


**Models 8710, 8712, 8713 (FireSmart™) X1 Series Detectors****Features****Intelligent Detectors for use with MPC 6000 and 7000 Control Panels**

- Three models available Photo (8710), Photo-Thermal (8713) and 135°F Thermal, fixed and rate of rise (8712)
- High-Speed, Fault-Tolerant Communication
- Multi-color status L.E.D (green, amber, red)
- Field cleanable photo chamber
- Electronic addressing with field programmer model 8720
- Mounts in standard 8853 Series Base
- Low Profile Design
- Optional fully programmable relay base, audible base and duct housing
- Two Wire Operation
-  UL Listed, CSFM, NYMEA and FM Approved

**Introduction**

The 8710 and 8713 intelligent photoelectric smoke detectors provide reliable smoke detection to meet today's critical life safety and property protection needs. The FireSmart series of detectors provide an extremely high degree of resistance to RFI, EMI and humidity. The FireSmart series detector utilizes a microprocessor with "on-board" EEPROM supporting the detectors sophisticated programming, error checking and self-diagnostic capabilities.

The 8710 is an intelligent smoke detector, the 8713 is a smoke detector with thermal assist, and the 8712 is a heat detector. The thermal sensors respond at 135°F. These devices are designed for use with the MPC-6000 and 7000 control panels and use the 8853 detector base.

**Description**

The 8710, 8712 and 8713 are two-wire, plug-in detectors that are compatible with the MPC-6000 and 7000 control panels. Each 8710 and 8713 have a dust resistant, field cleanable photo chamber and microprocessor based electronics. The 8712 and 8713 utilize a state-of-the-art thermistor for heat sensing. All detectors have low profile, high-temperature plastic covers for maximum protection of components and use surface mount electronic components for increased reliability. Every smoke detector is shipped with a red protective dust cover.



Smoke detectors utilize an infrared light emitting diode (IRLED) and a light sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern. The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the chamber, light emitted from the IRLED is scattered by the smoke particles and is received by the photodiode.

When an alarm condition occurs, the detector "latches" in alarm and informed the control panel of its status. The detector is reset upon command from the control panel. The control panel also sets the detector's sensitivity.

Every time the control panel polls the detector, the multi-color LED will flash green to indicate that it has passed the internal self test and has communicated its status to the control panel. If the detector does not pass the self test, is dirty beyond the limits of its environmental compensation, or is in "trouble" in any way, the LED flashes amber and informs the panel of its status, allowing for easy identification of which detector is in trouble. When in alarm, the detector LED flashes red.

Detectors are assigned their address using the 8720 Field Programmer/Tester, which electronically stores address information in the detectors non-volatile memory. The 8720 can also be used for device testing and diagnostics.

The FireSmart series detectors can be on the same circuit as other 8700 series initiating devices such as manual stations, TRI Monitoring/Relay Modules, etc. Detectors are mounted in the standard 8853 or 8716 Relay Base, 8715 Audible Base, or 8840/8717 Duct Housing. Use the standard 8727C or 8727W (red) Remote Lamps when remote annunciation is required.

Smoke detectors are field cleanable per the instructions included on the installation sheet provided with the product. X1 series detectors are UL listed for operation within the standard UL specified temperature range of 32 to 100 degrees F (0 to 38 degrees C).

### Application Data

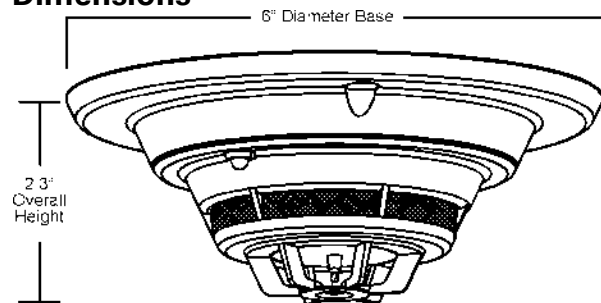
Installation of X1 series detectors require detector bases 8853, 8715, 8716, or 8840.

The 8710 and 8713 detectors can be applied within a maximum 30-foot center spacing (900 square foot area) as referenced in NFPA 72. This applications guideline is based on ideal conditions; specifically, smooth ceiling surfaces, minimal air movement and no physical obstructions between potential fire sources and the detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joints or beamed

ceilings may also affect safe spacing limitations of detectors. Should any questions arise regarding detector placement, observe NFPA 72 guidelines. Locating in close proximity to "noisy" electronic light ballasts or other sources of high level EMI or RFI should be avoided.

Good fire protection system engineering and common sense dictate how and when fire detection devices are installed and used. Contact your local Faraday authorized sales outlet whenever you need assistance applying these devices. Be sure to follow NFPA guidelines, the UL approved installation instructions provided with the product and local codes, as with any other fire protection equipment.

### Dimensions



### Technical Specifications

#### Operating Temperature

+32°F (0°C) to 100°F (38°C) per UL 269/268A

#### Humidity

0-93% Relative Humidity Non-Condensing

#### Current Draw

1 mA in alarm or stand-by mode

### Ordering Information

Model	Description	Part No.
8710	Photoelectric Detector	500-034800FA
8713	Photo-Thermal Detector (FireSmart™)	500-033290FA
8712	135°F Fixed Thermal Detector	500-033380FA
8715	Audible Base	500-033210FA
8853	Detector Base	500-094151FA
8840	Air Duct Housing	500-095656FA
8717	Air Duct Housing with Relay	500-033280FA
8716	Relay Base	500-033220FA
8727W	Remote Lamp (red) for 4" octagon box	500-033310FA
8727C	Remote Lamp (red) for single gang box	500-033230FA
8720	Field Programmer	500-033260FA
8846	Detector base lock (Pkg. of 50)	500-695350FA



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**WARNING** - The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information, are provided with the product and are available from the Manufacturer. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.