APPLICATION NOTE 152

ACD Multi-Sensor Mode Selection

ESPintelligent

ACD-EN

Multi-Criteria Sensor



Description

Introducing the ACD-EN, the most sophisticated multi-sensor released to market to date. This revolutionary product offers a staggering 24 EN approved modes of operation, including combinations of smoke detection, fixed temperature heat detection, rate of rise heat detection, CO detection and COHb detection; making it ideal for a variety of applications. The installer also has the ability to select a day mode and a night mode; increasing flexibility and ensuring reliability.

The ACD-EN is also enhanced for false alarm reduction. In modes featuring the Reduced False Alarm aspect (+RFA), the sensor will automatically adjust its sensitivity based on its surroundings, over time. The ACD-EN is installed with a default time delay. If the environment is clean with no smoke detected for a period of time, this time delay is reduced. If the environment continues to be clean, the time delay is reduced again. However, if transient smoke is detected, the time delay is increased. Any changes in CO and/or temperature will also automatically adjust the sensitivity levels up. We call this ground-breaking algorithm 'Suitable Moving Average Time' (SMART).

The Mode Selector Chart

	Day Day	(Night
Hotel Room	8D	8D
Hospital Common Areas	99	99
Care Homes	99	8D
Church or Cathedral	8D	99
Boiler Room	89	89
Data Centre	80	80
Electrical Room	80	81
Laboratories	8D	8D
Warehouse	89	89
Workshop	80	81
Court Room	8D	99
Above Control Panel	83	83
Bathroom or Toilet	87	80
Lift Shaft	81	81
Hallway or Corridor	82	83
Kitchen	89	80
Reception Area	82	82
Meeting Room	8D	8D
Office	9A	9A
Stairwell	82	82
Storage Room	80	81
Classroom	8D	8D
College or University Building	9A	99
Student Accom*	99	8D













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Mode Selection

A wide range of modes have been approved for use by LPCB. Each mode utilises different fire detection technologies in combination or individually. This allows the installer to "fine-tune" the ACD for the environment in which it is being fitted, where they can select both a day mode and a night mode.

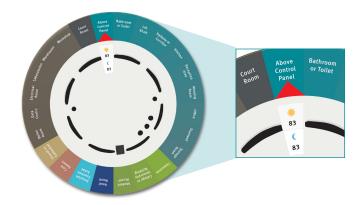
9A	Smoke/Heat/Co Combine (Default Mode)	8D	Smoke, Co, Heat (FT), Heat (RoR), COHb
9B	Co/Heat combine, Heat (RoR)	8E	Smoke/Heat Combine, COHb (Reduce false alarm function)
80	Smoke/Heat combine (Reduce false alarm function)	8F	Smoke, COHb (Reduce false alarm function)
81	Smoke/Heat combine	93	Heat (FT), Heat (RoR), COHb (Fixed Level 1 - Class A1) +COHb
82	Smoke (Reduce false alarm function)	94	Heat (FT), Heat (RoR), COHb (Fixed Level 2 - Class A1R) +COHb
83	Smoke	95	Heat (FT), COHb (Fixed Level 3 - Class A1S) +COHb
87	Heat (FT) Heat (RoR) (Fixed Level 1 - Class A1)	96	Heat (FT), Heat (RoR), COHb (Fixed Level 4 - Class C) +COHb
88	Heat (FT) Heat (RoR) (Fixed Level 2 - Class A1R)	97	Heat (FT), Heat (RoR), COHb (Fixed Level 5 - Class CR) +COHb
89	Heat (FT) (Fixed Level 3 - Class A1S)	98	Heat (FT), COHb (Fixed Level 6 - Class CS) +COHb
8A	Heat (FT) Heat (RoR) (Fixed Level 4 - Class C)	99	Smoke/Heat/CO Combine, Smoke, CO/Heat Combine, Heat (FT), Heat (RoR), COHb (Reduce false alarm function)
8B	Heat (FT) Heat (RoR) (Fixed Level 5 - Class CR)	9C	СОНЬ
8C	Heat (FT) (Fixed Level 6 - Class CS)	9D	со

FT = Fixed Temperature | RoR = Rate of Rise | COHb = Carboxyhaemoglobin

The Mode Selector Tool

The mode selector tool has been designed to assit in the selection of the best day and night modes for the specific installation environment**.

To receive your free selector tool, contact your Regional Sales Manager or the Hochiki Europe Marketing Department. There is also an online version of the tool available on the ACD page of our web site at www.hochikieurope.com/acd.













^{*}Dependent on control panel compatibility.

^{**} This document should be used as a guide only. It remains the responsibility of the installer to correctly risk assess the environment and install the correct fire detection equipment.