

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 parts 7 & 17 and Kiwa Telefication & DBI certified to EN54-13.
- Also certified to the relevant parts of EN54 with Swedish certification body SBSC.
- 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, it involved the creation of a powerful proprietary communication protocol (C-TEC Addressable System Technology, CAST) and multiple control panels & field devices. 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) via our CAST-PRO devices.
- Volumes, tones & detector modes can be changed at compatible

panels. • High-speed data transmission and robust data transfer. • Intrinsically EN54-13 compliant. • Geographical location of short and open circuit faults (a short circuit isolator is included as standard in every CAST field device). • Replace device function. • 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	Certified by SBSC to the relevant parts of EN54, DBI certified to EN54-13, 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 and falls on the photodiode.
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.