



June 2024  
www.fsrmatters.com

The Independent Voice for  
Fire Safety Professionals



HEAT DETECTION  
SMOKE DETECTION  
CO DETECTION  
**MULTI-SENSOR DETECTION**  
C-3-9.4 WHITE VAD  
O-C-1.9-4 RED VAD  
92DB(A) SOUNDER  
VOICE SOUNDER



PROVEN FALSE ALARM REDUCTION  
PROTECTION LIKE NEVER BEFORE



**THE FUTURE OF FIRE DETECTION IS HERE**

# CAST-PRO - The future of fire detection is here!

*C-TEC's Marketing Manager, Andy Green, discusses why the UK based life safety systems manufacturer believes CAST-PRO, its new range of fire detection and alarm devices, is the real deal.*

**P**roven false alarm reduction, 'Protection from fire like never before,' 'The greatest fire detector in the world.' These are significant claims but they are statements C-TEC passionately believes apply to our new CAST-PRO range of fire detection and alarm devices.

Conceived over a decade ago, enhanced numerous times along the way and now delivered, CAST-PRO is a British designed and built, fully EN 54 parts 3, 5, 7, 17, 23, 29 and 31 certified heat, smoke and CO fire detector with a tone or voice sounder and onboard visual alarm device.

Packed full of features, many of them patented, our comprehensive beta testing regime confirmed to us some time ago that CAST-PRO doesn't just reduce installation costs, it reduces false alarms effectively, detects real fires reliably and indicates true alarm conditions decisively. With third-party certification now complete, we are delighted to announce CAST-PRO is available to purchase today.

## What's so special about CAST-PRO?

At the heart of the CAST-PRO design is the MASC™ miniature advanced smoke detection chamber. Featuring computer designed airflow layers and a revolutionary non-focal non-linear prismatic angular bandpass filter (pictured) which facilitates multiple path detection, it was specifically designed to allow space for reliable Heat and CO fire detection, a 92 dB(A) tone or 86 dB(A) voice sounder AND a C-3-9.4 visual alarm device – all in the same attractive, compact device.

## How does the MASC™ smoke chamber work?

The patented MASC™ smoke detection chamber filters out unwanted light caused by contamination but directs wanted light from smoke particles using multiple paths directly towards CAST-PRO's light sensor. Contamination ridges absorb stray light and serve as an



*C-TEC's colour-coded IP21C rated CAST-PRO programmable Heat, Smoke & CO Fire Detector c/w 92dB(A) Sounder and C-3-9.4 VAD*

effective dust trap and parabolic reflector to reflect light from contamination away from the sensor. This unique approach means lots of contamination can be tolerated before drift compensation needs to work, significantly increasing the life of the detector. This, combined with CAST-PRO's powerful false alarm rejection algorithms, which recognise non-fire events but still track real fire signals means false alarms are massively reduced whilst ensuring real alarms are acknowledged quickly, especially if CAST-PRO's additional fire sensing functions are utilised. As a result, CAST-PRO is a game-changer for sites prone to false alarms, including, for example, industrial sites, hotels or houses of multiple occupation.

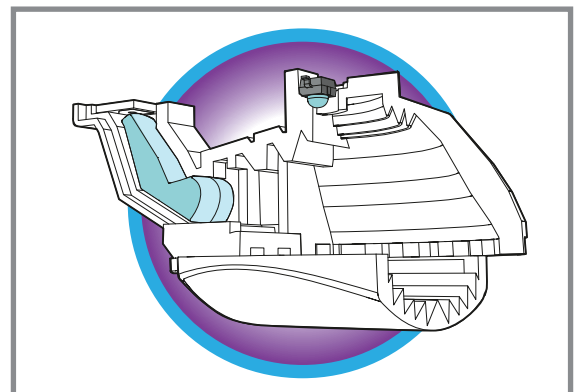
## What else can CAST-PRO detect?

As well as detecting smoke, our fully loaded CAST-PRO device features heat and CO fire detection allowing it to operate in one of 12 different modes (see Table 1) and for its operation to be tailored, not just to the environment, but to specific risks.

CAST-PRO is inherently flexible and can provide everything you need to satisfy the fire safety requirements of today's complex multi-purpose buildings.

## Protection at all times

CAST-PRO's Test mode does not change a detector's settings so devices do not need reconfiguring when testing is complete. Whilst testing is underway our CAST-PRO devices will continue to work in their normal detection mode, so if a real fire occurs elsewhere on the Zone being tested a full alarm will trigger. This ensures the site is always protected properly. Indeed, this



*CAST-PRO's innovative MASC miniature advanced smoke detection chamber allows additional space inside the device for extra detection and alarm functionality including heat and, dependent on the model purchased, CO fire detection via a 10-year self-testing CO cell.*

| MODE | DETECTOR FUNCTION                                                                                               |
|------|-----------------------------------------------------------------------------------------------------------------|
| 1    | High sensitivity smoke detection, 2.3% obscuration                                                              |
| 2    | Normal sensitivity smoke detection, 5.4% obscuration                                                            |
| 3    | Class A1R heat detection                                                                                        |
| 4    | Class A2 heat detection                                                                                         |
| 5    | Class B heat detection                                                                                          |
| 6    | High sensitivity smoke detection, 2.3% obscuration + Class A1R heat detection                                   |
| 7    | Normal sensitivity smoke detection, 5.4% obscuration + Class A1R heat detection                                 |
| 8    | Normal sensitivity smoke detection, 5.4% obscuration + Class A2 heat detection                                  |
| 9    | High sensitivity smoke detection, 2.3% obscuration + Class A1R heat detection + CO fire sensing to EN 54-31 NT  |
| 10   | Normal sensitivity smoke detection, 5.4% obscuration + Class A2 heat detection + CO fire sensing to EN 54-31 NT |
| 11   | Low sensitivity smoke detection, 43.8% obscuration + CO fire sensing to EN 54-31 NT                             |
| 12   | Normal sensitivity smoke detection, 5.4% obscuration + Class A2 heat detection + CO fire sensing to EN 54-31 NT |

Table 1: CAST-PRO's detector operation modes

feature actually facilitated the speedy extinguishing of a real fire in a zone under test at one of our beta test sites!

### The future of fire detection and ALARM DEVICES is here!

CAST-PRO isn't just a fire detector – it is an alarm device too. Take your pick from a 92dB(A) tone or 86dB(A) voice sounder with or without a C-3-9.4 white VAD or an O-C-1.9-4 red VAD. With 32 tones or 6 synchronised voice messages to choose from, CAST-PRO uses just one address and is very efficient from a current consumption point of view, even when in full alarm.

### Considerable cost savings

Having detection and alarm functionality in one device means considerable time and cost savings on installation. To illustrate this, we recently carried out a comparison exercise which revealed installation cost savings of 10-15% on a CAST-PRO system versus a typical addressable system with separate detection and alarm devices (based on 100 detectors, 30 sounders & 10 VADs).

### ENVISION Enabled

As well as being compatible with C-TEC's ZFP CAST protocol touchscreen-controlled addressable fire panel, CAST-PRO is fully compatible with C-TEC's powerful ENVISION Cloud-based IoT software. Combined with the features detailed above, ENVISION elevates CAST-PRO to greater levels of protection, delivering true, verifiable, live data on the status of your CAST-PRO devices – fires, faults, tests, pre-alarms, investigation periods started and more - direct to your smart phone or desktop. ENVISION makes testing and commissioning a breeze allowing device names to be

updated, sounders to be sounded, VADs to be switched on and more, all whilst standing alongside a device and remotely from the fire panel. Test reports are also available at the touch of the button.

### A breakthrough in fire technology

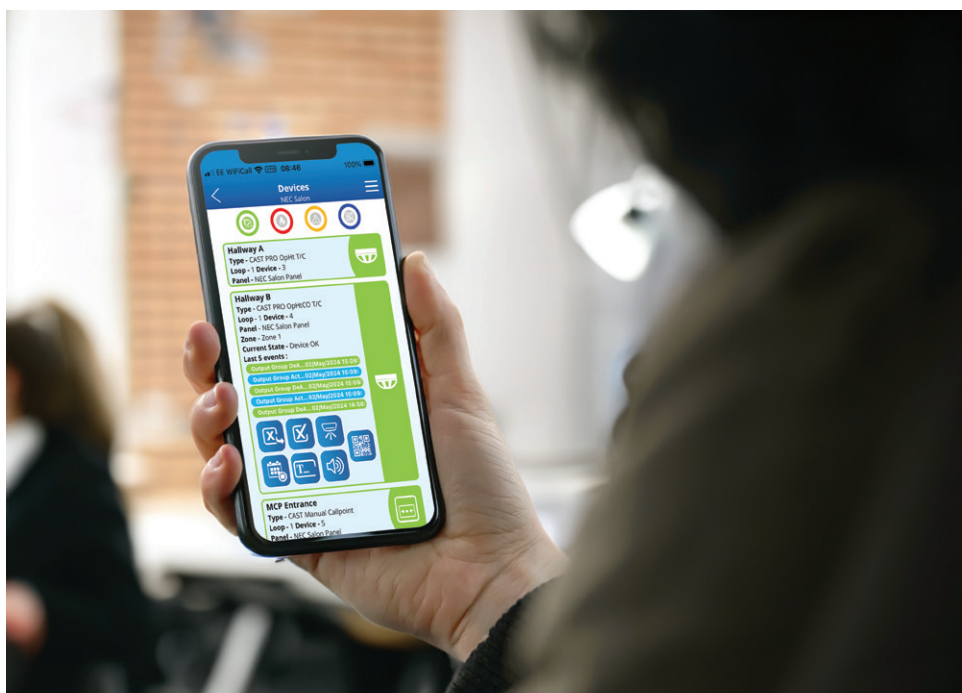
Ten years ago, C-TEC set out to design a more reliable fire detector that would minimise false alarms, incorporate audible and visual alarms, reduce installation time and maintenance costs AND comply with all relevant EN 54 standards. The ingenuity of its concise, environmentally friendly design and rapid advances in technology mean that CAST-PRO has exceeded all our

expectations, and we are excited to be in a position to share our innovation with the industry. We are also incredibly proud of the fact that, as with all C-TEC products, CAST-PRO was meticulously designed and created in our multiple third-party factory-process approved UK headquarters and dedicated R&D facility and its development is testament to our continuing commitment to UK manufacturing. ■

If you'd like to learn more about CAST-PRO's many features or would like assistance quoting for a project, please visit [c-tec.com](http://c-tec.com) or [cast-pro.com](http://cast-pro.com) today.

### Andy Green

With over 30 years' experience in the fire industry, Andy Green is C-TEC's Marketing Manager. Based at the company's manufacturing facility in Wigan, Andy is involved in product management and has a wealth of experience in marketing, business development, technical writing and promotional campaigns. Established in 1981, C-TEC is the UK's largest independent manufacturer of fire alarm, evacuation alert, disabled refuge, nurse call and hearing loop systems.



CAST-PRO is fully compatible with C-TEC's powerful ENVISION Cloud-based data management, installation & commissioning software bringing even more flexibility to the range