


## FPT-11

### Intelligent Thermal Detector for MXL, MXL-IQ and MXLV Control Panels

#### ENGINEER AND ARCHITECT SPECIFICATIONS

##### FPT-11

- Microprocessor Based Design
- Rate of Rise and Fixed Temperature
- Innovative Technology Provides High Speed, Fault Tolerant System/Detector Communications
- Multi-Color Detector Status LED
- Optional Fully Programmable Relay Base and Audible Base
- Two-Wire Operation
- Backward Compatible with Older MXL Systems (Rev 2 and Above)
- Compatible with DPU or FPI-32 Field Programmer/Tester
-  Listed, ULC Listed  
CSFM, FM, NYMEA Approved



### Introduction

The FPT-11 intelligent thermal detector provides an advanced method of detection, address programming and supervision, combined with sophisticated control panel communication. The FPT-11 detector uses a state-of-the-art thermistor providing 135°F fixed temperature and 15° per minute rate-of-rise alarm points. The user also has the option of disabling the rate-of-rise feature leaving just a fixed temperature sensor.

The FPT-11 intelligent thermal detector is compatible with the DPU and FPI-32 field programmer/testers. These testers are compact, portable, menu-driven accessories which make programming and testing detectors faster, easier and more reliable than other methods. They eliminate the need for cumbersome, unreliable mechanical programming methods and reduce installation and service costs by electronically programming addresses and functionally testing the FPT-11's performance before the detector is installed.

The FPT-11 thermal detector operates with the MXL family of control panels including MXL, MXL-IQ and MXLV.

The FPT-11 intelligent thermal detector is Underwriters Laboratory listed and Underwriters Laboratory of Canada listed.

### Description

The FPT-11 is a plug-in, two-wire thermal detector, compatible with the MXL family of control panels. Each FPT-11 has microcomputer chip technology and highly stable solid state electronic circuitry.

The FPT-11 utilizes a modern, accurate, shock-resistant thermistor to sense temperature changes. This electronic sensing method virtually eliminates thermal lag associated with mechanical temperature sensing devices and provides almost instantaneous temperature information to the control panel. The FPT-11, in its default mode, is a combination 135°F fixed temperature and 15° per minute, rate-of-rise detector. It can be programmed from the control panel as a fixed temperature detector without rate-of-rise, at the users option.

The FPT-11 detector's microprocessor uses an integral EEPROM to store the detector's address. Communications within the detector itself and between the FPT-11 and the control panel, or with the FPI-32 field programmer/tester, are supervised and safeguarded against disruption by reliable, microprocessor based error checking routines. Additionally, the microprocessor supervises all EEPROM memory locations and provides a high degree of EEPROM failure fault tolerance.

The FPT-11 is listed as a self-testing device. The FPT-11's visible light emitting diode (LED) flashes green every 4 seconds to indicate it is communicating with the control panel and that it has passed its internal self-test. Should the detector sense a fault or failure within its systems, the LED will flash amber and the detector will transmit that information to the control panel. A quick visual inspection is sufficient to indicate the condition of the detector at any time. If more detailed information is required, a printed report can be provided from the MXL panel indicating the status and settings assigned to each individual detector.

When the FPT-11 moves to the alarm mode, it will flash amber and transmit that information to the control panel. When the MXL(V) confirms the detectors condition, the panel will instruct the FPT-11 to flash red and to continue flashing until the system is reset at the control panel. At that same time, any user defined system alarm functions programmed into the system are activated. Each FPT-11 detector can operate one remote alarm indicator, one auxiliary relay, or one audible base; but only one accessory per detector.

A DPU or 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 programmer/tester then automatically sets and verifies the address as well as tests the detector. The programmer/tester 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 FPT-11 detector is compatible on the same MXL initiating circuit with other IL Series, FP Series or ID-60 Series addressable ionization, photoelectric, or thermal detectors, MSI addressable manual stations, TRI Series addressable interfaces, or CZM Series addressable conventional zone modules.

Each FPT-11 thermal detector is capable of operating one "X" or "I" Series remote alarm indicator or auxiliary relay or audible base. The FPT-11 detectors use a surface mounting base, Model DB-11, which mounts on a 4-inch octagonal, square or single gang electrical box. Relay base Model DB-X11RS mounts to a 4-inch square deep electrical box. Audible base Model ADBX-11 also mounts to a 4-inch square deep electrical box.

The DB-11, and the DB-X11RS and ADBX-11 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 LK-11.

## Application Data

The MXL uses ALD loop circuits with each circuit capable of supporting up to sixty FPT-11 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.

Locate the FPT-11 on the ceiling, at least 4 inches from the side walls. For an ideal, smooth ceiling condition, place the detectors at a maximum center spacing of 50 feet (2500 square feet), 25 feet from side walls or room partitions.

Actual job conditions and sound engineering judgment must determine detector spacing. Consider environmental factors including ambient temperature fluctuation, and the nature of the fire hazard. Room or area configuration and ceiling type (sloped or flat, smooth or beamed) also dictates placement.

Should questions arise regarding detector placement, follow the drawings provided and/or approved by Siemens Building Technologies, Fire Safety Division or by its authorized distributors. This is extremely important! The detector placements shown on these drawings were chosen after a careful evaluation of the area being protected. Fire Safety's extensive experience in design of the system assures the best detector placement by following these drawings.

## Technical Specifications

**Current Requirements:** Normal 750  $\mu$ a  
Alarm 750  $\mu$ a

**Operating Temperatures:** +32°F (0°C) to  
100°F (38°C)

**Humidity:** 0-93% Relative Humidity  
Non-condensating

## Ordering Information

Model	Description	Part No.
FPT-11	Addressable Thermal Fire Detector	500-095918
DB-11	Detector Mounting Base for Series 11	500-094151
DB-11E	Small 4.5 inch Diameter Detector Base	500-094151E
DB-X11RS	Relay Base for Series 11 Intelligent Detectors	500-096125
ADBX-11	Audible Base for Series 11 Intelligent Detector	500-096181
RLI-1	Remote (red) alarm indicator-octagon box mount	500-390673
RLI-2	Remote (red) alarm indicator-single gang box mount	500-695350
LK-11	Base Locking Kit for Series 11	500-695350
DB-ADPT	Base Adapter to DB-3S Base	500-094187
<b>In Canada Order:</b>		
FPT-11C	Addressable Thermal Fire Detector (ULC)	500-095918C
DB-11C	Detector Mounting Base for Series 11(ULC)	500-095687
DB-X11RSC	Relay Base for Series 11 Intelligent Detectors (ULC)	500-096125C
ADBX-11C	Audible Base for Series 11 Intelligent Detector (ULC)	500-096181C

## Dimensions

