

## 1151 Ionization Smoke Detector

### Features

- Unique dual unipolar sensor
- Stable operation up to 1200 ft. per minute (6 meters per second) air velocities
- Removable cover for field cleaning
- Two visible LEDs “blink” in standby
- Sealed against dirt, insects, and back pressure
- Field metering of detector sensitivity
- Field adjustable sensitivity
- Built-in test switch
- Low standby current
- Built-in tamper-resistant feature
- Designed for direct surface or electrical box mounting
- 360° field viewing angle of the visual alarm LEDs
- Insect-resistant screening
- Easy lug-in of the head to base
- SEMS screws for easy wiring

### Applications

The 1151 ionization smoke detectors are intended for use in commercial, industrial, and institutional buildings. The detectors are placed primarily in clean, indoor environments where early warning fire detection is required. The detectors are used in combination with an Ansul AUTOPULSE® Control System and an Ansul fire suppression system for automatic detection, alarm, equipment control, and fire suppression system release capabilities.

### Description

The 1151 ionization smoke detector contains a unique dual source, dual unipolar chamber detection design which will sense the presence of smoke particles produced by fast combustion as well as slow smoldering fires. Additional key features include a blinking LED standby status indicator, an easily visible alarm indication and provide for convenient field test and metering.

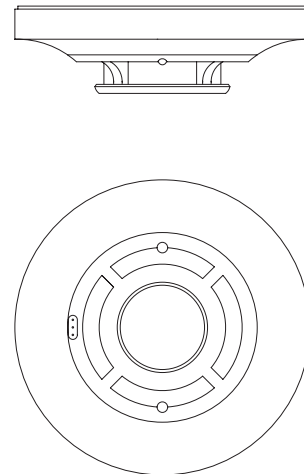
The 1151 ionization smoke detector has two chambers: an outer sampling chamber and an inner balance chamber. Smoke or invisible combustion gases can freely penetrate the outer chamber, but the inner chamber is virtually closed to prevent easy entry. With both chambers ionized by a single radioactive source, a very small current flows in the circuit. The presence of visible smoke or invisible gases have a great influence upon the current flow in the outer chamber and will cause a change in the voltage ratio between the chambers. This difference is then amplified inside the detector and transmitted to the Ansul AUTOPULSE Control

System to which it is connected. The LED indicator mounted on the detector will light steadily and any remote annunciators will activate at this time to indicate that the detector is in alarm.

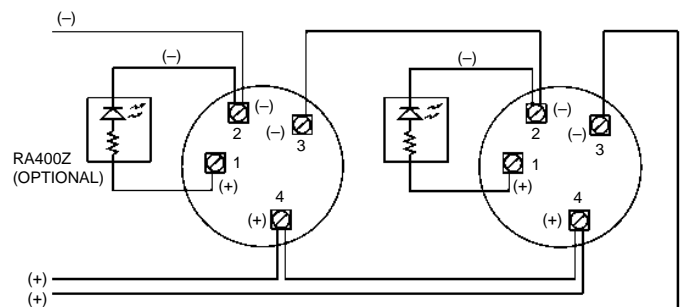
### Technical Information

- Stand-by Current: . . . . . 40 microamps
- Sensitivity: . . . . .  $.97 \pm .47\%$  nominal
- Weight: . . . . . 0.5 lb. (277 g)
- Size: . . . . . 1.7 in. High x 4.0 in. diameter (81 mm x 102 mm)
- Construction: . . . . . Flame retardant white thermo plastic
- Temperature: . . . . . 32 °F to 120 °F (0 °C to 49 °C)
- Humidity Range: . . . . . 10-93% RH (non-condensing)
- Maximum Air Velocity: . . . . . 1200 feet per minute (6 meters per second)

### 1151 IONIZATION SMOKE DETECTOR WITH BASE



### B110LP OPTIONAL NFPA CLASS “A” WIRING



## Technical Information (Continued)

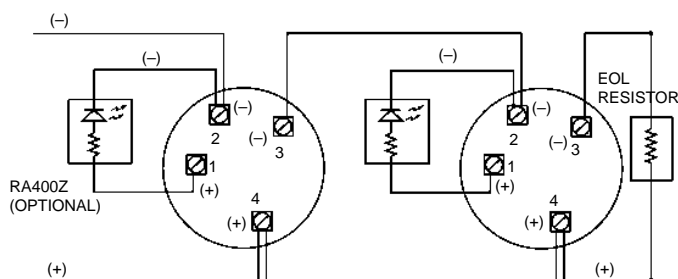
Base Model	Loop Type	Current Limit Resistor	Contact Type	Standby Voltage	Current Draw on Alarm
B110LP	2-Wire	No	—	12-24 VDC	10-100 mA*
B401	2-Wire	No	—	12-24 VDC	10-100 mA*
B401B	2-Wire	No	—	8.5-35 VDC	10-100 mA*
B401BR-750	2-Wire	Yes	—	17-32 VDC	10-39 mA
B402B	2/4 Wire	Yes	Form A/C	17-32 VDC	14-39 mA

\* Limited by control unit

### Detector Base/Control Unit Compatibility

Detector Base (Part No.)	AUTOPULSE 1000, 2000, 3000, 4000	AUTOPULSE FOUR	AUTOPULSE 442R, 442D	AUTOPULSE IQ-301 MMX-2
B110LP (430025)	No	No	Yes	Yes
B401 (423026)	No	No	Yes	Yes
B401B (417996)	No	No	Yes	Yes
B401BR-750 (78997)	Yes	Yes	No	No
B402B (79011)	2 or 4 wire	2 or 4 wire	4-wire only	4-wire only

### B110LP BASE WIRING DIAGRAM



### Listings and Approvals\*

UL..... S911  
 California State Fire Marshal (CSFM)..... 7271-1209:157  
 Factory Mutual Research Corporation (FMRC) ... Approved  
 MEA..... 205-94-E

\* Listings and Approvals are under SYSTEM SENSOR

### Ordering Information

Part No.	Description	Shipping Weight	
		lb.	(kg)
430024	1151, Ionization Detector	1	(0.4)
430025	B110LP Standard Base	0.5	(0.2)
430026	B401 4 in. Dia Base	0.5	(0.2)
428138	F110 Trim Ring, Low Profile	0.5	(0.2)
73887	MOD400R Sensitivity Tester	0.5	(0.2)
417671	RA400Z Remote LED Annunciator	2	(0.9)
417675	M02-04 Test Magnet	0.5	(0.2)
417699	EOL, Power Supervision Relay	1	(0.4)

ANSUL and AUTOPULSE are registered trademarks.

### Mounting Guidelines

The detector bases are designed for surface mounting. The detector head can be inserted or removed from the base without disrupting the wiring connections.

All detector bases can be mounted to a 3 1/2 in. octagon, 4 in. octagon, or a 4 in. square outlet box.