# TRI-SENSOR DETECTOR







### TRI-SENSOR DETECTOR

Our tri-sensor detector is one of the very few multi criteria detectors available on the market and represents a unique product within wireless fire solutions.

The device offers the latest fire detection technology, combining CO, dual-path optical smoke and heat sensing technologies for unrivalled performance.

Advanced algorithms ensure early detection and notification of fire situations and the highest levels of unwanted alarm rejection.

The Hyfire product is a CO enhanced fire detector, not a life safety CO detector (build up of carbon monoxide).

#### 1 THERMISTOR

3

2 DUAL ANGLE OPTICAL CHAMBER DESIGN

SOLID ELECTROLITE CARBON MONOXIDE CELL WITH SELF TEST

MONITORING FUNCTION

### **KEY FEATURES**



HIGH SENSITIVITY MODES AND EARLY FIRE DETECTION IN ANY ENVIRONMENT



INNOVATIVE ALGORITHMS ENSURE PROMPT DETECTION OF MULTIPLE INPUTS, PREVENTING UNWANTED ALARMS



EN54-25 AND EN54-31 (MT AND NT PROFILES) COMPLIANT



COMPATIBLE WITH HYFIRE STATIC RANGE



EASY TO INSTALL AND CONFIGURE

## **COMBUSTION PROCESS**

Any combustion process generates a combination of smoke, heat and gases, depending on the combustible material and the progression of the fire. Our multicriteria device detects quickly and reliably fire signatures at the different combustion stages, providing reliable alert and evacuation signals to building occupants and smartly rejecting unwanted fire alarms. Heat sensing identifies the rise in temperature that is caused by a fire, dual path optical sensing responds to grey/black smoke while the gas sensing is able to detect carbon monoxide at the early smouldering combustion stages, before an incipient combustion may become a fully developed and widely spread fire. Typical applications for the wireless tri-sensor detector span from industrial workshops and warehouses, to hospitals, theatres or nightclubs, to offices and data centres.

### DETECTOR PROFILE SETTINGS

#### CONFIGURABLE SOLUTION FOR OPTIMUM PERFORMANCE

Our tri-sensor detector is fully compliant with EN54-31 (point detectors using a combination of smoke, carbon monoxide and optionally heat sensors), which considers two possible operative modes, NT and MT. The device can be programmed for one of the two categories to respond to specific environment requirements.

When the detector is programmed as category NT, it allows the alarm condition if any of the stimuliprocessed through the multi criteria algorithms exceeds the selected time and amplitude thresholds; when it's programmed as category MT the alarm condition requires at least two of the sensed environment stimuli exceeding the above thresholds.

Our device offers additional environmental profiles and further customisation options for each of the two modes, adapting the detectors to different environments, thus offering the most immune and promptest fire detection possible. See table for further details.

	PROFILE	ENVIRONMENT CLASS	SMOKE SENSITIVITY
NT	L1	Harsh	Low
	L2		
	L3		
	N1	Normal	Normal
	N2		
	N3		
	H1	Clean	High
	H2		
	H3		
MT	LO	Harsh	Low
	L1		
	L2		
	L3		
	NO	Normal	Normal
	N1		
	N2		
	N3		
	HO	Clean	High
	H1		
	H2		
	H3		

#### **TYPICAL PROGRESSION OF FIRE**



THERMAL SENSITIVITY DESCRIPTION Fixed Boiler room/Parking area/Warehouse High Nightclubs/Theatre stage A1R Kitchen/Cafeteria/Bathroom Fixed False ceiling/Storage room High Lobby/Stairway/Corridor A1R Office Fixed Bedroom/Dormitory High Nursery/Care Home A1R Hospital's operating theatre/intensive care/maternity ward None Industrial Workshop Boiler room/Parking area/Warehouse Fixed High Nightclubs/Theatre stage A1R Kitchen/Cafeteria/Bathroom None Prison Fixed False ceiling/Storage room High Lobby/Stairway/Corridor A1R Office None Meeting room/Data Centre Fixed Bedroom/Dormitory High Nursery/Care Home A1R Hospital's operating theatre/intensive care/maternity ward



HYFIRE WIRELESS FIRE SOLUTIONS LTD

Unit B12a Holly Farm Business Park Honiley, Warwickshire CV8 1NP

T: 01926 485282 F: 01926 485550

E: info@hyfirewireless.co.uk W: www.hyfirewireless.com