Series 700 Intelligent Conventional Fire Detection Range

The 700 Series Intelligent Conventional Fire Detection Range is the first conventional detector range from Johnson Controls that uses algorithms to determine fire conditions more precisely. This provides superior performance and improved false alarm rejection rates.

Through innovative design, the built-in micro-processors in the 700 Series detectors offer built-in drift compensation which extends the life of the detectors, thereby reducing service costs to the customers. Installers only need one fitting to complete the installation.

The 701PH Detector has EN54-29 approval.

Features

- Designed for fast, easy installation
- Low operational voltage
- Available as smoke, fixed heat, RoR heat, and photo heat
- Backward compatibility with 600 series
- Compatible with 4"B-D, 4B and 5B bases
- Low profile and discreet design
- Approval to EN54, LPCB standards
- Improved detection algorithms
- Built-in drift compensation
- EN54 approval

Series 700 Intelligent Conventional Fire Detection Range

General

The 700 series of detectors are microprocessor-based conventional fire detectors. There are five models in the range, which measure certain parameters and respond to them. The parameters monitored are:

- Smoke density
- Fixed temperature
- Rate of temperature rise

The 700 series of detectors are used for conventional 2-wire detection systems, where detectors will normally be connected in zones. Each detector samples the ambient air every five seconds. If a fire condition is detected, a signalling current is drawn from the zone, causing the fire detection panel to provide an alarm response for the affected zone.

Series 700 Conventional Detectors

701P Smoke Detector

The 701P Smoke Detector operates by sensing the optical scatter from smoke particles generated in a fire. These detectors are suitable for general applications and areas where cable overheating may occur, for example, in electrical services areas.

701PH Optical and Heat Detector

The 701PH Optical and Heat Detector is suitable for normal ambient conditions, where the high-performance optical detector behaves as a normal optical detector. Only when a rapid rise in temperature is detected does the sensitivity of the detector increase and the condition change. This is the first conventional detector from Johnson Controls to be certified to the EN54-29 standard for multi-sensors.

70xH Heat Detectors

700 series heat detectors include rate-of-rise and fixed-temperature types. These detect high rates of temperature rises, and high temperatures, 60°C and 90°C, respectively. For general use and where ambient temperatures may be low, the 701H rate-of-rise heat detector may be preferred.

In environments where a sudden change in temperature is normal, such as kitchens and canteens, the slower responsiveness of the 702H or 703H fixed-temperature detectors may be suitable.

Series 700 Intelligent Conventional Fire Detection Range

Technical specifications

Table 2: Performance characteristics

		701P	701PH	701H	702H	703H
Operating voltage	Minimum	10.5 V				
	Typical	24 V				
	Maximum	33 V				
Average quiescent current		50 µA	60 µA	37 µA		
Switch on surge		200 µA maximum				
Stabilisation time		30 s typically				
Alarm current[1]		65 mA @ 30 V				
		35 mA @ 20 V				
		12.5 mA @ 12 V				
Reset voltage		6.9 V				
Reset time		2 s				
Remote LED drive		Pulls low from line positive via a 1k resistor[2]				

Note:

1. Alarm current excluding remote LED current.
2. A drive is provided for a remote indicator connected between the positive supply and the R terminal. Therefore, the polarity of the supply must be known at a detector where a remote indicator is connected.

Series 700 Intelligent Conventional Fire Detection Range

Product Order Codes

516.900.001	701P: Optical smoke detector
516.900.002	701PH: Optical and heat detector
516.900.003	701H: Heat detector - Rate of rise
516.900.004	702H: Heat detector - Fixed 60°C
516.900.005	703H: Heat detector - Fixed 90°C
516.800.908	801 RIL: Remote Indication LED
540.003.006	601 RIL: Remote Indication LED
577.001.035	601SB: Conventional Sounder Base
577.001.037	601SBD: Conventional Diode Sounder Base
568.001.018	MC600: Relay Base
517.050.015	Volume adjustment tool

For more information, visit **www.johnsoncontrols.com** or follow **@johnsoncontrols** on Twitter.

The power behind **your mission**

Johnson Controls