

## TC806E1012M01 Photoelectric, TC807E1011, Ionization Low Profile Intelligent Smoke Sensors



### FEATURES

- Early detection of fire conditions.
- Direct-dial decade switches for easy address entry.
- Continuous monitoring of sensor sensitivity.
- Electronics conformal-coated to resist corrosion.
- Optional tamper-resistant mounting.
- Sensor heads easily plug into common mounting base.
- Dual LEDs provide 360-degree viewing.
- Local test feature.
- Compatible with Honeywell XLS1000 / XLS80e / XLS40e/50e&60e and FS90 intelligent loop transmission.

### APPLICATION

The TC806E1012M01 Photoelectric Smoke Sensors and TC807E1011 Ionization Smoke Sensor are intelligent detection devices that provide two-way communication with the Honeywell fire alarm systems. The fire alarm panel loop controller uses a proprietary communication protocol containing both digital and analog signals that allow each sensor to communicate its individual address, sensor type (such as photoelectric or ionization) and an analog value. The panel analyzes the analog signal to measure the sensitivity of each sensor and to determine its status: alarm, prealarm, normal and trouble. The TC806E Photoelectric Smoke Sensor has an optical sensing chamber and uses the light-scattering principle, and also includes a dual 135°F (57°C) fixed temperature thermal sensing element. The TC807E uses a dual, unipolar ionization chamber. These sensors provide stability and fast response to a broad range of fire conditions. The address for each sensor is set via two direct-dial decade switches. Dual LEDs on the sensors provide 360-degree visual indication. A common mounting base accommodates the TC806E or TC807E. A total of 99 sensor addresses can be set for each Intelligent Loop Interface.

### SPECIFICATIONS

#### Models:

TC806E1012M01 Photoelectric Smoke Sensor.

TC807E1011 Ionization Smoke Sensor.

#### Electrical Ratings:

Voltage Range: 15 Vdc to 32 Vdc, peak.

Standby Current: 300  $\mu$ A at 24 Vdc (one communication every 5 seconds with LED blink enabled).

LED Current: 6.5 mA at 24 Vdc.

#### Temperature Ratings:

Ion/Photo: 32°F to 120°F (0°C to 49°C).

Humidity Ratings: 10% to 93% RH, noncondensing.

#### Velocity Ratings:

TC806E: 4000 ft/min.

TC807E: 1200 ft/min. constant airflow.

**Thermal Sensor Ratings (TC806E1012M01 only):** Photo with thermal: 135°F (57°C) fixed.

**Sensor Placement:** Honeywell recommends spacing sensors in compliance with EN54.

#### Nominal Sensitivity:

TC806E1012M01: 1.65%/ft obscuration.

TC807E1011: 1.06%/ft obscuration.

**Indicators and Switches:** Two LEDs on opposite sides of sensor head for 360-degree viewing angle. LEDs blink for normal operation and are latched on for alarm condition. As an option, normal blinking can be suppressed for use in a sleeping area.

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Ref: TC806E1012M01 & TC807E1011

**Testing:** Built-in magnetic reed switch for testing with magnet. This device must be routinely tested in accordance with EN54 requirements.

**Shipping Weight:**

TC806E1012M01: 5.2 oz (147g).

TC807E1011: 3.8 oz (108g).

**Lamp Life:** LED rated at 40 years.

**Construction:** Off-white plastic.

**Pressure Rating (TC807B1059 only):** 10 in./Hg maximum.

**14506414 Base**

**Model:** 14506414-007: Mounts on a standard European circular electrical box.

**NOTE:** The TC806E and TC807E can be used with Honeywell

Intelligent Sensor Bases including the Temporal Tone Sounder Base, Relay Base and Isolator Base.

**Mounting:** Surface mounted on ceiling.

**Dimensions:** See Fig. 1.

**Wiring:** See Fig. 2 and the installation instructions shipped with the product.

**Approvals:** EN54.

**Additional Equipment:**

Optional magnet for local testing of individual sensors.

RA400Z Remote Annunciator.

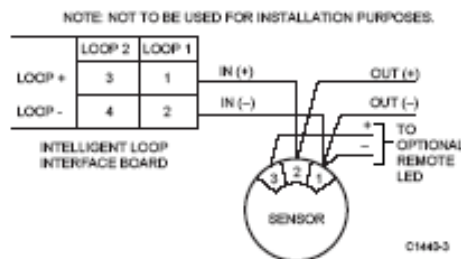
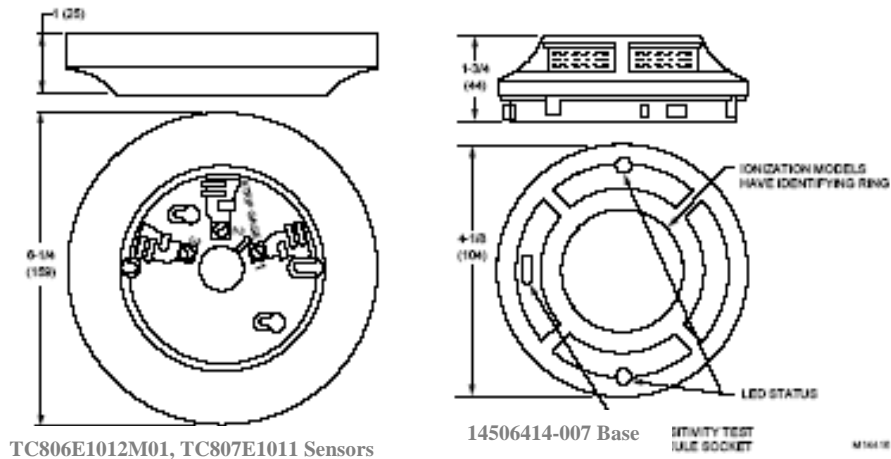


Fig.2. Wiring for 14506414-007

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