



**HARRINGTON**  
FIRE ALARM



**IS802**

I-Spy Photoelectric Detector

Harrington Signal Inc.  
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## Description

The IS802 Photoelectric detector uses the same outer case as the ionization smoke detector. The housing is white polycarbonate and will not fade. Terminals are nickel plated stainless steel.

## Operation

Within the case is a printed circuit board which, on one side, has the light-proof chamber with integral gauze surrounding the optical measuring system and, on the other, the signal processing and communications electronics. An infra-red light emitting diode is arranged at an obtuse angle to the photo-diode. The photo-diode has an integral daylight-blocking filter. The IR LED emits a burst of light every second. In clear air the photo-diode receives no light directly from the IR LED, because of the angular arrangement and the chamber

baffles. When smoke enters the chamber it scatters light from the emitter IR LED onto the photo-diode in an amount related to the smoke characteristics and density. The photo-diode signal is processed to provide an analogue value for transmission when the detector is interrogated.



## Features

- Compatible with Harrington's FireSpy®Tracker 1000, 2000, and 8000 panels
- 5 operating modes
- Drift compensation
- Address is set by X-Pert card and is stored in base
- Alarm flag for fast alarm reporting

## Ordering Information

Model Number	Part Number	Description
IS802	IS802	Photo Smoke Detector
IS804	IS804	4 " Mounting Base
IS807	IS807	6" Low Profile Relay Base
IS808	IS808	Isolator Base
IS809	IS809	6" EZ Fit Low Profile Base
IS821	IS821	6" Sounder Base
IS840	IS840	Pre-addressed X-Pert Cards
IS841	IS841	X-Pert Cards

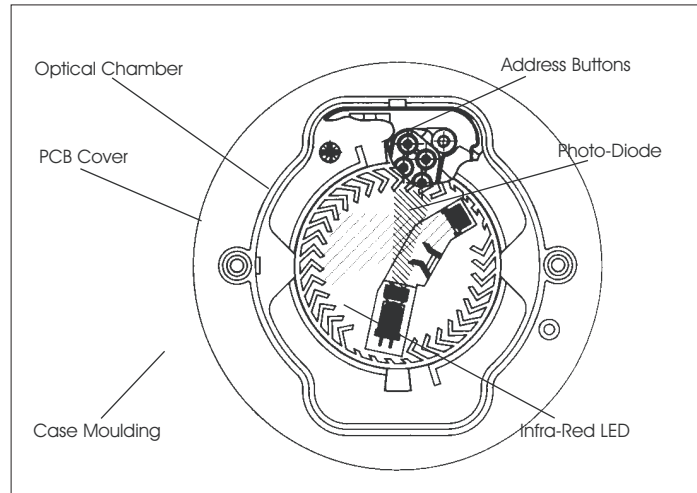


Mode	Alarm threshold %/m	Minimum time to alarm (sec)
1	1.4	5
2	1.4	30
3	2.1	5
4	2.1	30
5	2.8	5

Photoelectric detector operating modes

### Specifications

Standby current: 400uA  
 Alarm current: 3.4mA  
 Alarm LED current: 3.4mA  
 Operating voltage: 17-28VDC  
 Max. continuous operating temp: 140°F  
 Min. continuous operating temp: 32°F  
 Min. operating -4°F (no condensation/icing)  
 Storage: -22°F to 176°F  
 Detector weight: 3.68oz  
 Detector with base weight: 5.62oz



Top section - IS802 Photoelectric Smoke Detector

### Dimensions

Diameter: 3.93"  
 Height: 1.65'  
 Height in base: 1.96'

### Engineering Specifications

The photoelectric smoke sensor shall be Harrington Signal IS802, where indicated on the plans, with one of the several addressable mounting base options available. The photoelectric smoke detector shall include compensation for sensor drift as part of the internal signal-processing algorithm. The photoelectric sensor head and twist-lock mounting base shall be UL Listed and UL Listed as compatible with the FireSpy® Tracker 1000, 2000, and 8000 Addressable Fire Alarm Control Panels. The base shall permit free interchange of sensor heads without requiring any additional wiring or additional programming of the head or base. The smoke sensor shall contain an integral LED that shall latch in when the unit goes into alarm. RF suppression techniques shall be employed to minimize false alarms. The photoelectric smoke sensor shall have automatic conventional false safe mode if the detectors polling mechanism fails.

**NOTICE:** The information contained in this document is intended only as a summary and is subject to change without notice. The products described have specific instructional/installation documentation, which covers various technical, approval, code, limitation and liability information. Copies of this documentation along with any general product warning and limitation documents, which also contain important information, are provided with the product and are also available from Harrington Signal Inc. The information contained in all of these documents should be considered before specifying or using the products. Any example applications shown are subject to the most current enforced local/national codes, standards, approvals, certifications, and/or the authority having jurisdiction. All of these resources, as well as the specific manufacturer of any shown or mentioned related equipment, should be consulted prior to any implementation. For further information or assistance concerning the products, contact Harrington Signal Inc. Harrington Signal Inc. reserves the right to change any and all documentation without notice. Quality manufactured for Harrington Signal Inc. Fire Alarm by Apollo.