

# J2351 Series

## Addressable Photoelectric Smoke Detectors



The Johnson Controls J2351 Series intelligent plug-in smoke detectors are designed for both performance and aesthetics, and are direct replacements for the 2951J Series. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards.

The J2351 Series detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the J2351T. The J2351R is a remote test capable detector for use with DNR Series duct detector housings. J2351 series detectors are available for both FlashScan® and CLIP applications as designated.

### Features

#### SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring
- Compatible with FlashScan® and CLIP protocol systems
- Stable communication technique with noise immunity

#### ADDRESSING:

- Addressable by device
- Rotary, decimal addressing  
(Refer to the *JCI panel manuals* for device capacity.)

#### ARCHITECTURE:

- Sleek, low-profile, stylish design
- Unique single-source design to respond quickly and dependably to a broad range of fires
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Remote test feature from the panel
- Walk test with address display (an address on 121 will blink the detector LED: 12-[pause]-1(*FlashScan systems only*))
- Built-in functional test switch activated by external magnet
- Removable cover and insect-resistant screen for simple field cleaning
- Expanded color options

#### OPERATION:

- Designed to meet UL 268 7th Edition
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level
- LED "blinks" when the unit is polled (communicating with the fire panel) and latches in alarm.
- Low standby current

#### MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance



- Separate base allows interchange of photoelectric, ionization and thermal sensors

#### OPTIONS:

- Optional relay, isolator, and sounder bases

### Installation

J2351 Series plug-in intelligent smoke detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *JCI-60056*.

**NOTE:** Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring only. When using relay or sounder bases, consult the M500XJ(A) installation sheet 156-1384 for device limitations between isolator modules and isolator bases.

### Construction

These detectors are constructed of fire-resistant plastic. The J2351 Series plug-in intelligent smoke detectors are designed to commercial standards and offer an attractive appearance.

### Operation

Each J2351 Series detector uses one of the panel's addresses (total limit is panel dependent) on the JCI Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The J2351 Series offers features and performance that represent the latest in smoke detector technology.

## Product Line Information

**NOTE:** “-IV” suffix indicates CLIP and FlashScan device.

**J2351:** White, low-profile intelligent photoelectric sensor, FlashScan only

**J2351A:** Same as J2351 but with ULC listing

**J2351-IV:** Ivory, low-profile intelligent photoelectric sensor

**J2351A-IV:** Same as J2351-IV but with ULC listing

**J2351T:** White, same as J2351 but includes a built-in 135°F (57°C) fixed-temperature thermal device, FlashScan only

**J2351TA:** Same as J2351T but with ULC listing

**J2351T-IV:** Ivory, same as J2351T but includes a built-in 135°F (57°C) fixed-temperature thermal device

**J2351TA-IV:** Same as J2351T-IV but with ULC listing

**J2351R:** White, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW, FlashScan only

**J2351RA:** Same as J2351R but with ULC listing, for use with DNRA

**J2351R-IV:** Ivory, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW

**J2351RA-IV:** Same as J2351R-IV but with ULC listing, for use with DNRA

### INTELLIGENT BASES

**NOTE:** For details on intelligent bases, see JCI-60982.

**B300-6:** White, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300-6-IV:** Ivory, 6” base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

**B300A-6:** Same as B300-6, ULC listed

**B300A-6-IV:** Ivory, 6” standard flanged low-profile mounting base, ULC listed

**B300-6-BP:** Bulk pack of B300-6, package contains 10

**B501-WHITE:** White, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-BL:** Black, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-IV:** Ivory color, 4” standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

**B501-WHITE-BP:** Bulk pack of B501-WHITE contains 10

**B224RB-WH:** White, relay base (CSFM: 7300-1653:0216)

**B224RB-IV:** Ivory, relay base (CSFM: 7300-1653:0216)

**B224RBA-WH:** White, relay base, ULC listing

**B224RBA-IV:** Ivory, relay base, ULC listing

**B224BI-WH:** White, isolator detector base (CSFM: 7300-1653:0216)

**B224BI-IV:** Ivory, isolator detector base (CSFM: 7300-1653:0216)

**B224BIA-WH:** White, isolator detector base, ULC listing

**B224BIA-IV:** Ivory, isolator detector base, ULC listing

**B200S-WH:** White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200S-IV:** Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

**B200SA-WH:** Same as B200S-WH, ULC listing

**B200SA-IV:** Same as B200S-IV, ULC listing

**B200SCOA-WH:** White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications)

**B200SCOA-IV:** Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing)

**B200S-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200S-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

**B200SR-WH:** White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SR-IV:** Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

**B200SRA-WH:** Same as B200SR-WH with, ULC listing

**B200SRA-IV:** Same as B200SR-IV in Ivory color, ULC listing

**B200SR-LF-WH:** White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

**B200SR-LF-IV:** Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

### MOUNTING KITS AND ACCESSORIES

**TR300:** White, replacement flange for B210LP(A) base

**TR300-IV:** Ivory, replacement flange for B210LP(A) base

**RA100Z(A):** Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

**M02-04-00:** Test magnet

**M02-09-00:** Test magnet with telescoping handle

**CK300:** Color Kit (includes cover and trim ring), white, 10-pack

**CK300-IV:** Color Kit (includes cover and trim ring), ivory, 10-pack

**CK300-BL:** Color Kit (includes cover and trim ring), black, 10-pack

# SYSTEM SPECIFICATIONS

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## Sensitivity:

- UL Applications: 0.5% to 4.0% per foot obscuration.
- ULC Applications: 0.5% to 3.5% per foot obscuration

**Size:** 2.0" (5.3 cm) high; base determines diameter

- **B300-6:** 6.1" (15.6 cm) diameter
- **B501:** 4" (10.2 cm) diameter

For a complete list of detector bases see JCI-60982.

**Shipping weight:** 3.4 oz. (95 g)

## Operating temperature range:

- J2351: 32°F to 122°F (0°C to 50°C)
- J2351T Series: 32°F to 100°F (0°C to 38°C)
- J2351R Series installed in a DNR/DNRW, -4°F to 158°F (-20°C to 70°C)

**UL/ULC Listed Velocity Range:** 0-4000 ft/min. (1219.2 m/min.), suitable for installation in ducts

**Relative humidity:** 10% – 93% non-condensing

**Thermal ratings:** fixed-temperature set point 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C)

## ELECTRICAL SPECIFICATIONS

**Voltage range:** 15 - 32 volts DC peak

**Standby current (max. avg.):** 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

**Max current:** 4.5 mA @ 24 VDC ("ON")

## DETECTOR SPACING AND APPLICATIONS

Johnson Controls recommends spacing detectors in compliance with NFPA 72. In low airflow applications with smooth ceiling, space detectors 30 feet (9.1m). For specific information regarding detector spacing, placement, and special applications refer to NFPA 72. A *System Smoke Detector Application Guide*, document A05-1003, is available at [systemsensor.com](http://systemsensor.com).

## Listings and Approvals

Listings and approvals below apply to the J2351 Series detectors. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL/ULC Listing: S1948
- FM Approved
- CSFM: 7272-0554:0503

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