CA416/CON
Optical Smoke Detector

Product Datasheet
CAST Compatible

Product Description

The CA416/CON CAST optical smoke detector offers medium optical fire sensitivity. The detector is compatible with Context Plus's XFP and ZFP range of 'CAST' protocol analogue addressable fire panels and is fully compliant with EN 54-7 and EN 54-17.

The detector must be fitted to either a CA408/CON CAST detector base (which has an integrated locking mechanism to prevent tampering), or a CAST Base Mount device.

LPCB 176k/01

CE 22
2831-CPR-F4651
DoP0000081

Part Number	Description
CA416/CON	Context Plus CAST Optical Smoke Detector
CA408/CON	Context Plus CAST Detector Base

Illustration shows a CA416/CON CAST smoke detector mounted on a CA408/CON base. The smoke detector has a grey colour coded ring.

Key Features

- Third-party certified to EN 54-7 & EN 54-17
- Compatible with Context Plus's XFP and ZFP range of 'CAST' protocol fire panels
- Medium sensitivity setting of 0.16dB/m*
- 22-40 Vdc operating voltage
- Onboard short-circuit loop isolator
- Two ultra-bright red LED indicating strips
- Manufactured from white polycarbonate
- Simple 'click and twist' design and easy-fit base ensures reduced installation time
- Compatible with Context Plus's CA408/CON CAST base and CAST Base Mount devices
- Programmable heat and multisensor variants are also available (see separate datasheets for details)

* Detector sensitivity is set up via the panel's programming tools

Operation/Application

Optical detectors use an infrared light source and a photodiode to detect smoke. In the absence of smoke, light passes in front of the photodiode in a straight line. When smoke enters the optical chamber across the path of the infrared beam, light is scattered by particles of smoke in all directions, some of which falls on the photodiode thus triggering the alarm.

Optical detectors are typically used in escape routes, living areas, bedrooms and enclosed spaces to give an early indication of fire. They are particularly effective at detecting slow burning fires (such as those caused by overheated electrical wiring or smouldering materials) which tend to generate larger particles of visible smoke.

Technical Specification

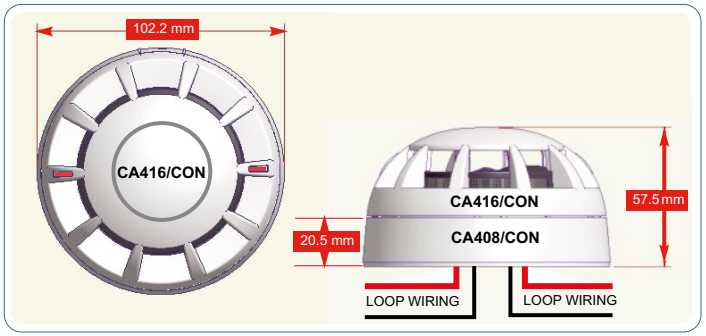
Part Number:	CA416/CON
Description:	Optical Smoke Detector
Certifications:	EN54-7:2018, EN54-17:2005 The approval certificate can be viewed on Context Plus's website.
LPCB Certificate No.:	176k/01
CPR Certificate No.:	2831-CPR-F4651
Declaration of Performance (DoP):	DoP0000081
Communication Protocol:	CAST
Compatible Panels:	XFP or ZFP (Context Plus CAST versions)
Compatible Bases:	CA408/CON CAST detector base and CAST Base Mount devices
Optical Trigger:	0.16 dB/m
Sampling Frequency:	Once per second
Operating Voltage:	22 to 40 Vdc
Quiescent Current:	370 µA at 40 Vdc
Alarm Current:	5 mA (LEDs illuminated)

LED Indicators:	Two red LED indicator strips offering 360° visibility
Wiring & Connections:	Via CA408/CON CAST base
Detector Materials:	Robust white polycarbonate outer casing rated to UL94 V-2 with nylon internal parts
Dimensions (detector only):	102.2 mm diameter; 37 mm deep.
Dimensions (detector & base):	102.2 mm diameter; 57.5 mm deep.
Weight:	Detector 99 g; CA408/CON Base 55 g.
Atmospheric Pressure:	Insensitive to atmospheric pressure
Operating Temp.:	-10°C to +55°C
Humidity:	0% to 95% relative humidity

EN 54-17 SC-Isolator Specification (Controllable Isolator)

Maximum Loop Voltage (***V*** max):	40 Vdc
Nominal Loop Voltage (***V*** nom):	40 Vdc
Minimum Loop Voltage (***V*** min):	22 Vdc
Maximum Current Device Isolates, switches from closed to open (***Iso*** max):	55 mA
Minimum Current Device Isolates, switches from closed to open (***Iso*** min):	15 mA
Maximum Rated Continuous Current with switch closed (***Ic*** max):	1 A
Maximum Rated Switching Current under short circuit conditions (***Is*** max):	1.6 A
Maximum Leakage Current with switch open (***IL*** max):	20 µA
Maximum Series Impedance with switch closed (***Zc*** max)	100 mohms

Dimensions (CA416/CON Head & CA408/CON Base)



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