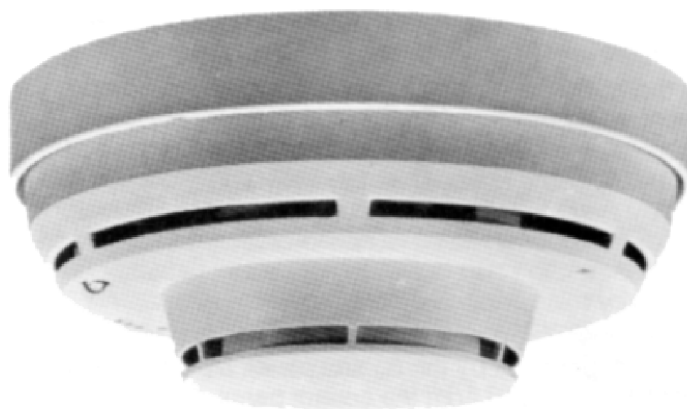


ID-60 SERIES

Intelligent Initiating Devices & Ionization Smoke Detectors for MXL and IXL Control Panels

ENGINEER AND ARCHITECT SPECIFICATIONS

- ID-60I, ID-60IA, ID-60IB
- Custom Microcomputer Chip Technology
- Innovative Technology Supports Intricate System and Detector Communication
- Dynamic Supervision
- Remote Sensitivity Adjustment and Measurement Capability
- LED Pulses Only During Alarm
- Two-Wire Operation
- **SensorLINK**, FPI-32 Programs and Verifies Detector's Address and Tests Detector's Functionality
- Electronic Address Programming is Easier and More Dependable
-  Listed, ULC Listed, NYMEA, FM, CSFM and City of Chicago Approved



Introduction

Cerberus Pyrotronics ID-60I, ID-60IA and ID-60IB intelligent ionization smoke detectors provide the market's most advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. Each ID-60 Series ionization detector incorporates a microcomputer chip. The ID-60 Series microcomputer chip technology, and its sophisticated bi-directional communication capabilities with the control panel, achieves the state of an "Intelligent Initiating Device."

Cerberus Pyrotronics' innovative technology also allows all ID-60 Series intelligent ionization detectors to be programmed by using **SensorLINK**, the Model FPI-32 Programmer/Tester. The FPI-32 Programmer/Tester is a compact, portable, menu driven accessory which makes programming and testing a detection device faster, easier and more dependable than previous methods. The FPI-32 eliminates the need for mechanical addressing mechanisms, such as program jumpers, dipswitches or rotary

dials, because the FPI-32 assigns the ID-60 Series detector's address into the detector's microcomputer chip non-volatile memory. Vibration, corrosion and other conditions which deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The ID-60 Series ionization detectors operate with either the IXL, MXL or the XL3 control panel.

All ID-60 intelligent ionization detectors are Underwriters Laboratories, Inc. and ULC Listed.

Description

The ID-60I, ID-60IA and ID-60IB are plug-in, two-wire ionization detectors, compatible with either the MXL, XL3, or IXL (ICon) control panel. Each ID-60 Series ionization detectors consists of self-compensating dual ionization chambers, custom microcomputer chip technology and highly stable solid state electronic circuitry.

The outer chamber of the detector's self-compensating dual ionization chambers detects the presence of products of combustion. The inner chamber serves as a reference to stabilize the detector's sensitivity to gradual changes in

environment conditions. Also, the detector's microcomputer chip software compensates for ambient temperature changes. As a result, temperature and humidity changes have a minimal effect on the detector's sensitivity within the detector's specified operating range.

The detector's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information such as assigned alarm and trouble threshold values. In addition, the ID-60 Series detectors, using their microcomputer chip, can communicate in either of two protocols. One protocol type is used when the ID-60 Series detectors communicate with the IXL or MXL control panels and other protocol is used for XL3 communication.

If the ID-60 Series detectors are linked to an MXL or IXL (Icon) panel, whether the detector's operating status is normal or in trouble depends upon the difference between the alarm threshold value stored in the detector's memory and the detector's analog value. The detector then communicates its operating status to the control panel. In addition, the MXL periodically obtains the signal of the detector's analog value. When the MXL determines that the detector's analog values indicate excessive dust build-up, the MXL informs the user that the particular detector requires maintenance.

When the ID-60 Series ionization detector's alarm condition is confirmed by the control panel, the LED blinks and continues blinking until the system is reset at the control panel. Also, any user defined system alarm function and control by event functions are activated when the detector goes into alarm. Each ID-60 Series ionization detector is capable of operating one I Series remote alarm indicator or one auxiliary relay or one audible base.

Detector sensitivity, calibration and identification are dynamically supervised by the control panel. Detector sensitivity can be changed from the control panel.

A **SensorLINK**, Model FPI-32 Programmer/Tester is used to program and verify the detector's address. The user selects the Program Mode to enter the desired address. The FPI-32 Programmer/Tester then automatically sets and verifies the address as well as tests the detector. The FPI-32 has rechargeable batteries, so a detector's address can be programmed by the user from the most convenient location. The user can also separately test the detector for functionality. When the user selects the Test Mode, a series of tests are automatically conducted and the user is informed whether the detector has passed or failed.

The ID-60I Series are fully compatible on the same MXL circuit with other ID-60 Series detectors. MSI Series manual stations, TRI-60 Series interfaces or the CZM Series addressable conventional zone modules. The ID-60I Series are fully compatible on the same IXL (Icon) circuit with other ID-60 Series detectors, MSI manual stations and TRI-60 interface modules. The ID-60I Series are also fully compatible on the same XL3 circuit with all X Series detectors, manual stations or interfaces modules.

The ID-60I Series detectors use a low profile, surface mounting base, Model DB-3S which mounts to a 4 inch octagonal, square or single gang electrical box. Relay base Model DB-X3RS mounts to a 4 inch square deep electrical box. Audible base Model ADBI-60 also mounts to a 4 inch square deep electrical box. When a 4 inch square or 4 inch square deep box is used, an optional finish ring for these bases is available, Model RA-ADB.

The DB-3S, DB-X3RS and ADBI-60 bases use screw-clamp terminals for all electrical connections and self-wiping contacts for reliability. The bases also contain a provision for an optional concealed locking mechanism to prevent unauthorized removal of the detector head, Model DB-LK.

The ID-60 Series ionization detectors are designed to meet a wide range of system design parameters. The ID-60I is designed to be used in areas which have minimal air velocities of up to 300 ft./min. The ID-60IA is designed for open area protection and plenum protection where the air velocity is 0-1200 ft./min., such as, under floor areas in computer rooms. The ID-60IA has a specially designed internal chamber cover to provide the detector with the stable operation needed for this type of service.

The ID-60IB is designed specifically for use with Cerberus Pyrotronics AD-3I or AD-3XRI air duct detector housings, and, like the ID-60IA, contains a specially designed internal chamber cover. The ID-60IB must be used with the AD-3I or AD-3XRI air duct detector housings in air duct applications with air velocities of 500-4000 ft./min.

The ID-60I, ID-60IA and ID-60IB are also available for use in high altitude applications (3000 to 8000 feet above sea level) designated as model numbers ID-60IH, ID-60IAH and ID-60IBH.

This equipment is approved for operation over the temperature range of 0°C and 38°C.

Application Data

An XL3's INX input module contains four circuits, with each circuit capable of supporting up to thirty ID-60 Series intelligent ionization detectors. The MXL uses ALD loop circuits with each circuit capable of supporting up to sixty ID-60 Series ionization detectors. The IXL uses an Icon Module and each Icon module is capable of supporting sixty ID-60 Series intelligent ionization detectors.

The ID-60 ionization detectors are applicable to the maximum 30 foot center spacing (900 sq. ft.) as referred to in the National Fire Protection Association Standard 72. This, however, is based on ideal conditions, namely, smooth ceiling, no air movement and no physical obstructions between the fire source and the detector. This spacing should be used as a guide or a starting point in detector installation layout. Do not mount detectors in areas close to ventilation or air conditioning outlets. Exposed joists or beamed ceilings may also affect safe spacing limitations for detectors. It is mandatory that

engineering judgment be applied regarding detector locations and spacing. Should questions arise regarding detector placement, follow NFPA 72 guidelines.

The detector, or group of detectors, require a two-wire circuit of minimum 18 AWG thermoplastic fixture wire enclosed in conduit, or minimum 18 AWG, limited energy, shielded cable without conduit if permitted by local building codes. Wiring should conform to local and National Electrical Codes, and to the control panel's wiring specifications. T-tapping is permitted only for Style 4 (Class B) wiring.

Engineer and Architect Specifications

The addressable ionization detector shall incorporate a custom microprocessor based integrated circuit which shall provide communication with its compatible control panel. All of the detector's communication circuits shall be contained within the detector. No communication electronics or address identification mechanisms shall be contained within the detector's base. The detector shall be a Cerberus Pyrotronics ID-60 Series ionization detector which shall be compatible with either a Cerberus Pyrotronics XL3, MXL or IXL control panel. The ionization detector shall be a plug-in unit which mounts to a twist-lock base. The detector shall operate on a two-wire circuit and shall contain an LED indicator which shall blink to signal alarm actuation. The detector shall be Underwriter's Laboratories, Inc., listed.

The detector shall contain two ionization chambers and a LED alarm indicator. The reference chamber and the microcomputer chip's software shall compensate against sensitivity changes caused by environmental factors such as temperature, humidity and barometric pressure.

The detector's address shall be programmed with the use of a portable programming accessory. The programming accessory shall be a Cerberus Pyrotronics FPI-32 Programmer/Tester. The portable programmer shall be menu driven. Once the desired address is entered, the programmer shall set and verify the address. The programming accessory shall also be capable of testing the detector's functionality. The detector's address shall be set by electronic means only. No mechanical means such as programming pins, dipswitches or rotary dials shall be required to set the detector's address.

The detector shall be capable of bi-directional communication with the control panel.

The detector shall be dynamically supervised and uniquely identifiable by the control panel. The control panel shall be capable of analyzing the signal for the detector's analog value for calibration, identification and sensitivity. These values can be displayed by the control panel instructions. The detector's sensitivity shall be individually adjustable from the control panel. Should the detector sensitivity voltage shift beyond an acceptable level and stay there for a pre-determined length of time, a discrete detector trouble signal shall be annunciated at the control panel.

The detector shall be compatible on the same MXL circuit with all other Cerberus Pyrotronics "I" Series, manual stations, TRI Series interface modules, or CZM Series addressable conventional zone modules. The detector shall be compatible on the same IXL circuit with all other "I" Series detectors, manual stations, or TRI interface modules.

The detector shall be capable of operating one remote alarm indicator or auxiliary relay or audible base. The relay or remote alarm indicator is normally activated by the associated detector. However, the MXL or XL3 system shall be capable of being programmed to operate the relay or remote alarm indicator independently of the associated detector. All detectors and/or relays connected to the initiating circuit can be in alarm or activated simultaneously.

The addressable ionization detectors shall insert into the standard Model DB-3S base or the ADBI-60 audible base or the DB-X3RS relay base. The base assembly in which the detector is installed shall be of the twist-lock design with screw-clamp terminals. The base shall use self-wiping contacts and shall accept other compatible plug-in detectors. A locking mechanism shall be installed in those areas where tamper resistant installation is required.

The detector shall be the Cerberus Pyrotronics ID-60I for applications which have minimal air flow (0-300 ft./min.), the ID-60IA for applications with high air velocity (0-1200 ft./min.), or the ID-60IB for applications that involve air ducts and the use of the AD-3I or AD-3XRI air duct detector housings.

The detector shall also be available for applications in altitudes of 3000 to 8000 feet above sea level if desired. In this application the detector shall be the Model ID-60IH, ID-60IAH or ID-60IBH.

Technical Specifications

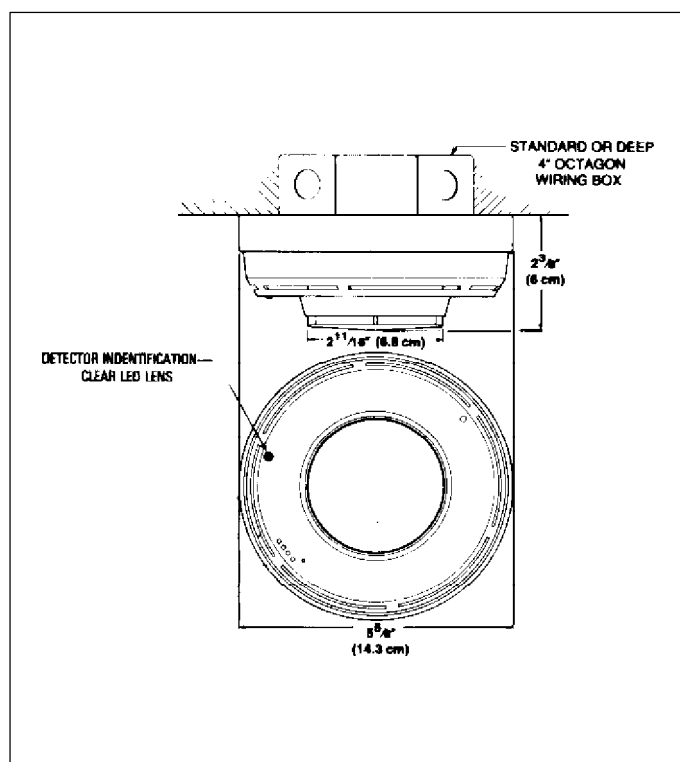
Current Requirements:	Normal — 500uA Typical Alarm — 550uA Typical
Voltage Range:	*16 VDC-25 VDC Peak pulsed voltage
Operating Temperature:	+32°F (0°C) to +100°F (38°C) Per UL 268/268A
Humidity:	0-93% Relative Humidity, Non-Condensating
Air Velocity:	0-300 ft./min. Model ID-60I 0-1200 ft./min. Model ID-60IA 500-4000 ft./min. Model ID-60IB (requires air duct housing)

*The voltage applied to the detector assumes several different DC voltage levels which change continuously with time.

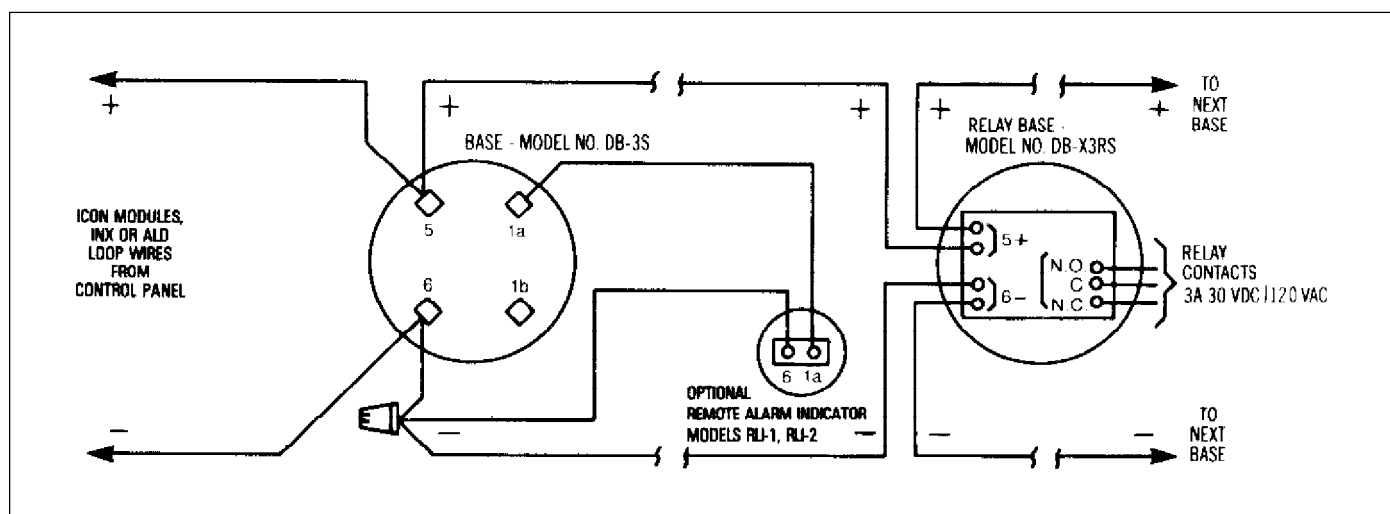
Ordering Information

Model	Description	Shipping Wt.	
		Lb.	Kg.
ID-60I	Addressable ionization detector air flow (0-300 ft./min.)	1	.45
ID-60IH	Addressable ionization detector air flow (0-300 ft./min.) High altitude (3000-8000 ft.)	1	.45
ID-60IA	Addressable ionization detector air flow (0-1200 ft./min.)	1	.45
ID-60IAH	Addressable ionization detector air flow (0-1200 ft./min.) High altitude (3000-8000 ft.)	1	.45
ID-60IB	Addressable ionization detector air duct use only (with AD-3I or AD-3XRI)	1	.45
ID-60IBH	Addressable ionization detector air duct use only (with AD-3I or AD-3XRI) High altitude (3000-8000 ft.)	1	.45
DB-3S	Low profile surface mount base	1	.45
DB-3XRS	Mounting base with relay	1	.45
ADBI-60	"I" Series audible base	1	.45
DB-LK	Locking kit for D-3S, DB-X3RS and ADB-X3	.5	.22
RAD-ADB	Optional finish ring for boxes	.2	.1
RLI-1	Remote alarm indicator (for 4" octagon box mounting)	1	.45
RLI-2	Remote alarm indicator (for switch box mounting)	1	.45
AD-3I	Air duct detector	1	.45
AD-3XRI	Air duct detector	1	.45

Mounting Data



Wiring Diagram — Style 4 (Class B)



NOTICE: The use of other than Cerberus Pyrotronics detectors and bases with Cerberus Pyrotronics control equipment will be considered a misapplication of Cerberus Pyrotronics equipment and as such void all warranties either expressed or implied with regards to loss, damage, liabilities and/or service problems.



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