

Cautions, Warnings, and Regulatory Information

READ AND SAVE THESE INSTRUCTIONS Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depend upon proper installation.



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 an authorized Simplex product supplier.



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



STATIC HAZARD Static electricity can damage components. Handle as follows:

- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.

Introduction

Note: The 4098-9772, 4098-9780, 4098-9791, 4098-9794, 4098-9795, and 4098-9796 are not compatible with the 2120 CDT. The 4098-9777 and 4098-9793 are only compatible with the 4010, 4010ES, 4007ES and 4100U/4100ES (except 4100-3101), and 4008 FACP. The 4098-9770, 4098-9771, 4098-9773, 4098-9797 and 4098-9798 are only compatible with the 4007ES, 4010ES, 4100ES, and 4100U version 12.05 or higher.

4098 TrueAlarm Smoke/Heat Sensor and Sounder Bases are connected to a 2120 Multiplex Communication Device Transponder (CDT), 4010, 4020, 4100+, 4120, 4010ES, 4100U/4100ES (except 4100-3103), or 4008 FACP by a single wire pair (MAPNET II or IDNet). The 4098-9770 through 4098-9773, 4098-9775, 4098-9776, 4098-9777, 4098-9780, 4098-9789, 4098-9791, 4098-9792, 4098-9793 (IDNet only), 4098-9794, 4098-9796, 4098-9797 and 4098-9798 sensor bases and their sensors obtain both power and data over MAPNET II or IDNet wiring. Additionally, the 4098-9791 sensor base requires 24VDC power for relay operation. The 4098-9772, 4098-9794 Sensor Base with Sounder, the 4098-9795 Multi-Sensor Sounder Base and the 4098-9771, 4098-9773, 4098-9798 sounder bases require 24VDC or Notification Appliance Circuit (NAC) power.

This document covers only the information necessary to mount and wire these sensor base configurations. Before installing these devices, make a survey of the area to be covered in accordance with information provided in NFPA 72, Chapter 5. For specific applications, refer to Simplex publication Common Code Requirements for Fire Alarm Systems (Publication No. FA2-91-010). For additional information, refer to NFPA 72 and the NEMA Guide for Proper Use of System Smoke Detectors.

Important: Refer to the *4098 Detectors, Sensors, and Bases Application Manual (574-709)* that was shipped with the fire alarm system for compatibility and specification data, address settings, maintenance, and correct application of these Smoke/Heat Sensor Bases.

Installation

CAUTION: Install the bases described in this instruction in accordance with applicable NFPA standards, local codes, and the authorities having jurisdiction (AHJ). Failure to follow these instructions may result in failure of the sensor to initiate an alarm condition. Simplex is not responsible for sensors that have been improperly installed, tested, or maintained. The smoke sensors come with dust covers to protect them from contamination during completion of building construction. Sensors will not operate with dust covers in place.

For installation in Canada, installation needs to comply with current edition of ULC S524 – Standard for Installation of Fire Alarm Systems, and Canadian Electrical Code Part 1. Final acceptance is subject to the local AHJ. Suffix “E” following an eight-digit Product ID number denotes Global product.

Mounting

The 4098 Smoke/Heat Sensor Bases mount to a 4-inch square, single-gang, or 4-inch octagonal electrical box. Install the sensor base using Figure 1 as a reference.

Note: Sensor bases with Relay Modules 2098-9737 and 4098-9822 require an 1.5 inch extension ring (not supplied) mounted to the 4-inch square or octagonal electrical box (relay module(s) cannot be used in single-gang electrical box installations) to meet the space requirement of the relay cube and its wires. The Relay Module 4098-9822 must be installed in the electrical box directly.

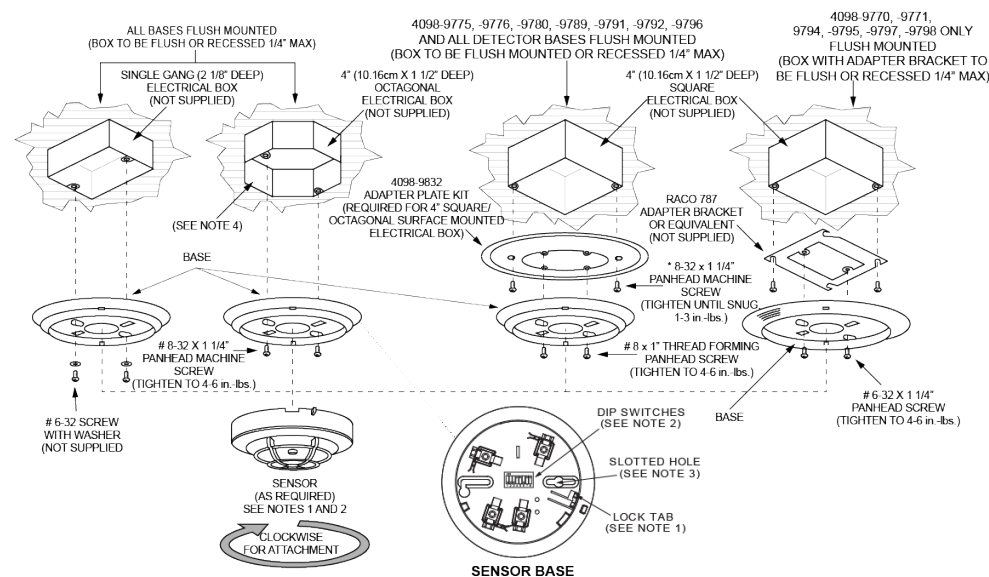


Figure 1: Typical base mounting

Note:

1. Break off plastic lock tab to engage locking mechanism. To lock sensor into base, turn unit until the locking tab clicks into place. To unlock sensor, insert the blade of a screwdriver into this slot and then pull down on handle. This action allows the sensor to be turned and removed.
2. Refer to the *4098 Detectors, Sensors, and Bases Application Manual (574-709)* for detailed information on compatible Sensor(s) and DIP Switch Address Settings.
3. Use the slotted hole indicated for the first screw when mounting the sensor base.
4. Use Adapter Plate Kit 4098-9832 when mounting the 4098-9770, 4098-9771, 4098-9794, 4098-9795, 4098-9797 and 4098-9798 to a surface mounted 4-inch square or octagonal box. Adapter plate must be installed with textured side towards the electrical box for this installation only.
5. The 4098-9755, 4098-9776, 4098-9777, 4098-9780, 4098-9789, 4098-9791, 4098-9792, 4098-9793, 4098-9794, and 4098-9796, sensor bases are rated for 150°F ambient temperature for use with the 4098-9734 heat head only. For use with any other detector head, install in maximum ambient temperature of 100°F only.



Wiring

Figure 2 illustrates the wiring connections for the different smoke/heat sensor base configurations. All screw terminals accept 14 to 18-gauge AWG solid or stranded wire. Recommended strip length is 3/8 inch. **The maximum torque should not exceed 12-inch-pounds.** Connect wiring to terminals as illustrated below.

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

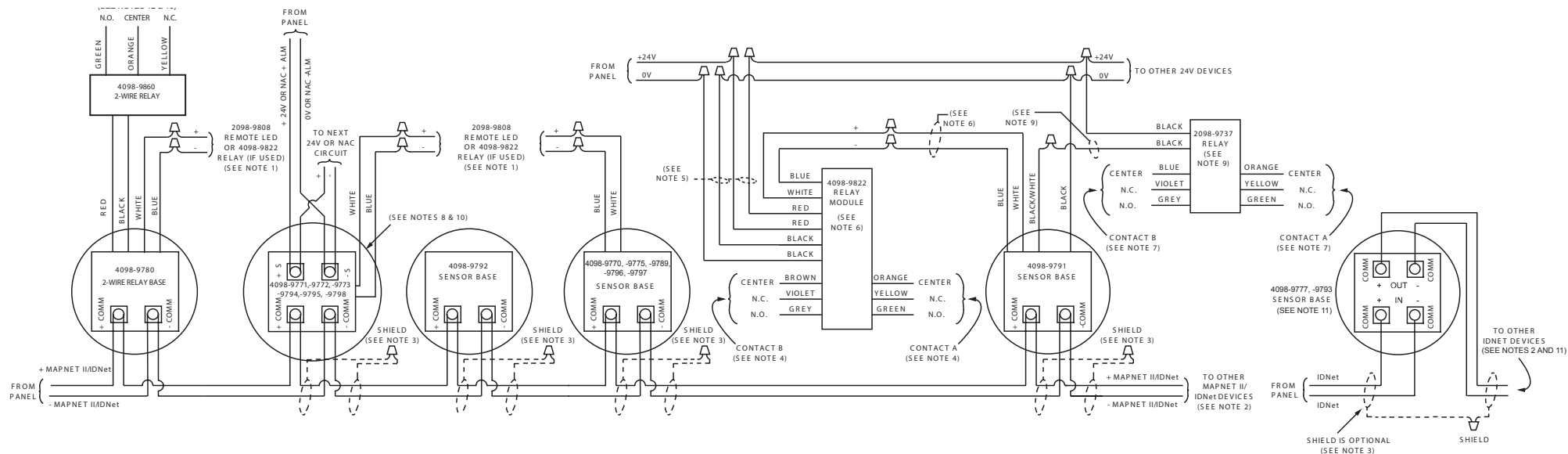


Figure 2: 4098 Smoke/Heat sensor base connections

Note:

- Remote LED and relay wires are not supervised.
- Maximum quantity of devices per circuit is 127 for the 4010ES/4100U/4100ES (MAPNET) 4020, 4100+, or 4120 panels, 128 for the 2120 CDT panel, 200 for the 4008 panel, and 250 for the 4010 and 4007ES/4010ES/4100U/4100ES (IDNet) panels. Maximum quantity of 4098-9795 and 4098-9796 Multi-Sensor bases is 63 for the 4020, 4100+, 4120 4100U, 4100ES and 4010ES panels using MAPNET II. 100 for 4008 panel, and 124 for the 4010, 4007ES, 4010ES, 4100U and 4100ES panels using IDNet/IDNet2. If the sounder output is coded (Temporal code, etc.) via MAPNET II/IDNet control, see note 10.
- If shield is used, twist shield wires together and cap with wire nut. Shield should be insulated from electrical box.
- Contact A or B: Dry, Form C - each rated 2 A at 24 VDC / 0.5 A at 110 VAC, resistive.
- 18 VDC to 32 VDC, 0.008 A typical / 0.013 A maximum.
- Do not use remote LED if the 4098-9822 relay module is used.
- Contact A or B: Dry, Form C - Each rated at 3A at 28VDC / 115 VAC, resistive.
- Remove the protective tape over the CO Sensor on the 4098-9770, 4098-9771, 4098-9773 4098-9797, 4098-9798 bases only after the sensor head has been installed.
- Maximum wire length between 4098-9791 sensor base and 2098-9737 relay module is 100 ft. The 2098-9737 relay module is required for supervised remote control relay operation.
- Maximum quantity of sensors with 4098-9771, 4098-9772, 4098-9773, 4098-9794, 4098-9795 sounder bases limited to 43 if output is coded (Temporal code, etc.) via MAPNET II/IDNet control. If coding is performed via 24 VDC or NAC circuit, see note 2. This also applies for the 4098-9797 and 4098-9798 sounder bases.
- Maximum line resistance between panel and isolator and between two isolators is 10 ohms (780 ft at 18 AWG).
- Contacts Dry Form C, rated at 2 A at 30 VDC / 0.5 A at 125VAC, resistive.
- Maximum wire length between 4098-9780 sensor base and 4098-9860 relay module is 100 ft.
- 4098-9772, 4098-9773, rated [520Hz-115mA; Broadband-125mA] at 18V for 24VDC circuits; rated [520Hz-129mA; Broadband-139mA] at 16V for REGULATED 24VDC circuits. See *4098 Detectors, Sensors and Bases Application Manual (574-709)* to set Tone.