



# AIE-AS

## ANALOGUE IONIZATION SMOKE SENSOR



**Hochiki Provides New, high Quality Sensors. Hochiki's new Ionization Analogue Smoke Sensor supports the newly developed GTP transmission protocol communication. AIE-AS can give a very fast alarm response by means of transmission INTERRUPT of the normal polling thus, priority attention in the event of device activation.**

### Features

1. Quick detection of fire by the Analogue Ionization Smoke Sensor (AIE-AS).
2. AIE has its loop address set between 1 and 127 by a simple solid state programming method. The sensor's address is stored in a nonvolatile memory within the sensor, the address can be changed from the factory default by using a hand-held programmer.
3. The AIE-AS's quick and reliable response results from a dual chamber construction with an inner reference chamber and an outer measurement chamber. Signals are taken from the chamber by measuring the imbalance between both chambers, thus compensating for problems due to environmental conditions.
4. Through fully digital asynchronous communication, the sensor can give a very fast fire alarm by means of interrupt of the normal polling thus, priority attention in the event of device activation.
5. Can support a low power operation mode for current saving.
6. All sensors analogue data are synchronized by means of A/D conversion commands from the control panel for fire analysis purposes.
7. AIC accommodates a remote LED terminal and a monitoring LED.
8. Fire test can be performed by a command from the control panel.
9. Alarm and pre-alarm threshold levels can be set by commands from the control panel.
10. AIE-AS has been designed with a one piece outer cover which gives an aesthetically pleasing modern low profile shape. Twin fire alarm LEDs give 360° viewing, the light from the LEDs is transmitted via unique light guides because the LEDs are sealed on the PCB for increased protection and reliability.

### Principle of Operation

The AIE-AS sensor has a 4 bit microprocessor and can read transmission signals from the control panel, including paging signals, fire test signals, and alarm lamp turn on signals. These transmission signals are transmitted as digital signals which change the power source voltage between 39.5V (high) and 31.0V (low). In addition, AIE-AS returns as analogue value corresponding to the smoke density from the detector using a digital signal. When polled from the control panel, the analogue sensor returns the last analogue value. The fire alarm level is sent from the control panel to the analogue sensor in advance. When the detected smoke density exceeds this level, the sensor sends a fire signal and, as a rule, the control panel stops polling and performs fire detection processing by priority.

### AUSTRALIAN DISTRIBUTORS

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## Maintenance

To ensure reliable performance and long life, the AIE-AS should be regularly tested and cleaned. For further information, please contact Hochiki or Hochiki authorized agent.

## Specifications

		AIE-AS
Supply Voltage Range	Absolute Maximum Voltage (V <sub>H</sub> )	41V DC
	V <sub>Low</sub>	17V - 31V
	Pulse Voltage	7V - 9V
Current Consumption	Quiescent	350μA (Typ)
	Low Power Mode 0.75s Polling	140μA (Typ)
	Low Power Mode 1.5s Polling	100μA (Typ)
	Current at polling	22mA ±20%
	Current in Alarm	16.3mA
	Surge Current	25mA (for 20ms)
Smoke Density Range		0 ~ 0.35 (MIC X value)
Fire Test Level		0.45 (MIC X value)
Operating Ambient Temperature Range		-10°C ~ +50°C
Storage Temperature Range (≤80% RH at 60°C)		-30°C ~ +60°C
Dimensions		Ø100mm x 44mm
Weight		Approximately 120g
Colour		Off White
Applicable Standard		AS1603-2
SSL Listing Number		AFP-1087

