PHOTOELECTRONIC SMOKE DETECTORS FOR SYSTEMS/RESIDENTIAL APPLICATIONS

MODELS

2806/2812/2824

BRK ELECTRONICS *World's Largest Manufacturer of Smoke Detectors*



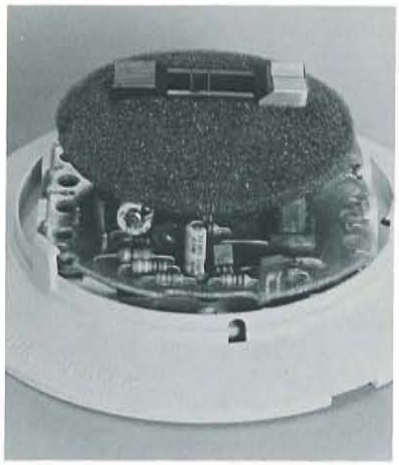
2800 Series 4/6 Wire Systems Detectors

- **Compact, Stylish Design**
- **Geometrically Optimized Photoelectronic Sensing Chamber**
- **Designed for Direct Surface or Electrical Box Mounting**

- **Unique New Optical Sensing Chamber**
  - **—Superior Signal-to-Noise Ratio (2.0)**
  - **—Stable Photoelectronic Operation**
  - **—2.0% Nominal Sensitivity**
  - **—Built-in Signal Processing**
- **6, 12, and 24 Volt Models**
- **Twist-on Mounting Bracket with Tamper Option for Easy Installation**
- **Built-in Thermal Available**
- **Convenient Terminal Strip Wiring**
- **Built-in Test Capability**
- **Visual Alarm Indication**
- **Remote LED Option**
- **Low Standby Current**
- **Listed to UL 268**
- **Bug Screen**
- **Ideal for Residential and Commercial Applications**

BRK's new 2800 Series detectors are designed to be more responsive to a broader range of fires and at the same time offer maximum stability. They're compact, attractive and easy to install.

These detectors operate on the light scattering principle and feature a unique photo optic sensing chamber that provides good smoke entry while minimizing the effects of ambient light. Its carefully designed geometry maximizes signal strength and signal-to-noise ratio (2.0 nominal). This sensing chamber is more responsive to fast flaming fires (the most difficult for photoelectronic detectors) than the chambers used in most competitive units. It can, therefore, be set less sensitive and further from the threshold of alarm than most competitive detectors. This combination of high signal-to-noise ratio and stable sensitivity setting gives the detector remarkable stability over a wide range of environmental conditions. The detector also has a custom integrated circuit that uses signal processing for alarm verification. In standby mode its infrared LED is designed to pulse once every eight seconds, but when smoke is detected, this sampling rate accelerates to once per second. Two successive positive samplings are required before the detector can alarm, and this significantly increases its immunity to nuisance alarms.

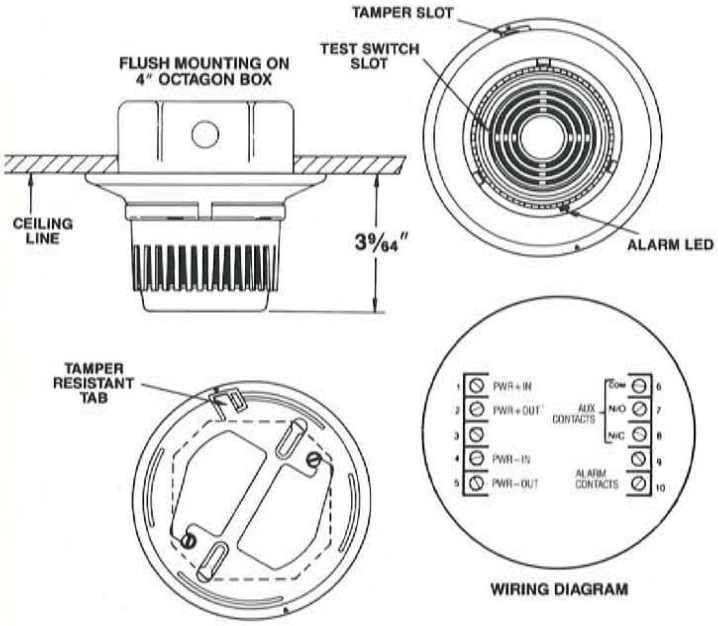


Unique new photo optic chamber features high signal-to-noise ratio for remarkable stability.

BRK's new 2800 Series Detectors are more responsive to a broader range of fires!

The 2800 Series are system-type detectors designed for use with four/six wire UL listed control panels. The 2806 operates on 6VDC, the 2812 on 12VDC, and the 2824 on 24VDC. Thermal versions ("TH") incorporating 135° fixed temperature thermals are available. The sensitivity of the detectors is preset at the factory and does not require adjustment in the field. A solid state voltage regulator maintains detector sensitivity over a wide range of input voltages. Testing capability is incorporated in the detector which permits quick and easy testing without sophisticated test equipment. A visual indication of an alarm is given by an LED on the detector cover. This visible alarm signal may be remoted by using BRK's 669 Series Remote Alarm Lamp Assemblies. The 2812 and 2824 detectors typically draw 100 microamps and the 2806, 400 microamps during normal operation.

Easy to install, clean and maintain, these detectors are designed for direct surface mounting (twist-on mounting bracket with tamper proof option included) or for mounting to most boxes up to 4" octagonal. The units also feature convenient terminal strip wiring. For installation and maintenance instructions, see the I56-156-XX Manual. For location and placement of detectors, see the I56-210-XX "Applications Manual for System Smoke Detectors."



SPECIFICATIONS	2806	2812	2824
Operating Voltage (+10%, −15%)	6VDC	12VDC	24VDC
Current Consumption			
Standby (typ.)	400μA	100μA	100μA
Alarm (max.)	200mA	100mA	85mA
Sensitivity	2.0% nominal		
Sensor	Photoelectronic		
Alarm Contacts	SPST—N.O., 30W/50VA, 1.25 Amps (Res.) 30 VAC/VDC		
Auxiliary Contacts	SPDT—30W/50VA, 1.25 Amps (Res.) 125VAC/100VDC		
Temperature	32°F to 120°F (0°C to 49°C)		
Humidity	10% to 85% Relative Humidity, Excluding Condensation		
Visual Alarm Indicator	Solid State Light-Emitting Diode		

HOW TO ORDER

Model	Description
2806	Photoelectronic Detector, 6VDC.
2806TH	Photoelectronic Detector, 6VDC, with 135° thermal.
A77-716-00	End of Line Relay Module, 6VDC.
669-01	Remote Alarm Lamp (LED) Assembly with rectangular mounting plate; 6VDC.
2812	Photoelectronic Detector, 12VDC.
2812TH	Photoelectronic Detector, 12VDC, with 135° thermal.
A77-716-01	End of Line Relay Module, 12VDC.
669-02	Remote Alarm Lamp (LED) Assembly with rectangular mounting plate; 12VDC.
2824	Photoelectronic Detector, 24VDC.
2824TH	Photoelectronic Detector, 24VDC, with 135° thermal.
A77-716-02	End of Line Relay Module, 24VDC.
669-03	Remote Alarm Lamp (LED) Assembly with rectangular mounting plate; 24VDC.
I56-210-XX	Application Manual for System Smoke Detectors.
I56-98-XX	Installation Instructions for the 669 series Remote Alarm Lamp Assembly.
I56-156-XX	Installation Instructions for 2800 series detectors.
R59-08-04	Detector Test Card

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