

TRW-HEAT and TRW-HEAT-ROR

Wireless Intelligent Temperature Sensors

TRIGA Life Safety Systems, LLC
 7600 Olde Eight Rd.
 Hudson, Ohio 4426-1057
 Tel: +1 330-577-5199. Email: info@trigaglobal.com

SPECIFICATIONS

Maximum Operating Voltage:	3.3 VDC
Maximum Standby Current:	210µA
LED Current:	10 mA
Maximum Transmit RF Power:	17dBm
Radio Frequency Range:	902-928 MHz
Operating Humidity Range:	10% to 93% Relative Humidity, Non-condensing
Installation Temperature:	32°F to 100°F (0°C to 38°C)
Fixed Temperature Rating:	135°F (57°C) TRW-HEAT and TRW-HEAT-ROR
Rate-of-Rise Detection:	Responds to greater than 15°F/minute TRW-HEAT-ROR
Battery Type:	4 Panasonic CR123A or 4 Duracell DL123A
Battery Life:	2 year minimum
Battery Replacement:	Upon TROUBLE BATTERY LOW display and/or during annual maintenance
Height:	2.4" (61 mm) installed in TR-B210W Series Base
Diameter:	6.0" (152 mm) installed in TR-B210W Series Base
Weight:	9.2 oz. (261 g) installed in TR-B210W Series Base with 4 batteries

This sensor must be installed in compliance with the control panel system installation manual and the SWIFT® Wireless Gateway Manual. The installation must meet the requirements of the Authority Having Jurisdiction (AHJ). Sensors offer maximum performance when installed in compliance with the National Fire Protection Association (NFPA); see NFPA 72.

GENERAL DESCRIPTION

Models TRW-HEAT and TRW-HEAT-ROR are intelligent sensors that use a state-of-the-art thermistor sensing circuit for fast response. These sensors are designed to provide open area protection with 50 foot spacing capability as approved by UL 521. Model TRW-HEAT is a fixed temperature sensor with 135°F/57.2°C fixed temperature alarm. Model TRW-HEAT-ROR is a rate-of-rise temperature sensor with 135°F/57.2°C fixed temperature alarm. Rotary dial switches are provided for setting the sensor’s address. (See Figure 1.) Two LEDs on the sensor are controlled by the panel to indicate sensor status.

Triga panels offer different feature sets across different models. As a result, certain features of the TRW-HEAT and TRW-HEAT-ROR may be available on some control panels, but not on others. The possible features available in the TRW-HEAT and TRW-HEAT-ROR, if supported by the control panel are:

- The panel controls the LED operation on the sensor. Operational modes include red, green and amber colors in various solid or blink patterns.

Please refer to the operation manual for the UL listed control panel for specific operation of the TRW-HEAT and TRW-HEAT-ROR.

The TRW-HEAT and TRW-HEAT-ROR require compatible addressable communications to function properly. Connect these sensors to listed-compatible control panels only.

NOTE: Do not attach the base and detectors to temporary structures such as removable ceiling tiles such that the placement could be altered. To prevent changes in device placement, permanently secure the structure or mount the detector across the ceiling panel support as shown in Figure 2.

SPACING

Wireless technologies can exhibit communication disruption if devices are spaced too close together. To avoid this form of disruption, SWIFT devices should not be placed closer than 2 feet (60 cm) apart without an intervening structure.

BATTERY REPLACEMENT

Low battery levels on the wireless devices are displayed as a trouble on the FACP. Therefore when the message “TROUBLE BATTERY LOW” is displayed, replace the battery in the device. This message is an indication that approximately one week of battery life remains.

To replace the batteries in a wireless device use the following steps:

1. Have 4 CR123A (or DL123A) batteries available
2. Remove the detector from the base.
3. Open the battery compartment refer to Figure 3. Note: The battery compartment cover may be left attached at the hinges during battery replacement.
4. Remove the used batteries and replace with new batteries. The battery compartment is designed such that the batteries can only align in the appropriate direction. Do not force the batteries into the openings.
5. Replace the battery compartment cover.
6. Return the device to its original location.

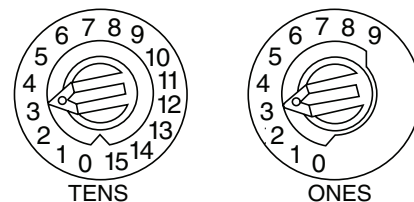
CAUTION

Dust covers provide limited protection against airborne dust particles during shipping. Dust covers must be removed before the sensors can sense smoke. Remove sensors prior to heavy remodeling or construction.

TAMPER RESISTANCE

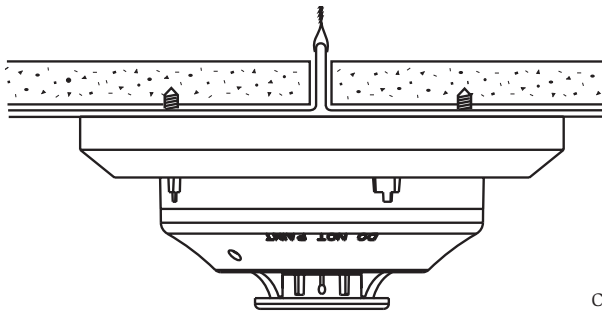
Models TRW-HEAT and TRW-HEAT-ROR include a tamper-resistant capability that prevents their removal from the base without the use of a tool. Refer to the base manual for details on making use of this capability. The base also includes a magnet for tamper resistance. The magnet activates a supervisory tamper fault at the panel if the detector is removed from the base.

FIGURE 1. ROTARY ADDRESS SWITCHES



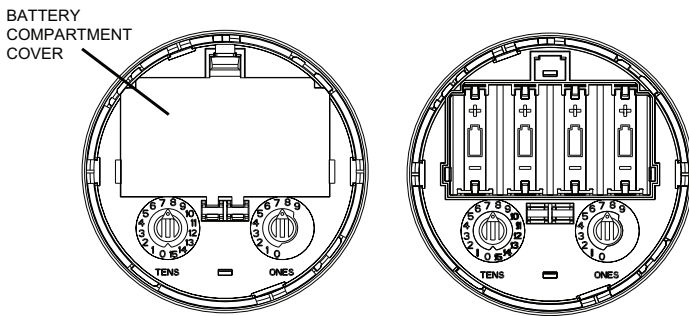
C0162-00

FIGURE 2. CEILING PANEL SUPPORT



C2005-00

FIGURE 3. BATTERY COMPARTMENT



C1092-00

TESTING

Before testing, notify the proper authorities that the system is undergoing maintenance, and will temporarily be out of service. Disable the system to prevent unwanted alarms.

All sensors must be tested after installation and periodically thereafter. Testing methods must satisfy the Authority Having Jurisdiction (AHJ). Sensors offer maximum performance when tested and maintained in compliance with NFPA 72.

The sensor can be tested in the following ways:

- A. Functional: Magnet Test (P/N M02-04-01 or M02-09-00)**
 1. Place the optional test magnet against the cover in the magnet test area, as shown in Figure 4, to activate the test feature.
 2. The LEDs should latch on within 10 seconds, indicating alarm and annunciating the panel.
 3. Reset the detector at the system control panel.
- B. Direct Heat Method (Hair dryer of 1000 – 1500 watts).**
 1. From the side of the detector, direct the heat toward the sensor. Hold the heat source about 6 inches (15 cm) away to prevent damage to the cover during testing.
 2. The LEDs on the detector should light when the temperature at the detector reaches the alarm setpoint. If the LEDs fail to light, check the power to the detector and the wiring in the detector base.
 3. Reset the detector at the system control panel.

A sensor that fails any of these tests should be cleaned as described under CLEANING, and retested. If the sensor fails after cleaning, it must be replaced and returned for repair.

When testing is complete, restore the system to normal operation and notify the proper authorities that the system is back in operation.

CLEANING

Before removing the detector, notify the proper authorities that the smoke detector system is undergoing maintenance and will be temporarily out of service.

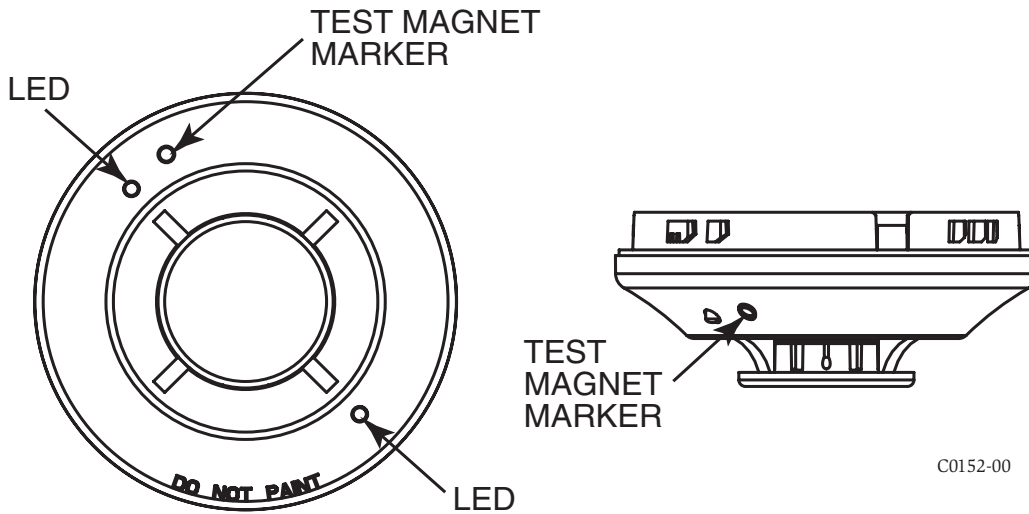
Disable the zone or system undergoing maintenance to prevent unwanted alarms.

It is recommended that the sensor be removed from its mounting base for easier cleaning and that sensors be cleaned at least once a year. Use a vacuum cleaner to remove dust from the sensing chamber. (See Figure 5.)

SPECIAL NOTE REGARDING SMOKE DETECTOR GUARDS

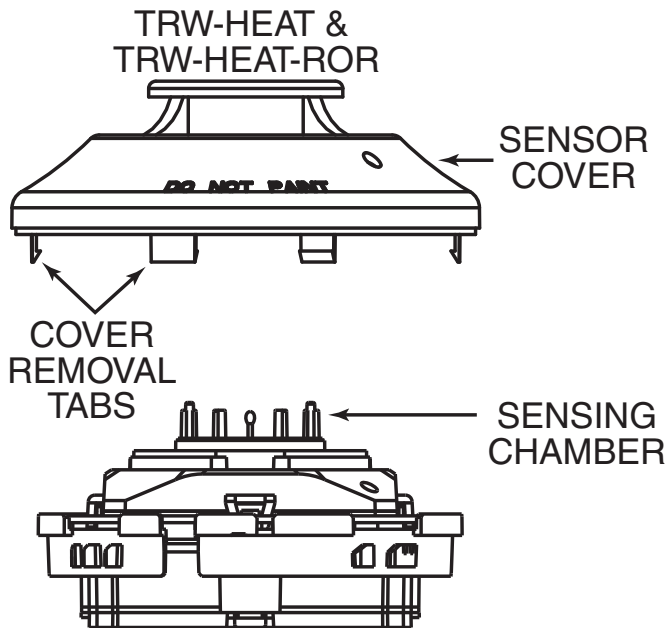
Smoke detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

FIGURE 4. MAGNET TEST MARKERS



C0152-00

FIGURE 5. DETECTOR COMPONENTS



C2012-05

FM CLASSIFICATION

RTI ratings are for installations which must comply with FM 3210.

TRW-HEAT RTI:	FAST
TRW-HEAT-ROR RTI:	V2-FAST

SUPPLEMENTAL INFORMATION

For Limitations of Fire Alarm Systems,
please go to:
[http://www.systemsensor.com/
en-us/Documents/156-1558.pdf](http://www.systemsensor.com/en-us/Documents/156-1558.pdf)



Limitations of
Fire Alarm Systems

FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

WARNING: Do not make changes to the equipment. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

LICENSING STATEMENT

Use of these products in combination with non-Honeywell products in a wireless mesh network, or to access, monitor or control devices in a wireless mesh network via the internet or another external wide area network, may require a separate license from Sipco, LLC. For more information, contact Sipco, LLC or Ipco, LLC at 8215 Roswell Rd., Building 900, Suite 950, Atlanta, GA 303350, or at www.sipcollc.com or www.intusiq.com.