JOHNSON CONTROLS

May 24, 2004 JCI-6936

5951J Series

Intelligent Thermal (Heat) Detectors with FlashScan®

GENERAL

Johnson Controls 5951J Series intelligent plug-in smoke detectors with communication provide features that surpass conventional detectors. 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 decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level. **5951J Series thermal detectors** use an innovative thermistor sensing circuit to produce 135°F/57°C fixed-temperature (**5951J**) or rate-of-rise thermal detection (**5951RJ**) in a low-profile package. **5951HJ** provides fixed high-temperature detection at 190°F/88°C. These thermal detectors provide cost effective, intelligent property protection in a variety of applications. The 5951J Series is compatible with the IFC-200, IFC-400, IFC-640, IFC-1010, IFC-2020, and IFC-3030 Fire Alarm Control Panels (FACPs).

FlashScan® *(U.S. Patent 5,539,389)* is a communication protocol developed to greatly enhance the speed of communication between analog intelligent devices and compatible systems. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed ***greater than five times*** that of earlier designs using CLIP communication.

UL LISTED S2375

FM APPROVED

California State Fire Marshal 7270-0554:133

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5951J in B210LPJ base

FEATURES

- Sleek, low-profile, stylish design.
- Addressable-analog communication.
- State-of-the-art thermistor technology for fast response.
- Rate-of-rise model (5951RJ), 15°F (8.3°C) per minute.
- Factory preset at 135°F (57°C); high-temperature model at 190°F (88°C).
- Addressable by device.
- FlashScan® (IFC-640 and IFC-3030) and classic CLIP system (IFC-200, IFC-400, IFC-640, IFC-1010, IFC-2020, and IFC-3030) compatible.
- Rotary, decimal addressing (1 – 99 on current classic systems, 1 – 159 on FlashScan® systems).
- Two-wire SLC connection.
- Visible LEDs "blink" every time the unit is addressed.
- 360°-field viewing angle of the visual alarm indicators (two bicolor LEDs). LEDs blink green in Normal condition and turn on steady red in Alarm.
- Integral communications and built-in device-type identification.
- Remote test feature from the panel.
- Built-in functional test switch activated by external magnet.
- Walk test with address display (an address of 121 will blink the detector LED 12-(pause)-1).
- Low standby current.
- Listed to UL 521.
- Backward-compatible.
- Built-in tamper-resistant feature.
- Designed for direct-surface or electrical-box mounting.
- Sealed against back pressure.
- Plugs into separate base for ease of installation and maintenance. Separate base allows interchange of photoelectric, ionization and thermal sensors.
- SEMS screws for wiring of the separate base.
- Constructed of off-white Bayblend®, designed to commercial standards, and offers an attractive appearance.
- 94-5V plastic flammability rating.
- Remote LED output connection to optional RA400Z remote LED annunciator.
- Optional sounder, relay, and isolator bases.
- Optional recessed (RMK400) or surface (SMK400) base mounting kits.

FlashScan® is a registered trademark of NOTIFIER.
Bayblend® is a registered trademark of Bayer Corporation.

SPECIFICATIONS

Size: 2.1" (5.3 cm) high x 4.1" (10.4 cm) diameter installed in B501J base, 6.1" (15.5 cm) diameter installed in B210LPJ base.

Shipping weight: 4.8 oz. (137 g).

Operating temperature range: ***5951J, 5951RJ:*** –20°C to 38°C (–4°F to 100°F); ***5951HJ:*** –20°C to 66°C (–4°F to 150°F).

Detector spacing: ***UL approved*** for 50 ft. (15.24 m) center to center. ***FM approved*** for 25 x 25 ft. (7.62 x 7.62 m) spacing.

Relative humidity: 10% – 93% noncondensing.

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

JOHNSON CONTROLS
For more information, contact your
Johnson Controls Field Support Center.
507 East Michigan Street, Milwaukee, WI 53202

ELECTRICAL SPECIFICATIONS:

Voltage range: 15 - 32 volts DC peak.

Standby current (max. avg.): 200 µA @ 24 VDC (with no communication enabled); 300 µA @ 24 VDC (one communication every 5 seconds with LED enabled).

LED current (max.): 6.5 mA @ 24 VDC ("ON").

BASES AVAILABLE:

B210LPJ: 6.1" (15.5 cm) diameter.

B501J: 4.1" (10.4 cm) diameter.

B501BH or B501BHT: Sounder base assembly. Includes B501 base.

B224RB Relay Base: ***Screw terminals:*** up to 14 AWG (2.0 mm²). ***Relay type:*** Form-C. ***Rating:*** 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive. ***Dimensions:*** 6.2" (15.748 cm) x 1.2" (3.048 cm).

B224BI Isolator Base: ***Dimensions:*** 6.2" (15.748 cm) x 1.2" (15.748 cm). ***Maximum:*** 25 devices between isolator bases. *See Note 2 under Installation.*

APPLICATIONS

Use thermal detectors for protection of property. For further information, go to **sytemsensor.com** for manual I56-407-00, *Applications Manual for System Smoke Detectors,* which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.

INSTALLATION

The 5951J Series plug-in intelligent thermal detectors use a separate base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector.

Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. Suitable boxes include:

- 4.0" (10.16 cm) square box.
- 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box.
- Single-gang box ***(except** relay or isolator base)*.
- ***B501BH or B501BHT base*** – use a 4.0" (10.16 cm) square box.
- ***B224RB or B224BI base*** – use a 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or a 4.0" (10.16 cm) square box.

NOTES: 1) *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.* ***2)*** *When using* ***relay or sounder bases****, consult materials on M500XJ for device limitations between isolator modules and isolator bases.*

PRODUCT LINE INFORMATION

NOTE: *"A" suffix indicates ULC-Listed model.*

5951J: Intelligent thermal detector. Must be mounted to one of the bases listed below.

5951RJ: Intelligent thermal detector with rate-of-rise feature.

5951HJ: Intelligent high-temperature thermal detector.

Bases:

B210LPJ: Standard U.S. low-profile base.

B501J: Standard European-style flangeless base.

B501BH: Sounder base, includes B501 base.

B501BHT: Same as B501BH, but includes temporal sounder.

B224RB: Intelligent relay base.

B224BI: Intelligent isolator base. Isolates SLC from shorts.

Accessories:

F110: Retrofit replacement flange for B501BJ base. Converts to a B210LPJ base for use with FlashScan® detectors.

RA400Z: Remote LED annunciator. 3 – 32 VDC. Fits U.S. single-gang electrical box. *Supported by B210LPJ and B501J bases only.*

SMK400: Surface mounting kit provides for entry of surface wiring conduit. *For use with B501J base **only**.*

RMK400: Recessed mounting kit. *For use with B501J base **only**.*

BCK-200B: Detector cover kit, black.

SMB600: Surface mounting kit for use with B210LPJ.

M02-04-01: Test magnet.

M02-09-00: Test magnet with telescope stick.

XR2B: Detector removal tool. Allows installation and/or removal of these FlashScan® detector heads from base in high ceiling installations.

T55-127-000: Detector removal tool without pole.

XP-4: Extension pole for XR2B. Comes in three 5-ft. sections.

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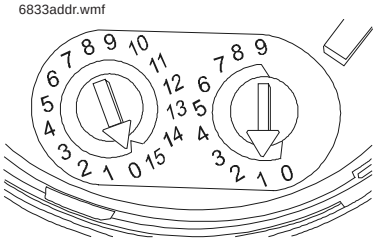
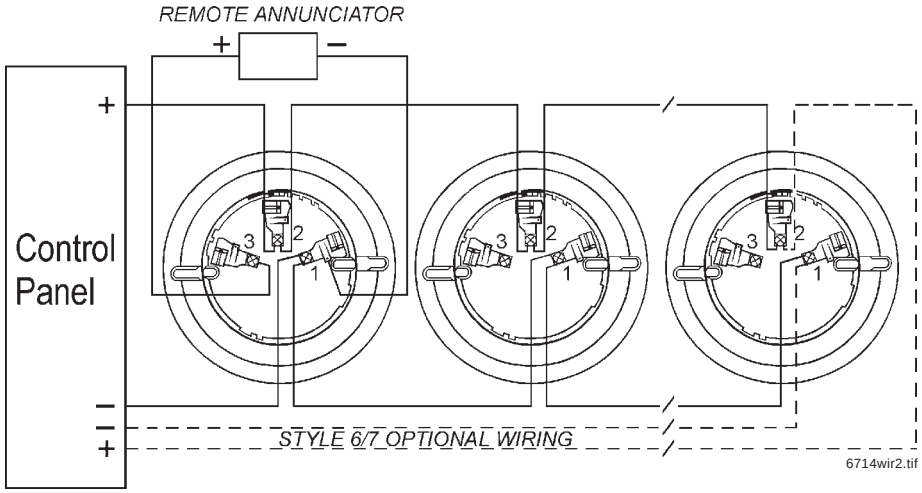


address dial on back of detector

WIRING DIAGRAM



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