CERBERUS
PYROTRONICS

ILT Series

Intelligent Thermal Detectors for IXL, MXL, and XL3 Control Panels

INTRODUCTION

Cerberus Pyrotronics ILT-1 intelligent thermal detectors provide an advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. The ILT-1 detectors are supplied with a 135°F, rate compensation/fixed temperature sensor. The ILT Series microcomputer chip technology, and its sophisticated bi-directional communication capabilities with the control panel, achieves the state of an Intelligent Initiating Device.

The ILT Series intelligent thermal detectors are compatible with Cerberus Pyrotronics SensorLINK FPI-32 field programmer/tester. The FPI-32 is a compact, portable, menu-driven accessory which makes programming and testing detectors faster, easier and more reliable than other methods. The FPI-32 eliminates the need for cumbersome, unreliable mechanical programming methods and reduces installation and service costs by electronically programming addresses and functionally testing the ILT's performance before the detector is installed.

The ILT-1 thermal detector operates with either the IXL, MXL or the XL3 control panel.

All ILT intelligent thermal detectors are UL listed.

DESCRIPTION

The ILT-1 is a plug-in, two-wire thermal detector, compatible with either the IXL (ICON), MXL or XL3 control panel. Each ILT-1 has microcomputer chip technology and highly stable solid state electronic circuitry.

The ILT Series thermal detector consists of a rate compensation/fixed temperature 135°F rated sensor. The sensor consists of an aluminum tubular shell containing two curved expansion struts under compression which are fitted with a pair of normally open, opposed, contact points. The contact points are insulated from the shell. The tubular shell and struts have different coefficients of expansion. When subjected to a rapid heat rise, the tubular shell expands and lengthens slightly. At the same time, the interior struts lengthen but at a slower rate than the shell.
An 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 ILT-1 Series detectors, using their microcomputer chip, can communicate in either of two protocols. One protocol type is used when the ILT-1 Series detectors communicate with the IXL (ICON) and MXL control panel and the other protocol is used for XL3 communication.

When the ILT-1 thermal detector is in alarm, the LED blinks and continues blinking until the system is reset at the control panel. Also, any user-defined system alarm functions and control by event functions are activated when the detector goes into alarm.

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The ILT-1 Series detector is compatible on the same MXL or XL3 initiating circuit with other Cerberus Pyrotronics IL Series or ID-60 Series addressable ionization or photoelectric detectors, X Series addressable thermal detectors, MSI or MSX Series addressable manual stations, TRI or TRX Series addressable interfaces, or CZM Series addressable conventional zone modules. The ILT-1 Series detector is compatible on the same IXL (ICON) circuit with other IL Series detectors, MSI Series manual stations and TRI Series interfaces.

Each ILT Series thermal detector is capable of operating one 1 Series remote alarm indicator or auxiliary relay or audible base. The ILT-1 detectors use a surface mounting base, Model DB-3S, which mounts on 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, and the DB-X3RS and ADBI-60 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.

### Application Data

An XL3’s INX input module contains four initiating circuits, with each circuit capable of supporting up to thirty ILT Series intelligent thermal detectors. The MXL uses ALD loop circuits and the IXL and ICON loop circuits, with each circuit capable of supporting up to sixty ILT Series intelligent detectors.

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 thermal 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 head. No communication electronics or address identification mechanisms shall be contained within the detector’s base. The detector shall be a Cerberus Pyrotronics ILT thermal detector which shall be compatible with either a Cerberus Pyrotronics XL3 or MXL or IXL (ICON) control panel. The thermal detector shall consist of a rate compensation/fixed temperature 135°F rated sensor.

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, dip switches 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 detectors shall be compatible on the same XL3 or MXL initiating circuit with other Cerberus Pyrotronics ID-60 Series, ILT Series or X Series addressable ionization or photoelectric detectors, X Series addressable thermal detectors, MSI or MSX Series addressable manual stations, TRI or TRX Series addressable interfaces, or CZM Series addressable conventional zone modules. The
detectors shall be compatible on the same IXL (ICON) initiating circuit with other Cerberus Pyrotronics ILT Series detectors, IL Series, MSI manual stations, or TRI Series interfaces.

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 XL3 or MXL 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 thermal detectors shall insert into the standard Model DB-3S base or the DB-X3RS relay base or the ADBI-60 audible 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.

**Technical Specifications**

**Current Requirements**
- Normal 1.4mA typical

**Humidity**
- 0-3 Relative Humidity, Non-condensating

**Ordering Information**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tr>
<td></td>
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<tr>
<td>ILT-1</td>
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<td>DB-3S</td>
<td>Low Profile Mounting Base</td>
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<td>DB-X3RS</td>
<td>Mounting Base with Relay</td>
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<td>ADBI-60</td>
<td>I Series Audible Base</td>
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<td>RLI-1</td>
<td>Remote Alarm Indicator (for 4 Octagon Box Mounting)</td>
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<td>RLI-2</td>
<td>Remote Alarm Indicator (for Switch Box Mounting)</td>
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<td>Series 3 Base Locking Kit</td>
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<td>RA-ADB</td>
<td>Optional Finish Ring for Bases</td>
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**Typical Wiring Diagram - Style 4 (Class B)**

![Typical Wiring Diagram - Style 4 (Class B)](image)
Mounting Data

**NOTICE:** The use of other than Cerberus Pyrotronics detectors and bases with Cerberus Pyrotronics 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.