

Factory Installed Smoke Detector Specification Sheet

For Factory Installed Smoke Detectors on 2-238 ton Commercial Rooftop Units

APPLICABLE UNITS: 4830P6G, FM, PD, G3, 28, 4830T10, (M, 30, 4830T11), (M, 29, 4830T12), (M, 29, 4830T13), (M, 29, 4830T14), (M, 29, 4830T15), (M, 29, 4830T16), (M, 29, 4830T17), (M, 29, 4830T18), (M, 29, 4830T19), (M, 29, 4830T20), (M, 29, 4830T21), (M, 29, 4830T22), (M, 29, 4830T23), (M, 29, 4830T24), (M, 29, 4830T25), (M, 29, 4830T26), (M, 29, 4830T27), (M, 29, 4830T28), (M, 29, 4830T29), (M, 29, 4830T30)

GENERAL DATA:
Type: TestAlert SuperAlert, 4-wire photoelectric sensing detector and control module.
The Carrier factory installed smoke detector systems comprise a fire-wise controller and one or two detectors (Option: Air Aid or Supply Air). In primary function, it is used to detect smoke that is circulating throughout the building. It is not to be used as a life saving device. Factory installed smoke detector require no address wiring tubes as they are field installed.

SYSTEM DESCRIPTION:
The controller includes a controller housing, a printed circuit board, and an easily removable clear plastic cover. The cover is attached to the multiple terminal connections and prior to connecting the connections to the alarm system, fire alarm control, and other auxiliary functions. A remote test/reset station must be connected to the controller.

Detectors: The detector includes a plastic housing, a printed circuit board, a clear plastic cover, an exhaust tube, and a sampling tube. The exhaust tube and sampling tube are attached during factory installation. The sampling tube varies in length depending on the size of the rooftop unit. The clear plastic cover permits visual inspection without having to disassemble the sensor. The cover opens an airtight chamber toward the sensing elements.
The installation using two detectors, the controller does not differentiate which detector signals an alarm or trouble condition. A rapid change in environmental conditions, such as smoke, causes the sensor to signal an alarm state but does not inhibit air movement over the sensor when the sensor's ability to sense smoke for environmental changes has weakened or failed (LDN duty). The sensor signals a trouble condition. As it is considered by the detector's detector's sensing chamber through a sampling tube that extends into the REVAC ductwork is detected back into the ventilation system through an exhaust tube. The difference in air pressure between the two tubes pulls the sampled air through the sensing chamber. When a sufficient amount of smoke is detected in the sensing chamber, the sensor signals an alarm state and the controller automatically takes the appropriate action to shut down the unit via the factory installed wiring device. Additional functions such as interposing with a Building Alarm System, additional fire and batteries, notify the fire alarm control panel, etc., require field wiring and configurations.

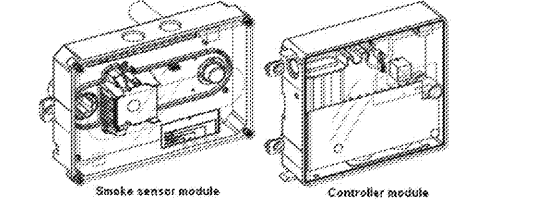


Fig. 1 - Controller and Detector (Sensor) Modules

GUIDE SPECIFICATIONS

- System Specifications:**
• System Type: Separate controller and detector modules
• Fire: Water Cooled and Detectors
• Photoelectric Sensing
• Environmental compensation with differential sensing for trouble, trouble, and alarm-free sensitivity
• Operating temperature:
• Temperature: 10° to 118°F (-20° to 70°C)
• Humidity: 10% to 95% RH, non-condensing
• Alarm activation:
• Alarm activation: Manual detector operation
• Field-free connection terminal access
• Recessed accessory switch for testing and resetting the detector

Terminal Number	Name
1	24VAC
2	Alarm
3	24VAC
4	Alarm/Control/Reset
5	Alarm/Control/Reset
6	Alarm/Control/Reset
7	Alarm/Control/Reset
8	Alarm/Control/Reset
9	Alarm/Control/Reset
10	Alarm/Control/Reset
11	Not used
12	Multi-function
13	Alarm/Control/Reset
14	Alarm/Control/Reset
15	Alarm/Control/Reset
16	Alarm/Control/Reset
17	Alarm/Control/Reset
18	Alarm/Control/Reset
19	Alarm/Control/Reset
20	Alarm/Control/Reset
21	Not used
22	Not used
23	Not used
24	Not used
25	Not used
26	Not used
27	Not used
28	Not used
29	Not used
30	Not used

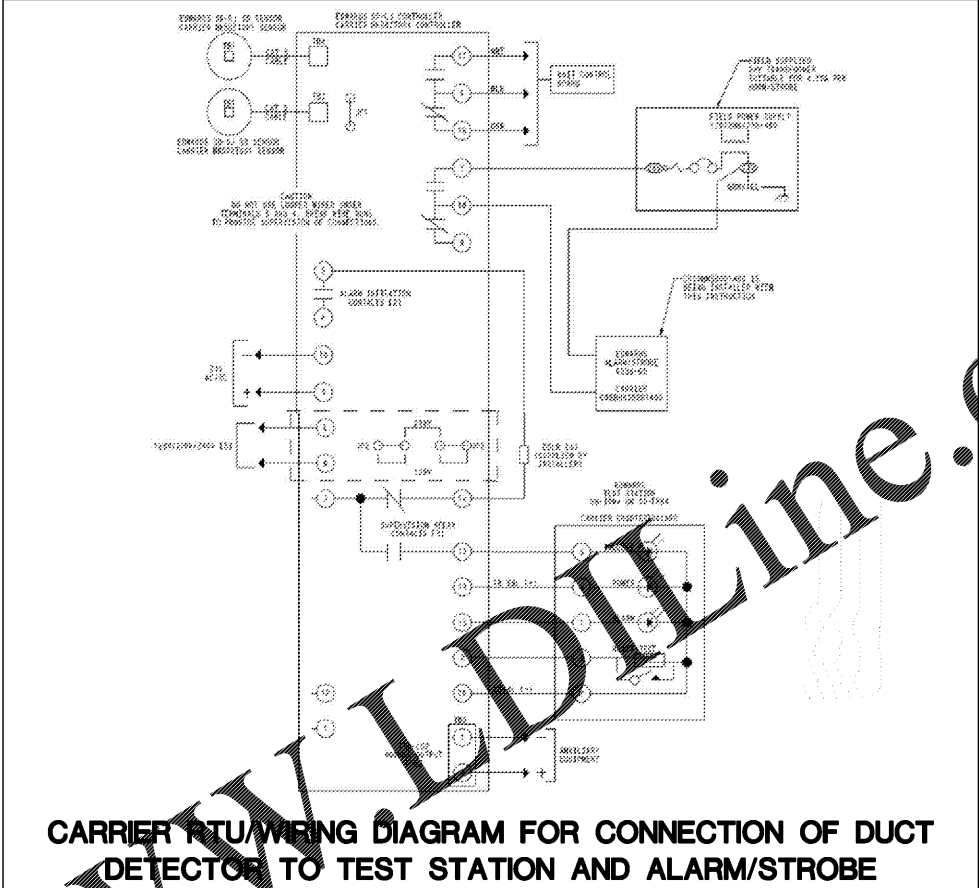
- Controller specifications:**
Controller shall include:
• One set of normally open alarm initiation contacts for connection to an existing smoke control or fire alarm control panel.
• Two Form C auxiliary alarm relays for use with fire alarm or other equipment.
• One Form C supervisory (trouble) relay to control the operation of the trouble LED on an existing fire alarm system.
• Capable of direct connection to ten individual detector modules.
• Can be tested to up to 14 other dual smoke detectors for multiple smoke alarm applications.

- Wire Size:**
High voltage terminals:
24VAC:
14 AWG
20-28 VAC, 50/60 Hz:
18 AWG
120 VAC, 50/60 Hz:
16 AWG
200-240 VAC, 50/60 Hz:
14 AWG

- Operating current:**
20-28VAC: 175 mA
24VAC: 100 mA at 50VAC Hz
100 mA at 60 Hz
75 mA at 40 Hz
90 mA at 30 Hz
40 mA at 40 Hz
100 mA at 20 Hz

- LED indicators:**
Alarm/Initiation Relay:
Capacity: 1 Normally open
2/2A at 24 VDC (resistive)
Auxiliary relays:
Capacity: 2 Form C
2/2A at 24 VDC
100 mA at 250 VAC
Supervisory (trouble) relay:
Capacity: 1 Form C
2/2A at 24 VDC (resistive)

- Detector specifications:**
Sensing: 9 7/16" dia. 1.10 in. Photoelectric method
Air velocity (max.): 100 - 1,000 ft/min
Photoelectric extinction (max.): 3.000 - 1.00 in.
Sensitivity: 1.67 to 2.48 % obscuration
Wire size: 14 to 22 AWG
Reset time: 7 seconds max
Power up time: 9 seconds max
Alarm test response time: 5 to 7 seconds (normal opening)
1,275 obscuration
Colors (Power): Yellow (Alarm)
Green (Power)



CARRIER RTU/WING DIAGRAM FOR CONNECTION OF DUCT DETECTOR TO TEST STATION AND ALARM/STROBE

CRSDTEST001A00 REMOTE TEST/RESET STATION SD-TRM4 FOR SMOKE DETECTOR COMMERCIAL ROOFTOP UNIT 3-27.5 TONS

Installation Instructions

IMPORTANT: Read these instructions completely before attempting to install the Remote Test/Reset Station.
SAFETY CONSIDERATIONS
Installation and servicing of air conditioning equipment may be hazardous due to system pressure and electrical components. Only trained and qualified personnel should install, repair or service this equipment.
Disconnect power to the equipment before servicing. Disconnect power and use proper locking and tagging procedure. Use only approved tools and equipment. Do not use compressed air on clothing or skin. Do not use compressed air on face. Do not use compressed air in confined spaces. Do not use compressed air on electrical equipment. Do not use compressed air on any other equipment that may be hazardous. Do not use compressed air on any other equipment that may be hazardous. Do not use compressed air on any other equipment that may be hazardous. Do not use compressed air on any other equipment that may be hazardous.

WARNING
ELECTRICAL SHOCK HAZARD
Failure to follow the warning could result in personal injury or death.
Do not touch the wiring or electrical components when the equipment is energized. Do not touch the wiring or electrical components when the equipment is energized. Do not touch the wiring or electrical components when the equipment is energized.

CAUTION
CUT HAZARD
Failure to follow the warning could result in personal injury or death.
Sharp metal parts may have sharp edges or burrs. Do not touch the wiring or electrical components when the equipment is energized.

WARNING
PERSONAL INJURY AND ELECTRICAL SHOCK HAZARD
Failure to follow the warning could result in personal injury or death.
Do not touch the wiring or electrical components when the equipment is energized. Do not touch the wiring or electrical components when the equipment is energized. Do not touch the wiring or electrical components when the equipment is energized.

GENERAL

The SD-TRM4 Remote Test/Reset Station is used with the SuperAlert™ Fire-wise dual smoke detector. Each remote test/reset station provides a green LED to indicate power and a yellow LED to indicate trouble. The SD-TRM4 requires a separate test reset station.

REMOTE TEST/RESET STATION TESTS

The Remote Test/Reset Station tests the detector's alarm, trouble, and trouble-free status. It also tests the detector's LED's, and the detector's wiring.

CAUTION
ALARM SYSTEM DEVIATION HAZARD
Failure to follow the warning could result in personal injury or death.
Do not touch the wiring or electrical components when the equipment is energized.

INSTALLATION

Mount the remote test/reset station on a single gang box as shown in Fig. 2.

WIRING

Wire the remote test/reset station to the fire-wise detector as shown in Fig. 3.

Fig. 2 - SD-TRM4 Installation Diagram

Fig. 3 - Wiring Diagram

EDWARDS ELECTRONIC PRODUCTS

Installation Instructions for the 6536-G5 Horn/Strobe

Description
The 6536-G5 is an audible/visual signal unit. Used for general purpose signaling applications.

Installation
A qualified electrician familiar with National Electrical Code and local code requirements must install the product. Failure to follow the safety precautions in this instruction sheet could result in product or property damage, severe personal injury or death.

WARNING
To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Do not connect AC power until installation is complete.

WARNING
To reduce the risk of shock, do not remove lens or tamper with unit when the circuit is energized. Disconnect power and allow five (5) minutes for stored energy to dissipate before starting work or disassembly. High energy could be stored in the strobe circuit once it is energized.

WARNING
Perform regularly scheduled testing or maintenance in accordance with local authority having jurisdiction.

Table 1. Specifications

Operating Voltage	24V 50/60 Hz	24V 1K
Alarm Current	175 mA	175 mA

Fig. 1 - Details of Horn/Strobe

Fig. 2 - Connecting the Horn and Strobe

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DUCT DETECTOR - TEST STATION - ALARM/STROBE

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