

# CAST Optical Smoke Detector

Part No. **CA416**



## Overview

A high-quality smoke detector for use with C-TEC's XFP&ZFP 'CAST' protocol Addressable Fire Panels.

LPCB certified to EN54-7 & 17 and Kiwa Telefication certified to EN54-13.

Smart algorithms help reduce false alarms.

Onboard short circuit loop isolator.

Includes two 8mm x 2mm ultra-bright red LED indicating strips.

Drift compensation functionality.

0.16dB/M sensitivity/obscuration level.

5mA typical alarm current (370uA typical quiescent) @ 22-40V DC

Programmable multi-function status LED.

Compatible with C-TEC's CA408 CAST base c/w integrated locking mechanism & ID tag.

## More Information

CAST' is the world's most-advanced 'distributed intelligence' fire alarm system protocol. Conceived, designed and realised by C-TEC as part of a five-year, multi-million pound project, it involved the creation of a powerful proprietary communication protocol (C-TEC Addressable System Technology, CAST) and multiple control panels & field devices. Now available to purchase, its key features include:

255 devices per loop.

Autonomous decision-making for faster response times.

Multiple type codes.

40V loop drive voltage.

Two 'soft' addressing options - automatic via the panel or manual via a powerful handheld programmer.

Powerful multi-level addressing facilitates easy device addition and swapped device identification.

Multiple functionality at a single address (integrated devices) - due 2021.

Volumes, tones & detector modes can be changed at compatible panels.



High-speed data transmission and robust data transfer.

Intrinsically EN54-13 compliant.

Provides geographical location of short and open circuit faults (a short circuit isolator is included as standard in every CAST field device).

Replace device function.

Programmable multi-function status LED.

Future seamless integration with other CAST life safety systems reducing energy, servicing, installation and repair costs.

Designed and manufactured in the UK.

## Technical Specifications

Approvals/certifications	LPCB certified to EN54-7 & 17 and Kiwa Telefication certified to EN54-13.
Compatibility	Compatible with C-TEC's XFP/ZFP CAST Protocol Addressable Fire Panels.
Type	Optical (utilises an infrared light source and photodiode).
Application/operation	When there is no smoke, light passes in front of the photodiode in a straight line. When smoke enters the chamber across the path of the IR beam, light is scattered, some of which falls on the photodiode triggering the alarm.
Application temperature	n/a
Static response temperature	n/a
Sensitivity	0.16dB/m.
Supply wiring	2-wire, polarity sensitive.
Supply/operating voltage	22 to 40V DC.
Quiescent current	370µA typical @ 22 to 40V DC.
Alarm current	5mA typical (LEDs illuminated) @ 22 to 40V DC.
Indicators	2 LED indicator strips emitting red light when in alarm offering 360° visibility. Optional remote LED.
Connections	Via CA408 base: 1 +Ve IN (analogue switch); 2 +Ve OUT (analogue switch); 3 Remote LED +Ve; 4 0V; 5 0V; 6 Screen; 7 Screen.
Product dimensions (mm)	102.2mm diameter x 37mm deep (detector only); 102.2mm diameter x 57.5mm deep (detector in base).
Construction & finish	White polycarbonate casing rated to UL94 V-2 with nylon parts.
IP Rating	IP42.
Weight	99g (not in base); 154g (in base).
Operating conditions/temperature	-20°C to +85°C.
Notes	Requires a CA408 CAST base. CA408R relay base also available.



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