

Because Lives, Property and Businesses aren't Fireproof.



Series 521B

Low Profile, Self-Diagnostic, Two-Wire, Photoelectric Smoke Detector with CleanMe®

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Features

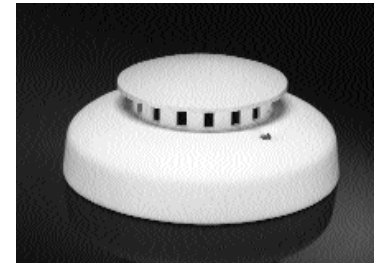
- CleanMe® - remote maintenance reporting reduces false alarms
- Smart dual fixed/rate of rise heats work with photo chamber to catch fires faster
- Built-in drift compensation reduces false alarms
- Field replaceable optical chamber makes servicing a snap
- Small, low profile design blends in with any environment
- CleanMe® compatible control panels - Harrington Signal Inc. HS-2402 SENSESMART

Applications

The Harrington 521B Series self-diagnostic, two-wire smoke detectors are the industry's first conventional direct-wire smoke detectors with analog features such as remote maintenance / trouble reporting CleanMe®, drift

compensation, and multi-criteria detection.

The 521B Series continually monitor their own sensitivity and operational status, and provide a visual and remote trouble condition if they drift out of the sensitivity range or fail internal diagnostics. This meets NFPA 72 field sensitivity testing requirements without the need for external meters. The 521B has a unique feature enabling it to send a signal (CleanMe®) to the Harrington Signal Inc. 505 module (sold separately) when it has drifted outside of its UL Listed sensitivity range or has failed its internal diagnostics test. The 505 is an interface module that will signal any panel via relays when the 521B is dirty. Several control panels have the CleanMe® software built in, eliminating the need for the 505 module. When



Low Profile, Self-Diagnostic, Two-Wire, Photoelectric Smoke detector with CleanMe® 521B

Available Models

Model Number	Part Number	Description
521B	440-2100	2 wire, photoelectric detector, 6-24 VDC with CleanMe® feature. UL Listed. (Use with HS-2402 SENSESMART control panel)
521B-10PK	440-2101	Bulk pack of (10) 521B detectors with 1 set of literature
521BXT	440-2102	2 wire, photoelectric detector, 6-24 VDC with CleanMe® feature and multi-criteria algorithms, fixed/rate of rise heat, UL listed. (use with HS-2402 SENSESMART control panel)
521BXT-10PK	440-2103	Bulk pack of (10) 521BXT detectors with 1 set of literature
521CRXT	440-2104	2 wire, photoelectric detector, 12-24 VDC with auxiliary relay, CleanMe® feature and multi-criteria algorithms, fixed/rate of rise heat, UL listed. (Use with HS-2402 SENSESMART control panel)
Accessories		
505	440-5003	Module that interprets the 521B's SENSESMART signal for panel and can convert 2-wire 521 Series to 4-wire inputs on panel
401	440-5004	Test magnet in plastic shell for pole mounting
SM-200	440-5000	Smoke in a Can® (canned smoke) for functional testing of smoke detectors
211	440-5005	Replacement optical chambers (set of 10)

Example: Model Number Part Number
 521B - 440-2100
 Series

Series 521B

Low Profile, Self-Diagnostic, Two-Wire, Photoelectric Smoke Detector with CleanMe

CleanMe® is not desired, simply leave the switch on the 521B off and it will work as a normal two wire detector. CleanMe® allows the installer time to schedule a service call and avoid a false alarm.

Time between cleaning detectors is dramatically increased because of the 521B's built-in drift compensation. This feature, usually only available in analog systems, allows the detector to automatically adjust its sensitivity over time as it becomes dirty, increasing dust life. And when the 521B has told you that cleaning is necessary, it's literally a snap with ESL's patented field replaceable optical chamber.

The multi-criteria model 521BXT photoelectric smoke detector / fixed rate of rise heat detector includes fast response algorithms for a quick response to both flaming and smoldering fires. Fast response algorithms allow the heat detectors to work intelligently together with the photoelectric smoke detector. As soon as the heat sensor detects a rapid rise in temperature, the sensitivity of the photoelectric sensor increases allowing it to detect smaller particles of combustion faster.

Architect & Engineering Specifications

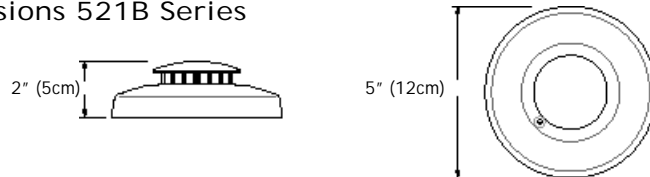
The Harrington Series 521B photoelectric smoke detector is a low-profile, self-diagnostic, two-wire detector that monitors its own sensitivity and operational status. This detector meets NFPA 72 field sensitivity requirements without the need for external meters. Built-in drift compensation automatically adjusts the sensitivity as the detector gets dirty. Normal sensing occurs every 9 seconds. This rate doubles when a signal exceeding the alarm threshold value is sensed. Two

additional successive signals above the threshold level will initiate an alarm.

See installation instructions for information about correct installation and maintenance.

The proprietary optical sensing chamber is field replaceable, allowing quick and easy cleaning and maintenance.

Dimensions 521B Series



Technical

Model Number	Characteristic	Description
521B	Voltage	Dip switch 1 "on" 6.5 - 33 VDC, polarity sensitive Dip switch 1 "off" 8.5 - 33 VDC, polarity sensitive
	Maximum ripple (pk to pk)	10% (V p-p)
	Typical average standby current (24V)	70µA
	Typical alarm current (24V)	up to 60mA max, if not limited by control panel
	Alarm contacts	500mA @ 36 VDC (resistive)
	Aux. Relay contacts	2A @ 30 VDC, 1 A @ 120 VAC
	Sensitivity - photoelectric	3.1% + 0.50 - 1.00%
	Operating temperature	32°F to 100°F (0° to 37°C)
	Operating humidity range	0 to 95% Non-condensing
	RFI Immunity	20 V/m minimum; 0-1000MHz
	Color	White head and base
	Field wiring size	12-24 AWG
	Heat detector specifications	Rate of rise - 15°F/min and > 105°F (8.3°C/min and > 40.6°C)
	UL two-wire compatibility identifier	Dip switch 1 "off" S10A, S11A; 1 "on" S09A
	Drift compensation adjustment	1.0%/ft. maximum
	Detector head dimensions	5" (12 cm) diameter 2" (5 cm) height
	Mounting dimensions	4.75" (12.5 cm) diameter; 0.3" (0.8 cm) height
	Reset time	1 second minimum
	Listings	UL

NOTICE: 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 Harrington Signal Inc. Fire Alarm. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact Harrington Signal Inc. Quality OEM manufactured for Harrington Signal Inc. by ESL. Harrington Signal Inc. Fire Alarm reserves the right to change specifications without notice. CleanMe® is a registered trademark of ESL.