

### Cautions and Warnings



DO NOT INSTALL ANY SIMPLEX® PRODUCT THAT APPEARS DAMAGED. Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify your local Simplex product supplier.



**ELECTRICAL HAZARD** - Disconnect electrical power when making any internal adjustments or repairs. All repairs should be performed by a representative or authorized agent of your local Simplex product supplier.



**STATIC HAZARD** - Static electricity can damage components. Therefore, handle as follows:

1. Ground yourself before opening or installing components.
2. Keep uninstalled component wrapped in anti-static material at all times.

### Introduction

This addressable 4090-9121 Security IAM monitors normally open or normally closed contacts on contact closure security devices. The Security Monitor IAM provides four-state status information (OPEN, NORMAL, ABNORMAL, and SHORT) to the 4100U Fire Alarm Control Panel (FACP) via the IDNet™ channel. The IDNet channel provides the communication link between security Monitor IAM and FACP, and powers the circuit.

The 4090-9121 Security IAM is not ULC Listed for use with a 4100U providing either Proprietary or Central Station protected premises service.

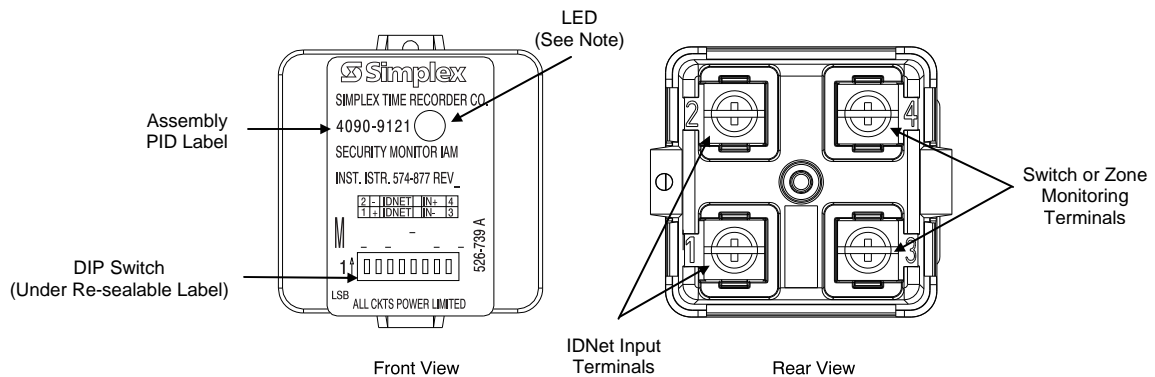
The range of possible temperatures under which the 4090-9121 Security IAM may function is between 0° C (32° F) and 49° C (120° F).

The 4090-9121 Security IAM operates normally under non-condensing humidity conditions up to 93% with relative humidity at 32° C (90° F).

### Installation

Security Monitor IAM installation consists of the following:

- Setting the Security Monitor IAM address
- Making electrical connections to the Security Monitor IAM
- Mechanically installing the Security Monitor IAM



**Note:** The LED flashes approximately once every three seconds to indicate valid communications with the FACP.

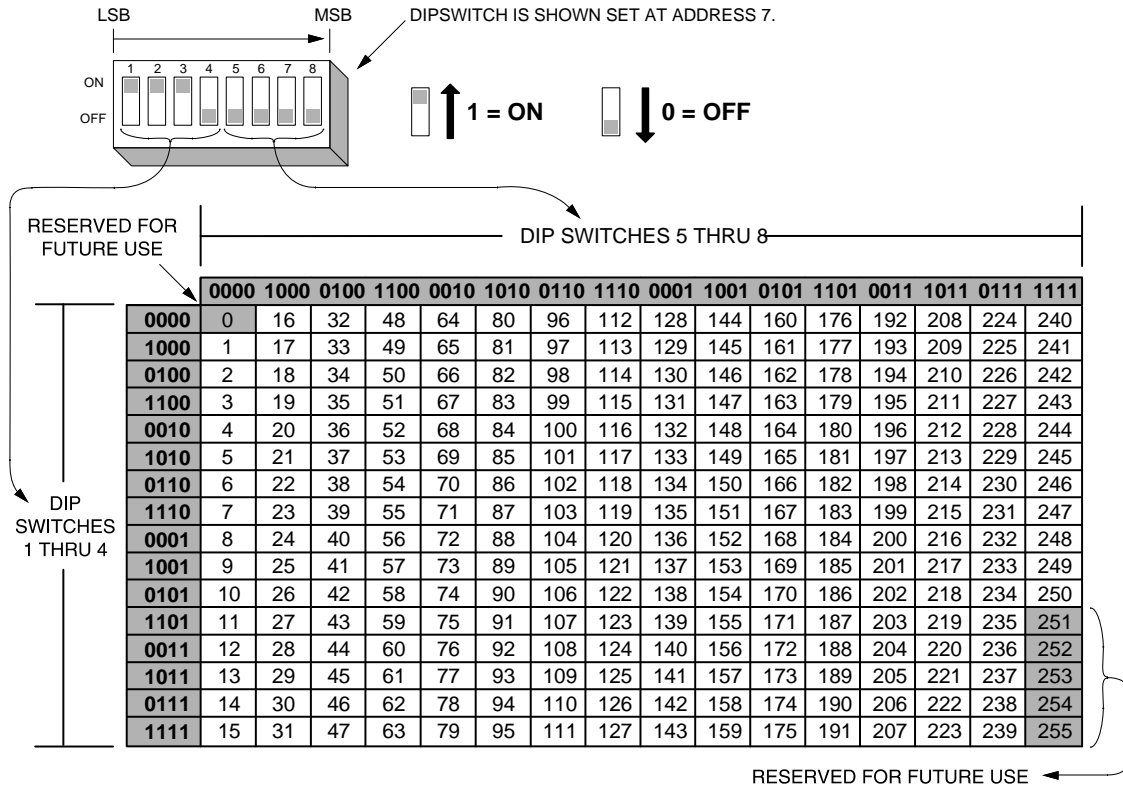
**Figure 1. 4090-9121 Security Monitor IAM Assembly**

## Setting the Security Monitor IAM Address

**Note:** The IDNet channel supports address codes 1 through 250.

Each Security Monitor IAM has a unique address. The address of the Security Monitor IAM is set via an eight-position DIP switch (Figure 1); DIP switch position 1 is the Least Significant Bit (LSB) and position 8 is the Most Significant Bit (MSB). Set the Security Monitor IAM address using Figure 2 as reference. Use a small screwdriver or pen to set the switches. The device address for the Security Monitor IAM should be written on the re-sealable label; this information provides an aid in troubleshooting the system.

**Note:** DIP switch in “1” position is “ON” while DIP switch in “0” position is “OFF”.



**Figure 2. Security Monitor IAM Address Chart**

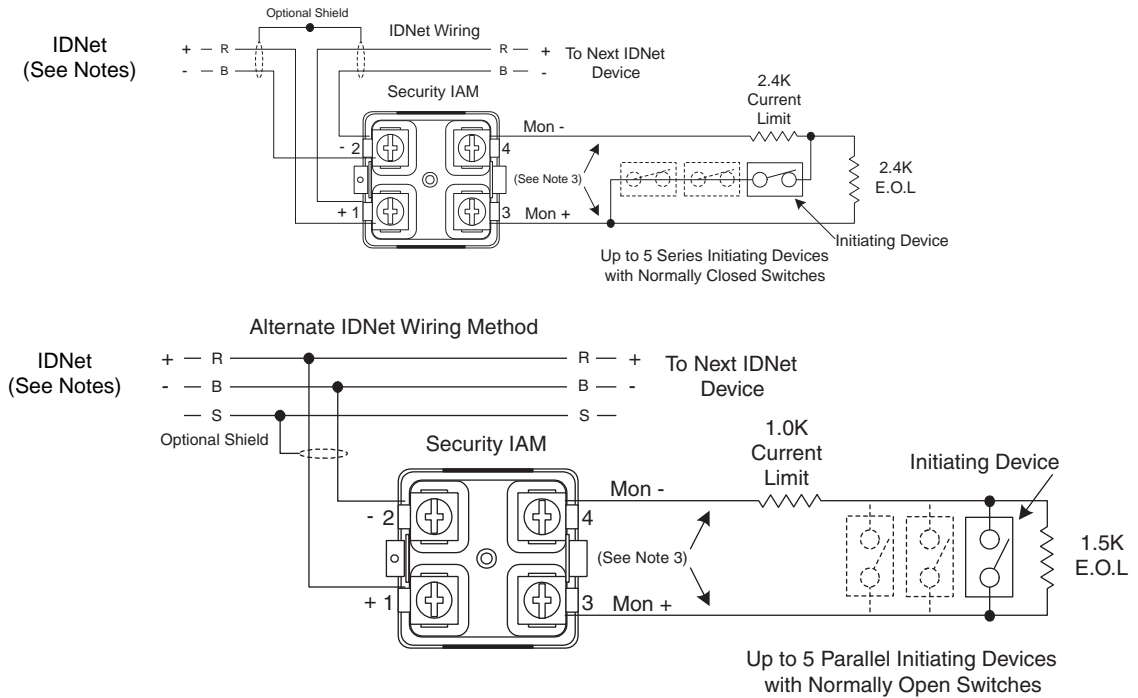
## Panel Configuration

Configure the Security Monitor IAM to the 4100 panel using the *4100 Fire Alarm – PC Programmer Programming Manual (574-849)*.

## Making Electrical Connections to the Security Monitor IAM

Input and output signals connect to the Security Monitor IAM via terminals (1-4) as illustrated in Figure 1. Terminal connections for the IAM are illustrated in Figure 3.

**CAUTION: Do not loop wire under terminals. Break wire runs to provide supervision.**



**1.0K Resistor Harness Assembly, Part No. 733-973**  
**1.5K Resistor Harness Assembly, Part No. 733-093**  
**2.4K Resistor Harness Assembly, Part No. 733-092**

### Notes:

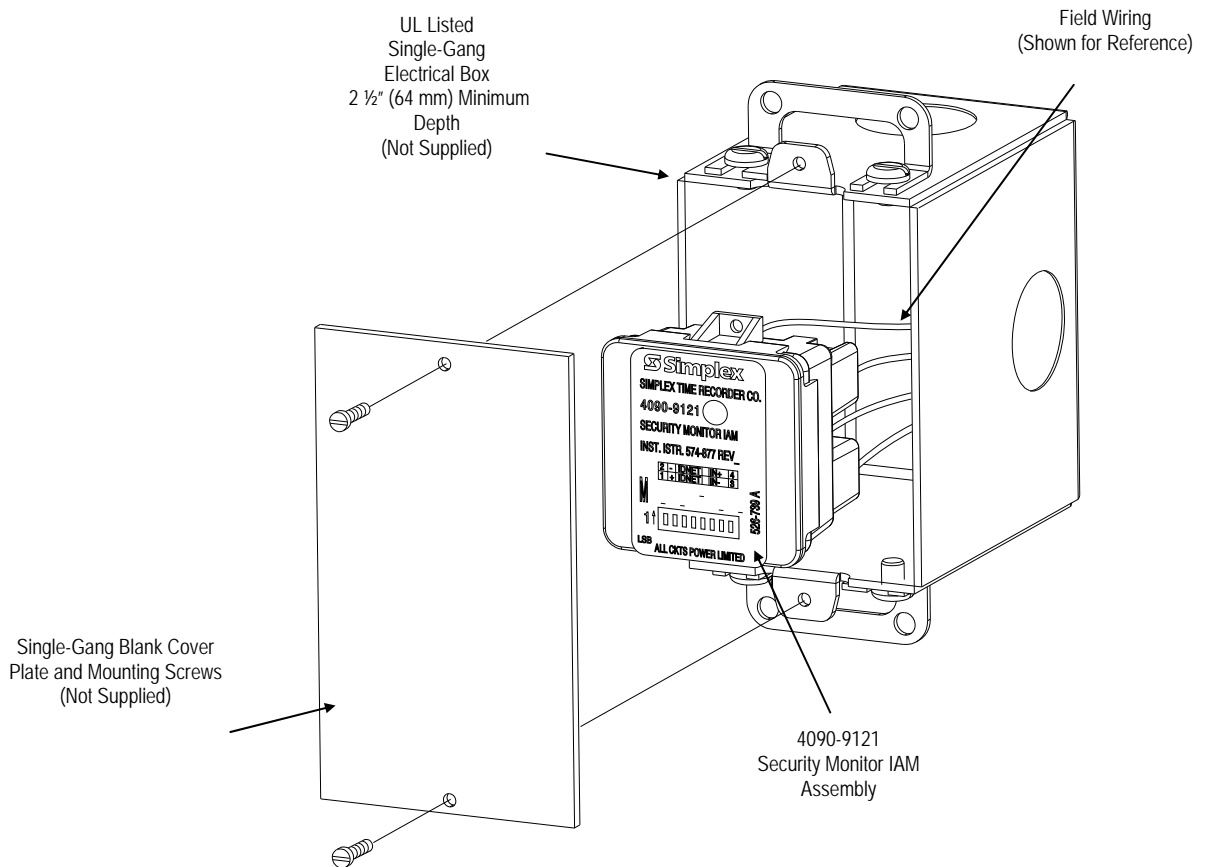
1. When connecting two wires to one terminal, position one wire on each side of the terminal screw. Maximum allowable run from FACP to farthest device not to exceed 2,500 feet (762 m). Maximum total wire (including all T-Taps) from FACP is 10,000 feet (3,048 m). IDNet lines are 18 AWG (0.8231 mm<sup>2</sup>) twisted pair (shield recommended).
2. The Security Monitor IAM counts as two "unit loads" on the IDNet with the maximum number of Security Monitor IAM devices per channel (no other devices on the channel) as follows:
  - 32 devices for a 64-point channel
  - 63 devices for a 127-point channel
  - 125 devices for a 250-point channel
3. Maximum wire length (#18 AWG [0.8231 mm<sup>2</sup>]) is 500 feet (152 m). Only dry contacts are allowed on the monitored device.
4. IDNet wiring is supervised and Power-Limited. Both IDNet wiring methods shown above are appropriate for the wiring of normally open or closed switches.

**Figure 3. Security Monitor IAM Connections**

## Mechanically Installing the Security Monitor IAM

Install the Security Monitor IAM into a UL Listed single-gang, 4-inch (102-mm) square, or 4-inch (102-mm) octagonal electrical box (not supplied) using Figure 4 as a reference. Mount the Security Monitor IAM to the electrical box as follows:

1. Insert the Security Monitor IAM into the electrical box; the attached field wiring holds the IAM in place inside the electrical box.
2. Secure the cover to the back box using the two #6/32 flathead screws.



**Note:** Simplex offers semi-flush and surface covers (ordered separately) with a light pipe. The cover(s) with light pipe allow viewing of the communications LED without taking the cover off. Installation of the 4090-9806 semi-flush cover and 4090-9807 surface cover are detailed in publication *4090 IDNet™ Semi-Flush/Surface Covers and IAM Bracket Installation Instruction (574-796)*.

**Figure 4. Security Monitor IAM Back Box Installation**