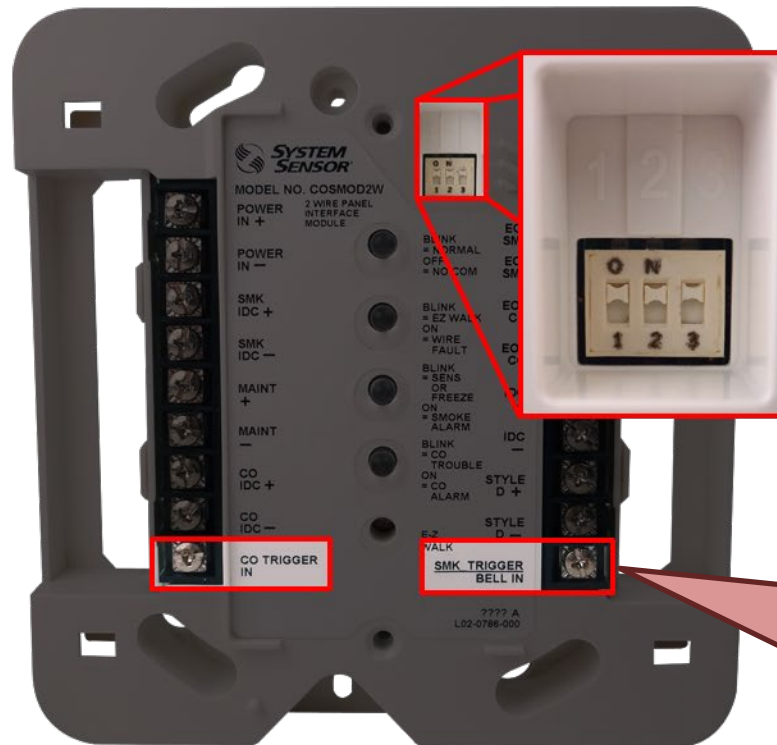
1. Bell or relay out
2. 2-Wire Maintenance Reporting

## Wiring: **Module to Panel**



- CO Hush
- Multiple module sounder activation

## Wiring: **Module to Panel**

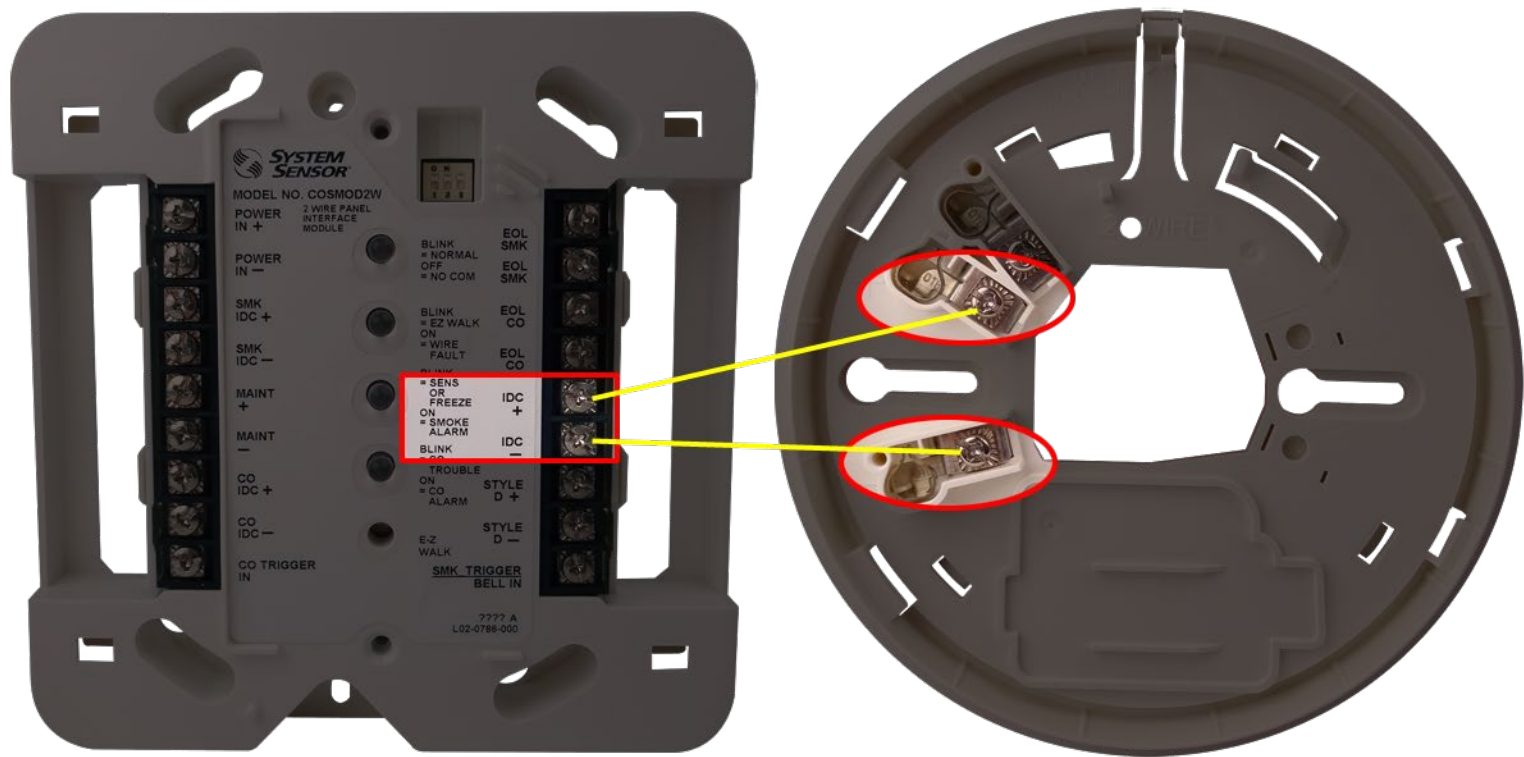


- Smoke Hush
- Multiple module sounder activation

## Wiring: **Module to Detector**



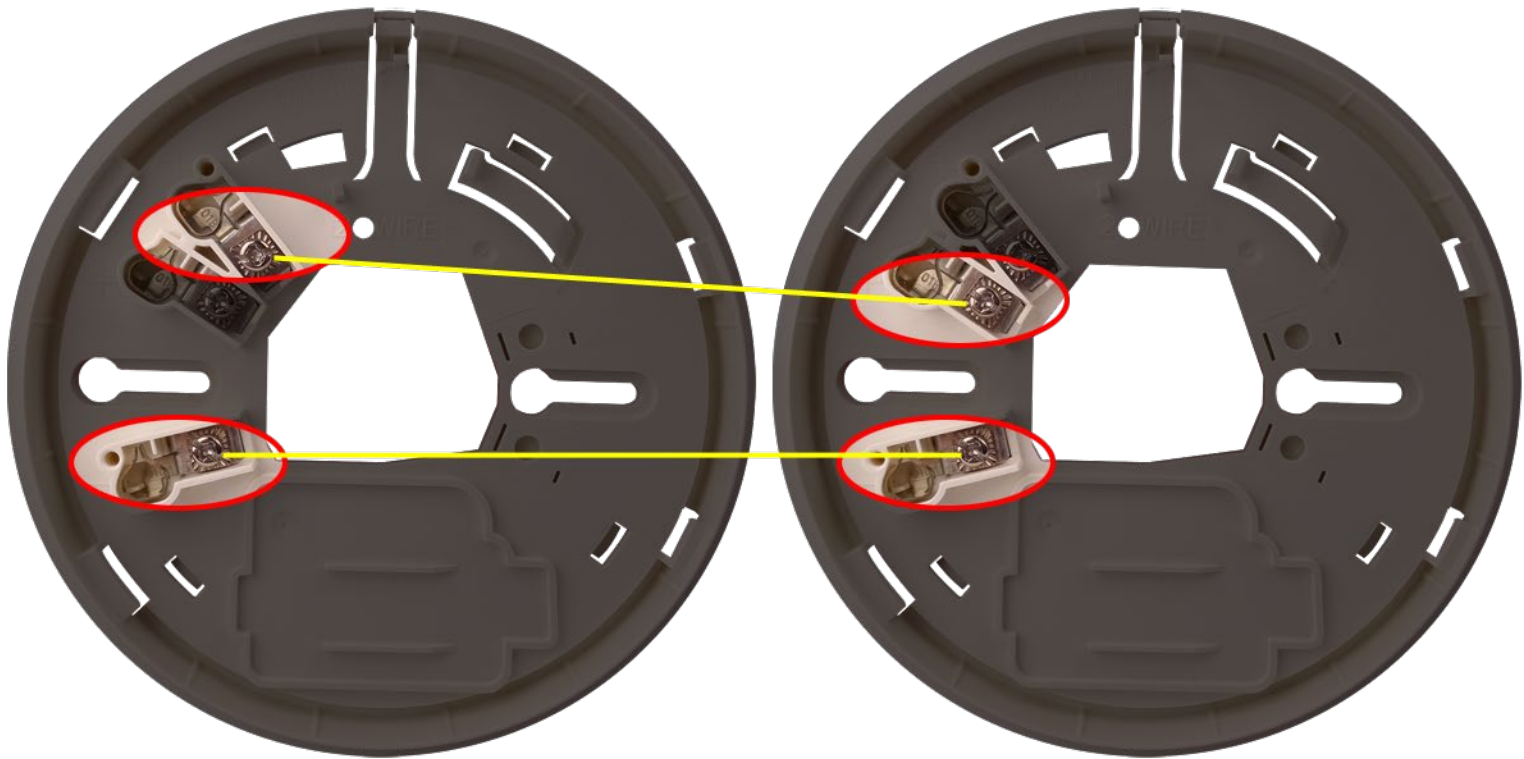
## Wiring: **Module to Detector**



## Wiring: **Detector to Detector**



## Wiring: Detector to Detector



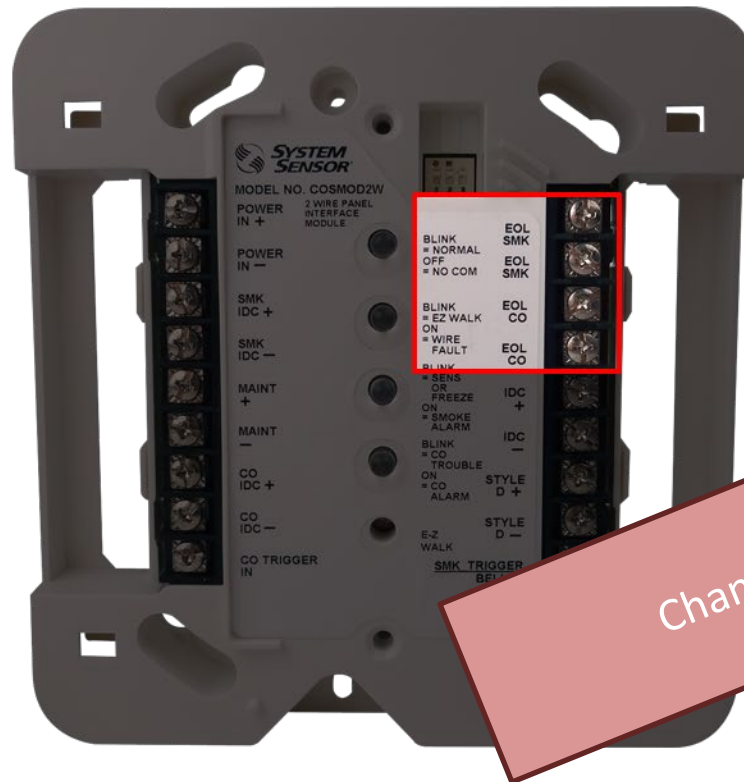
## Wiring: **Detector to Module**



## Wiring: **Detector to Module**



## Panel **End-of-Line Resistors**



# Testing



Detectors and system should be tested upon **install** and at least **once per year**.

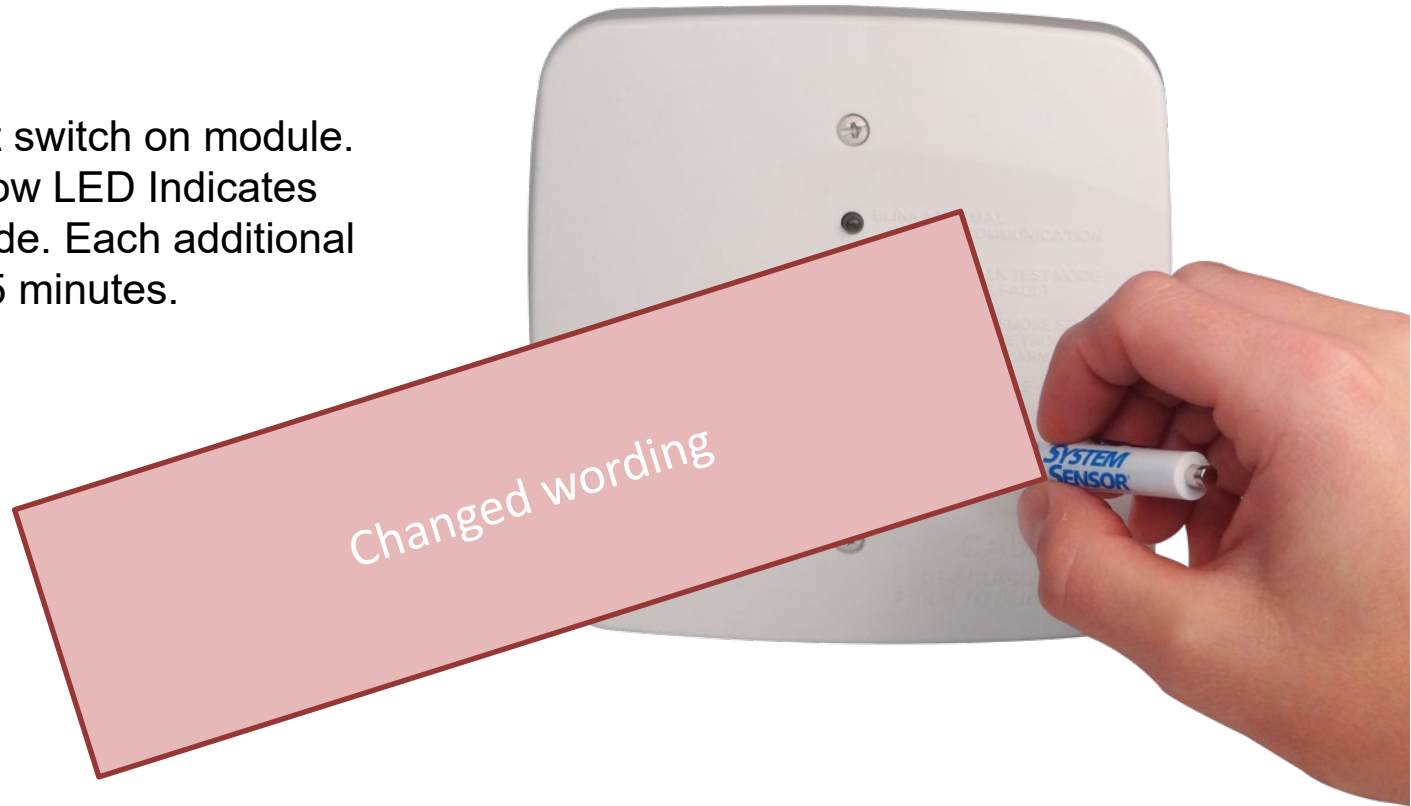
- **EZ Walk** can be utilized to verify proper wiring (2 wire models)
- **SENS-RDR** sensitivity tester can test the smoke sensitivity
- **RealTest**® Functional CO Test tests the CO cell using Solo C6 canned CO



## EZ Walk Loop Verification

### Step 1:

- Depress test switch on module.  
Blinking yellow LED Indicates  
EZ Walk mode. Each additional  
press adds 5 minutes.



## EZ Walk Loop Verification

### **Step 1:**

- Depress test switch on module. Blinking yellow LED Indicates EZ Walk mode. Each additional press adds 5 minutes.

### **Step 2:**

- At each detector, check to make sure the green LED is double-blinking.



## EZ Walk Loop Verification

### Step 1:

- Depress test switch on module. Blinking yellow LED Indicates EZ Walk mode. Each additional press adds 5 minutes.

### Step 2:

- At each detector, check to make sure the green LED is double-blinking.

### Step 3:

- The system will automatically exit EZ Walk mode.



## SENS-RDR Smoke Sensitivity Testing

### **Step 1:**

- Press the round button to turn on the SENS-RDR, it will display “READY” when on.



## SENS-RDR Smoke Sensitivity Testing

### **Step 1:**

- Press the round button to turn on the SENS-RDR, it will display “READY” when on.

### **Step 2:**

- Aim the SENS-RDR at the detector’s IR (purple) LED. Wait for a beep to get the reading.



## SENS-RDR Smoke Sensitivity Testing

### **Step 1:**

- Press the round button to turn on the SENS-RDR, it will display “READY” when on.

### **Step 2:**

- Aim the SENS-RDR at the detector’s IR (purple) LED. Wait for a beep to get the reading.

### **Step 3:**

- Reading indicated on SENS-RDR readout screen.



## RealTest® Functional CO Test

### **Step 1:**

- Depress test switch on detector.



## RealTest® Functional CO Test

### **Step 1:**

- Depress test switch on detector.

### **Step 2:**

- Spray a small amount of canned CO into any of the 3 sensing holes.



## RealTest® Functional CO Test

### **Step 1:**

- Depress test switch on detector.

### **Step 2:**

- Spray a small amount of canned CO into any of the 3 sensing holes.

### **Step 3:**

- Detector will go into CO alarm within 10 seconds with blue LED lit.



# Maintenance



## Maintenance: **CO Cell**

- CO cell life is **6 years**
- CO cell is **field-replaceable**



## Maintenance: **Smoke Chamber**

Smoke chamber can be  
**easily removed for cleaning**



## Course Takeaways

- The 4 “i”s
- **Installing** the System
- **Testing** the System
- **Maintaining** the System

[www.systemsensor.com/i4](http://www.systemsensor.com/i4)

