**Fire and voice alarm systems** Product catalogue

## Complete fire systems for the protection of life and property





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Cooper

# Energizing a world that demands more.

## Discover today's Eaton.

### Powering business worldwide

As a global power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses.

Eaton's innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.



#### We deliver:

- Electrical solutions that use less energy, improve power reliability
   and make the places we live and work safer and more comfortable
- Hydraulic and electrical solutions that enable machines
   to deliver more productivity without wasting power
- Aerospace solutions that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
- Vehicle drivetrain and powertrain solutions that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2014 sales of \$22.6 billion, Eaton has approximately 100,000 employees around the world and sells products in more than 175 countries.



#### Eaton's electrical business

#### Eaton is a global leader with expertise in:

- · Power distribution and circuit protection
- Backup power protection
- · Solutions for harsh and hazardous environments
- · Lighting and security
- Structural solutions and wiring devices
- Control and automation
- · Engineering services

Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges. With 100 years of electrical experience behind us, we're energized by the challenge of powering up a world that demands twice as much energy as today. We're anticipating needs, engineering products and creating solutions to energize our markets today and in the future.

We are dedicated to ensuring that reliable, efficient and safe power is available when it's needed most.

Eaton.com



## Excellence and innovation in fire safety solutions.

When it comes to protecting life and property there's no room to compromise. You need a partner that can support you with tried and tested products, global capabilities and local delivery.

Eaton is a leading manufacturer and global supplier of high quality fire systems. With our ability to provide complete systems, not just components, you can be confident in the knowledge that all of our products have been specifically designed and tested to ensure that they are all fully compatible to form a reliable and compliant fire detection and alarm system.

Our large multi-disciplined research and development team is responsible for the integration of the latest technology into the full range of fire products, ensuring that our products are designed to the latest fire industry standards and manufactured to the highest levels of quality. The many innovative, new and improved products featured in this catalogue demonstrate our commitment to staying at the leading edge of technological development for fire detection and alarm equipment.

#### Our core values and aims are:

- Investment in people
- To partner with our customers to develop open, long term relationships
- To have an unpretentious, straightforward and honest approach to business
- The continued investment in research and development
- Investment in manufacturing facilities to ensure they remain world class
- To produce products that are in full compliance with standards
- To operate in an environmentally friendly way in the products we design and the facilities in which we make them
- To have high ethical standards

Our solutions and services are recognised by a wide range of accreditation bodies, so you can count on products that comply with national and industry standards, while receiving full support, from initial system design to monitoring and service.









## Manufacturing fire solutions is just one small element of what we do.

#### **Services**

We believe that ownership of fire detection systems extends beyond the initial purchase of the products themselves. We therefore offer customers a wide range of services to ensure that their installations not only meet basic operational and safety requirements on day one, but will continue to do so throughout their lifetime.

From training and support on how to select products for a specific application through to the provision of routine on-site testing and maintenance. You can be sure that Eaton is ready to support you, whatever your needs.

#### **Major projects**

Design and installation of a fire detection system can often be a complex process, with each project often bringing its own challenges in making sure the system is compliant, reliable and easy to operate. Our team of engineers will partner with your project management team using our expertise to meet the specific requirements of your project.

Eaton has a great deal of experience handling major projects across the globe. We can help not just with the product and technical support but also by providing guidance and advice to specifiers and project management teams on topics such as standards and regulations.

We are BAFE SP203 certified for design, commissioning and maintenance of fire detection systems, giving our customers the peace of mind they need that our systems conform with all necessary safety requirements.

#### **Technical support**

Our dedicated technical support team are able to offer customers around the world advice and guidance on a wide variety of technical matters via telephone or email. In the vast majority of cases, a process of systematic questioning enables the team to diagnose the challenge and advise the customer on the appropriate solution.

Sometimes more detailed troubleshooting and analysis methods may be used to determine the actual requirements and the best way of resolving it. If necessary, the technical support team will also call on the knowledge and expertise of Eaton's product management, R&D and design departments to help resolve the customer's issue.

In addition, the technical support team can provide customers with assistance on product information, installation and operating instructions, and the legislative requirements of your fire detection systems.

Mariner's Quay Apartment Complex Newport

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## An introduction to fire systems

Eaton manufacture and supply a range of different types of fire systems, meaning we can provide a high quality fire solution whatever your need is.

There are a vast array of fire detection systems and devices on the market today, ranging from the relatively simple to the most technically sophisticated. Modern automatic fire detection systems are available in two types, conventional and addressable - which, broadly speaking, tend to be used in smaller and larger installations respectively. For more detail you can read our fire systems guide over the next few pages.

#### The basics of fire detection

A control panel is the hub of the detection system. All the devices which are part of the fire detection system are connected to this central panel which processes the signals received from the input devices and gives out signals to the output devices. Input devices such as detectors measure signals of combustion and communicate with panels, which in turn trigger output devices such as an audible or visual alarm device. Fire alarm panels can be further sub segmented into addressable or conventional panels.

There are various types of fire detection systems each suited to different applications or building types. A fire detection system can vary significantly in both complexity and price, from a single panel with a detector and sounder in a small commercial property to a complex intelligent addressable system in a multi-occupancy building.

A fire detection system can comprise of detection devices, notification devices and manual callpoints. The size of the building determines the number of detectors that would be required. The system works via the control panel receiving signals from the detection devices and then sending transmitting signals to the notification devices.







#### Conventional systems (p64-83)

The philosophy of a conventional system revolves around dividing the building into a number of areas called zones. The detectors and call points within each zone are then wired on a dedicated separate circuit.

In the event of a detector or call point being triggered, the panel is able to identify which circuit contains the triggered device and thereby indicate which zone the fire alarm has come from. The indicated zone can then be manually searched to locate the triggered device.

With this type of functionality a conventional system is best used in smaller builds where it wouldn't be difficult to locate the triggered device in a given zone.



Typical conventional system architecture

Example conventional system layout

#### Two-wire systems (p58-63)

Two-wire systems are based on standard conventional system technology, but it also incorporates additional functionality to enable the callpoints, detectors and sounders for each separate zone to be wired on a single common circuit.

By combining both the detection and the alarm annunciation wiring into a single circuit, considerable savings in installation time and cabling can be achieved.



Typical two-wire system architecture



Example two-wire system layout



#### Addressable systems (p17-41)

Intelligent addressable systems overcome the limitations of conventional systems as each fire detecting sensor or call point is electronically coded with a unique identification or 'address' which is programmed into the device during installation.

By using each devices' unique address, the control panel is able to conduct two way communication with any of the addressable devices connected to the system.

Under normal conditions the control panel continuously interrogates each device in sequence and analyses the reply to determine the status of each sensor or call point. The panel checks whether each device is functioning correctly and also the amount of smoke or heat that the device is currently sensing.

With the functionality of being able to pinpoint exactly which device is being triggered in an alarm or for a fault, addressable systems are perfect for mid to large size builds with multiple rooms and floors.



Typical addressable system architecture



Example addressable system layout



#### Emergency voice communication systems (EVCS) (p85-93)

#### What is disabled refuge?

A disabled refuge is a relatively safe area within a building or exit staircase for mobility impaired occupants, allowing building management and emergency services to safely assist these people from the building.

Mobility impairment is defined as not being able to walk 200m continuously without aid, and includes arthritis sufferers, people with leg and back injuries and women over 6 months term pregnancy.

#### What is a fire telephone?

Fire telephones are hardwired full duplex communications systems with monitoring and battery backup and are required in buildings over four storeys in many countries in the world (in the UK this is governed by BS9999, 2008). These are provided as a backup to traditional fireman's radio systems, which can fail to operate in many high rise environments due to the large amount of steel in the building, and the "corona" effect of fire on radio broadcasts.

Fire telephones are also required in fire fighting lift lobbies when these lifts are provided within a building. Fire telephones can also be used for fire wardens to call the control point during fire drills and primary evacuation phases before the fire services arrive and assume control.

#### What is a disabled refuge EVC system?

An EVC System (Emergency Voice Communication System) is a fixed, monitored and maintained, bi-directional, full duplex voice communication system. These systems are designed to assist the orderly evacuation of disabled or mobility impaired people and enhance fire fighters' communication during emergencies.

A disabled refuge system is not just for use during a fire and must be available at all times. Building regulations insist all new non-domestic buildings with more than one storey provide 'refuge' areas – relatively safe places where people who cannot easily use fire escapes and evacuation lifts, can call for assistance and wait until help arrives. Simple, effective two-way communication (refuge system) in these areas is essential, firstly to assist rescue teams in determining where assistance is required and secondly to reassure people help is on the way.

#### UL listed fire systems (p44-56)

Underwriters Laboratories Inc. (UL) is an independent product safety certification organisation, established in 1894, to develop standards and test procedures for products, materials, components, assemblies, tools and equipment. Chiefly dealing with product safety it also evaluates and certifies the efficiency of a company's business processes through its magnificent system registration programs.

Since the launch of our UL Listed fire product range, several prestigious projects worldwide have been supplied including Hyatt Resort and Spa, Shangri-la at the Fort and Times Square projects in South East Asia and several major projects in the Middle East including the prestigious Riyadh Financial District in the Kingdom of Saudi Arabia.

The Eaton UL range is designed to provide a solution for all sizes of project, from the simple small stand alone system to the large multi panel networked system with PA/VA and BMS integration.



#### Public address/voice alarm systems (p95-99)

Under BS5839 Pt.8 2013, voice alarm (VA) systems are recommended for all public buildings and multistorey buildings over four floors. VA systems are the quickest way to evacuate the public and staff from a building.

Following fire detection, automated messages control the flow of people in stair wells and corridors allowing an orderly evacuation without panic. These messages are supplemented by spoken messages from the fire service or management suite confirming the validity and need to leave the building. This positive confirmation speeds evacuation and avoids the "false alarm" mentality reducing the risk of death from fire.







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#### Intelligent addressable systems CF2000GCPD

## **CF2000GCPD** Intelligent addressable control panel



"The CF2000GCPD serves as the optimum solution for buildings requiring smaller addressable systems."

The Eaton CF2000GCPD is an entry level intelligent addressable control panel which can be configured for either 1 or 2 loop operation, and is certified to EN54 parts 2 & 4.

The panel has a graphic display, providing a simple menu driven end user interface. With the CF2000GCPD's ability to support Eaton cause and effect programming and a range of user controllable functions it makes the panel suitable for a varied range of projects from small warehouses to small/ medium office developments as well as many small industrial applications.

As with all Eaton intelligent addressable panels, the CF2000GCPD uses "spur tolerant" soft addressing to minimise installation time and remove the potential for errors often associated with many forms of manual addressing.

#### **Benefits**

- Configurable as a 1 or 2 loop panel
- Up to 200 addresses per loop (up to 60 sounders/beacons and up to 20 I/Os, subject to loop loading calculations)
- Soft addressing
- Menu-driven graphic screen
- Multi-language selection capability
- Integral battery and power supply
- 2x7Ah batteries included
- Easy to operate end user controls
- Full system integrity with Eaton developed protocol
- Core range of compatible devices
- 4 sounder circuits
- Monitored for open and short circuit (max 3.0A combined)



#### **Dimensions**



H (mm)	W (mm)	D (mm)
400	320	170
Features		CF2000GCPD
Ingress protection		IP30

#### **Catalogue numbers**

Description	Code
Intelligent addressable 2 loop control panel	CF2000GCPD
Standard repeater panel	CF3000PRG
Fire alarm system log book	MFALOG

#### **Compatible repeater panels**

The CF2000GCPD has a standard repeater panel available. Ideal for larger sites, the repeater allows you to display the system information from multiple locations.



24V dc output

Features	CF3000PRG
Active or passive option	✓
Integral battery and power supply	✓
Supervisor and engineer modes through code access	¥
Ingress protection	IP30



## **CF1100VDS** Intelligent addressable control panel



"The simplicity of operation, powerful cause and effect programming capability and competitive pricing make the system suitable for a wide range of small to medium sized projects."

The CF1100VDS is a high specification addressable panel for medium sized builds that is equipped with a versatile touch screen user interface. It is available as a 1 (CF1100VDS) or 2 (CF1200VDS) loop panel.

The powerful cause and effect programming capability and competitive pricing make the system suitable for a wide range of small to medium sized projects. The panels can operate as standalone or as part of a network with our other addressable panels (additional network card required).

	CF1100VDS	CF1200VDS*
No. of loops	1*	2*
Addresses per loop	200**	200**
No. of conventional sounder circuits	2***	2***
Ingress protection	IP30	IP30

\* No zonal LEDs

\*\* Up to 60 sounders/beacons and up to 20 I/Os

\*\*\*Monitored for open and short circuit (max 1.5A combined)

#### Benefits

- Soft addressing
- Large versatile touch screen user interface
- Multi-language selection capability
- Integral battery and power supply
- 2x7Ah batteries included
- Flexible distributed network capability
- Full range of compatible devices
- Flexible and easy to design, system cause and effect using site installer software
- Compatible with our addressable repeaters (see p21)



#### Intelligent addressable systems CF1 100VDS

#### **Dimensions**



	H (mm)	W (mm)	D1 (mm)
Panel	375	357	95
Cutout	345	325	50



CF1100VDS pictured with a range of compatible devices

#### **Catalogue numbers**

Description	Code
1 loop control panel	CF1100VDS
2 loop control panel	CF1200VDS
Add to end of product code if network card required	NC
Add to end of product code if dual redundancy network card required	NCDR
Network kit (for retro fit)	DF61NETKIT
Passive repeater panel	CF3000PRG
Touch-screen repeater panel	CTPR3000
Fire routing equipment PCB	ZPCB2187FRE
Fire alarm system log book	MFALOG



## **CF3000** Intelligent addressable control panel



"The large capacity, ability to support complex cause and effect programming and wide range of user controllable functions make the system suitable for a diverse range of projects"

The CF3000 series are high specification intelligent addressable control panels, which are fully certified to EN54 parts 2 and 4.

The panel comes with options for an integral printer for system posterity and an extended battery. Each panel is networkable with up to 126 other Eaton addressable control panels, only requiring the addition of one of our network cards for this functionality.

	CF30002G	CF30004G
No. of Loops	2	4
Addresses per Loop	200*	200*
No. of Conventional Sounder Circuits	4**	4**
Ingress protection	IP30	IP30

\* Up to 60 sounders/beacons and up to 20 I/Os \*\*Monitored for open and short circuit (max 1.5A combined)

#### Benefits

- Soft addressing
- Large versatile touch screen user interface
- Multi-language selection capability
- Integral printer (optional)
- Integral battery and power supply
- 2x 12Ah batteries included
- Extended battery option allows for 72 hours standby (subject to loop loading calculations)
- Flexible distributed network capability
- Full range of compatible devices
- Easy to design system cause and effect using site installer software
- Additional functionality through FRE & FPE (Fire Routing Equipment & Fire Protection Equipment) which are both monitored outputs



#### **Class change functionality**

Our CF3000 panel has a variety of easy to use additional software options on top of the standard class change facility; this provides benefits for a number of regions.

Class change input on the CF3000 can be used for functions such as Australian Fire Brigade, HMO operation, Swedish mode, Australian tone sounders for class change and different tones.



#### **Compatible repeater panels**

The CF3000 has both a passive and a touchscreen repeater panel available. Ideal for larger sites, the repeater allows you to display the system information at multiple locations.





Features	CF3000PRG	CTPR3000
Active or passive option	$\checkmark$	✓
No programming required	<b>*</b> *	✓
Programmable input	×	✓
Integral battery and power supply	✓	~
Supervisor and engineer modes through code access	✓	✓
Fire and fault volt free programmable relays	×	1
Adjustable volume from panel	×	✓
Ingress protection	IP30	IP30

\*Programming not required on network version.

#### **Dimensions**



	H (mm)	W (mm)	D1 (mm)	D2 (mm)
Standard	397	497	55	125
EB*	397	497	55	225
×=				

\*Extended battery version

#### **Catalogue numbers**

2 loop control panel	CF30002G
4 loop control panel	CF30004G
2 loop control panel, integral printer	CF30002GP
4 loop control panel, integral printer	CF30004GP
2 loop control panel, extended battery	CF30002GEB
4 loop control panel, extended battery	CF30004GEB
2 loop control panel, integral printer, extended battery	CF30002GPEB
4 loop control panel, integral printer, extended battery	CF30004GPEB
Add to end of product code if network card required	NC
Add to end of product code if loop card required	LC
Network kit (for retro fit)	DF6000NETKIT
Printer kit (for retro fit)	CF3000PKIT
Hinged protective cover kit	CF3000COV
Passive repeater panel	CF3000PRG
Touch-screen repeater panel	CTPR3000
Fire alarm system log book	MFALOG

Devices - sensors

## Sensors

Our addressable range has multiple options for intelligent addressable sensors. All sensors are designed for optimum functionality in mid-large sized builds. They are all soft addressed and have integral short circuit isolators. We also offer a loop connected remote indicator, designed to offer discreet remote indication and an ability to monitor multiple sensors. This helps to minimise wiring requirements.

**Photo-thermal sensor** 

**CAPT340\*** 

Optical smoke sensor CAP320



#### **Typical applications:**

Suitable for most applications.

Fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.



#### **Typical applications:**

Responds quickly to fast clean burning fires.

Maintains the advantage of optical sensors when detecting smouldering fires.



Heat sensor

**CAH330** 

#### **Typical applications:**

Environments where the ambient conditions might cause false alarms with smoke detectors.

Examples include areas with high levels of dust or fumes.

The CAH330 can operate in 3 modes: rate of rise, fixed heat 77°C and fixed heat 90°C.

These modes are set by the panel.

\*The CAPT340 has day/ night modes available, programmeable from the site installer software. The day mode uses the heat aspect of the sensor for areas which may have smoky environments during, for example working hours. The night mode uses a combination of A2S and smoke detection. If not programmed, the sensor defaults to dual mode

#### Dimensions



Description	Diameter (mm) (incl base)	Depth (mm) (excl base)	Depth (mm) (incl base)
Optical	104	33	45
Photo-thermal	104	43	55
Heat	104	43	55

#### Performance

Feature	CAP320	CAPT340	CAH330	CAH330	CAH330
Mode	Optical	Photo- thermal	Rate of rise	Fixed heat 77°C	Fixed heat 90°C
Area coverage*	100m <sup>2</sup>	100m <sup>2</sup>	50m <sup>2</sup>	50m <sup>2</sup>	50m <sup>2</sup>
Heat class	N/A	A2S	A2R	BS	CS
Alarm temperature	N/A	60 °C	60 °C	77 °C	92 °C
Ingress protection	IP30	IP30	IP30	IP30	IP30

\*(subject to local standards)

#### **Catalogue numbers**

Description	Code
Optical smoke sensor - CAP320	400002FIRE-0002X
Photo-thermal sensor - CAPT340	400004FIRE-0004X
Multi-mode heat sensor - CAH330	400003FIRE-0003X



VdS

#### Intelligent addressable systems

Devices - sensors

## Indicators

Our indicators are designed as additional indication devices when sensors have been triggered. These products are designed to be used as indicators only, and not visual alarm devices (see p26 and 29 for EN54-23 certified VADs).

Addressable remote indicator MRIAD



#### **Typical applications:**

Monitoring multiple sensors within a specific area.

Must be configured through site installer. The remote indicator can be programmed as a sounder.

#### Standard remote indicator CIR301



#### **Typical applications:**

The CIR301 can only be connected to one sensor and is powered by this sensor.

There is a weather resistant version also available. (Not IP65).

Staff warning device CAB382



#### **Typical applications:**

As this product does not meet EN54-23 requirements as a beacon we recommend it as an internal warning device in offices, schools or manned reception areas.



Remote indicator lens detail

#### **Dimensions**



Staff warning device



Remote indicators

Description	Diameter (mm)	Depth (mm)	_
Staff warning device	101	33	-
Description	Height (mm)	Width (mm)	Depth (mm)
Remote indicators	87	87	30

#### **Catalogue numbers**

Description	Code
Loop connected remote indicator	MRIAD
Standard remote indicator	CIR301
Weather resistant standard remote indicator	CIR301WP
CAB382 Staff warning device	666028FULL-0066

Accessories - bases

## Bases

We stock a variety of bases, providing a wide functionality for different situations. The standard base (CAB300) provides a foundation for our addressable sensors. The range of bases also includes capability for additional sounder and sounder beacon operation. Both our sounder base (CAS380) and VAD sounder beacon base (CASBB394) can be used as standalone devices when fitted with our cover plate (CASC).

Standard base CAB300



#### **Typical applications:**

General use product, recommended for use in all environments



#### **Typical applications:**

Areas of limited extent, where lower output volume is required Areas with limited cable space Concrete ceilings, to save cabling 0.5HZ FLASH

Sounder beacon base

CASBB394 (CASBB384)

#### **Typical applications:**

The CASBB394 is an EN54-23 certified Visual Alarm Device (VAD) sounder beacon base.

It is compatible with the Eaton range of intelligent addressable sensors and can also be used as a dedicated discreet standalone device.

(The CASBB384 sounder beacon base is also available for indication purposes, where EN 54-23 is not a requirement.)

#### Sounder base with cover CAS380 + CASC



#### **Typical applications:**

Optional cover plate can be used to enable the sounder to operate as a dedicated discreet stand alone device



VAD sounder beacon base shown with optical sensor

#### Features

	CAB300	CAS380	CASBB384	CASBB394
First fix base	✓	✓	~	✓
Loop integrity switch	~	✓	~	✓
Multiple cable entry points	✓	×	×	×
Selectable tones	×	✓	✓	✓
Ingress protection		IP40	IP40	IP21C





#### Intelligent addressable systems Accessories - bases

#### Performance

	CAS380	CASBB394
Sound output		
Low volume	84dB at < 4mA	77dB at < 6.6mA
Medium volume	92dB at < 8mA	89dB at < 8mA
High volume	95dB at < 12mA	90dB at < 9mA
Flash rate	n/a	0.5 Hz flash*

\*Polar dispersion infromation available on datasheet

#### **Dimensions**







Sounder beacon base

Standard base

Sounder base

Description	Diameter (mm)	Depth (mm)
Standard base	104	22
Sounder base	102	40
Sounder beacon base	115	44

#### **Catalogue numbers**

Description	Code
Standard base	CAB300
Sounder base	CAS380
VAD sounder beacon base	CASBB394
Sounder beacon base	CASBB384
Cover plate (pack of 5)	CASC
Bell tone sounder base	CAS380B
Australian sounder base*	CAS380AU*
Addressable relay base	MAB800R
Base shroud	BAR3000

\* Only for Australian market



Devices - callpoints

## Callpoints

Two versions of the intelligent addressable callpoint are available, the surface/ flush mounted CBG370S or the weatherproof CBG370WP. Both have an integral short circuit isolator and are very simple to install. The callpoints are packaged with 2 frangible glass elements and test key, with a comprehensive range of further accessories available.

Weatherproof callpoint

CBG370WP

Surface/flush mounted callpoint CBG370S



#### **Typical applications:**

General use product, suitable for use in most indoor applications.



**Typical applications:** Builds requiring a callpoint in harsh conditions. For example, outside or in a wash down area.



**Dimensions** 

Description	H (mm)	W (mm)	D (mm)
Surface mounted	87	87	36
Flush mounted	87	87	57
Weatherproof	87	87	59

#### **Features**

	CBG370S	CBG370WP
Fast fit clip	~	$\checkmark$
High Visibility LED	~	✓
Heavy duty terminals	✓	✓
Ingress protection	IP42	IP65

#### **Catalogue numbers**

Description	Code
Surface/flush callpoint	CBG370S
Weatherproof callpoint	CBG370WP
CXPC Protective hinged cover (pack of 10)	4990001 FUL-0022
Spacer plates (pack of 10)	MBGSP
MBGBEZ Recessing bezels (pack of 10)	4990005FUL-0194
MBGREKIT Resettable element kit (pack of 10)	4990010FUL0045
UBSG Spare break glasses (pack of 5)	516200FULL-5017
MFBGKEY3 Callpoint keys (pack of 10)	4990009FUL-0040

#### Further accessories:



Callpoint shown with protective hinged cover



Callpoint recessing bezel



## Wall sounders and VADs

There are also two versions of our intelligent addressable wall sounder, the internal (CAS381) and the weatherproof (CAS381WP). Their highly efficient design offers excellent sound output levels despite the low current consumption. They both contain an integral short circuit isolator and have multiple tones and volume levels which can be controlled from the panel globally, or individually via site installer.

We also offer a new open class Visual Alarm Device (CASB393), combining the high output sound of the wall sounders with a stronger LED to meet the EN54-23 VADs requirements. The open class functionality allows the VADs to be installed in open areas such as warehouses or airport terminals.

#### Wall sounder CAS381/CAS381WP



#### **Typical applications:**

Both an indoor and weatherproof variant of the wall sounder are available, allowing for consistent performance for any application where a wall sounder is required.

#### VAD wall sounder beacon CASB393/CASB393WP CASB383\*/CASB383WP\*



#### **Typical applications:**

The CASB393 is an addressable open class VAD suitable for all markets where EN54-23 VADs are now a requirement. White flash only.

(The CASBB383 wall sounder beacon is also available for indication purposes, where EN 54-23 is not a requirement. **Red flash only**.)





Internal wall sounder / sounder beacon

Weatherproof wall sounder/ sounder beacon

Description	H (mm)	W (mm)	D (mm)
Wall sounder	105	105	95
WP wall sounder	108	108	103
VAD sounder beacon	108	108	96
WP VAD sounder beacon	110	110	105

Tones	CAS381/ CAS381WP	CASB393/ CASB393WP	CAS381AU/ CAS- 381WPAU	
Continuous	$\checkmark$	$\checkmark$	$\checkmark$	
Two tone @ 1Hz cycle	$\checkmark$	✓	×	
Slow whoop 500-1200Hz in 3.5 seconds / 0.5secs gap	$\checkmark$	✓	×	
Pulsed 1Hz (Virtual Tone)	✓	√	√	
Pulsed sweep ISO8201 3x500ms 800-970Hz 1½ Sec Gap	×	×	√	
Bell tone	×	×	√	

#### Sound output

	CAS381/CAS381WP	CASB393/CASB393WP
Low volume	87dB at < 2mA	87dB at < 8.6mA
Medium volume	93dB at < 3mA	93dB at < 10mA
High volume	100dB at < 6mA	100dB at < 11mA
Flash rate	n/a	0.5Hz Flash
	CAS381/ CASB393/	CAS381WP/ CASB393WP/

 CASB383
 CASB383WP

 Ingress protection
 IP42

 IP66

#### **Catalogue numbers**

Description	Code		
Internal wall sounder	CAS381		
Weatherproof wall sounder	CAS381WP		
Vad wall sounder beacon	CASB393		
Weatherproof VAD wall sounder beacon	CASB393WP		
Australian internal wall sounder	CAS381AU		
Australian weatherproof wall sounder	CAS381WPAU		
Wall sounder beacon	CASB383		
Wall sounder beacon weatherproof	CASB383WP		



## Addressable fire systems Devices - beam detectors

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Beam detectors, typically used in large open areas, such as airports, shopping centres and warehouses

WHI HALL

## **Beam detectors**

There are two available loop powered reflective beam detectors in the intelligent addressable range. The MAB50R has a range of up to 50 metres and the MAB100R has a range of up to 100 metres. Neither requires a power supply and are both equipped with a simple set up mode to enable easy and quick alignment during installation.

The beam detector is loop powered with one unique address, and has the ability to add address text at the panel. There is a maximum limit of 20 per loop (based on loop loading calculations).

## Duct probe mounting kit

The presence of smoke in a ventilation duct is detected by sampling the airflow through the duct via two sampling tubes. A detector and base are mounted within the sampling chamber, which is located on the external skin of the duct, with sample and exhaust probes passing into the duct in an area of low turbulence. The unit requires an addressable optical detector and base and is supplied with full fixing instructions.

#### Addressable reflective beam detector MAB50R / MAB100R



#### **Typical applications:**

Large open areas such as warehouses, manufacturing plants, shopping centres, airports etc.





Allows access to the automatic gain control data from the detector.

The beam detector will show fire, fault and pre-alarm.

Features				
	MAB50R	MAB100R		
Operating range	5 to 50 metres	50 to 100 metres		
Tolerance to beam misalignment at 35%	Detector ± 0.8°, Prism ± 5.0°	Detector ± 0.8°, Prism ± 5.0°		
Fire alarm thresholds	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)		
Optical wavelength	880nm	880nm		
Ingress protection	IP40	IP40		

Beam detectors have 3 operating modes:

**Prism targeting mode** designed to provide simple initial alignment of beam and reflector assembly.

**Alignment mode** enables accurate fine tuning of beam alignment without the need for additional calibration equipment or a second operator.

Normal running mode during standard operation.

Duct probe unit MDP201



Typical applications:

Detecting presence of smoke in ventilation ducts.

Requires base and detector to be ordered separately.

#### **Features**

Duct width range	300mm to 1500mm 5 to 50 metres
Duct air speed range	1m/s to 20m/s Detector ± 0.8° Prism ± 5.0°
Temperature range	-20°C or +60°C
Optical wavelength	880nm
Ingress protection	IP67

#### **Catalogue numbers**

Description	Code		
Reflective beam detector (50m range)	MAB50R		
Reflective beam detector (100m range)	MAB100R		
Mounting bracket	MRBFP		
Spare reflector	MABR		
Duct probe unit	MDP201		



CE VdS

**Devices** - interfaces

## Interfaces

We supply an extensive range of interfaces to support our control panels. Interfaces allow for a wide variety of installations to be simplified without the use of specialist or customised equipment. For assistance deciding which interfaces will benefit you the most, contact our technical support team at firetechsupport@eaton.com

Zone monitor unit **CZMU352** 

Spur isolator unit **CSI350** 

Shop monitor unit **MSU840** 

#### 3 channel I/O unit **CIO351**







#### **Typical applications:**

The unit connects a zone of suitable conventional detectors (20 detectors per zone) and a separate zone of conventional callpoints (if required) to an addressable panel.

It allows for easier connection to existing conventional detection zones, as long as the devices used are compatible.

#### **Typical applications:**

The spur isolator unit enables a spur of intelligent addressable devices to be connected to a main analogue loop. This simplifies the installation of remote parts of buildings or system extensions.

The CSI350 doesn't take an address in the number sequence.

Recommended no more than a zones worth of devices per isolator.



#### **Typical applications:**

The shop monitor unit is designed to allow small units with conventional fire systems to be fully integrated with a main intelligent addressable fire system.

It is ideal for connecting individual shop units into a main shopping centre system.

Recommended for use with conventional VADs (see p72). Please note: A PSU (see p38) is required to operate conventional sounder circuits.

The MSU840 can have 2 sounder circuits, each with up to 0.3A of power.

#### **Typical applications:**

The 3 channel input/output unit enables simple interfacing between the fire system and other equipment such as nurse call systems or access control systems. The inputs are fully monitored for open and short circuits.

Relay contacts are rated at 30V dc 1A. See below for further options.





Description		H (mm)	W (mm)	D (mm)
Interface style 1	1	88	147	60
Interface style 2	2	129	180	60

#### **Catalogue numbers**

Description	Code
Zone monitor unit	CZMU352
Shop monitor unit	MSU840
Spur isolator unit	CSI350
3 channel input/output unit resets on reset (recognised as 1 address)	CIO351
230V ac relay unit	CMIO353



#### 230V ac relay unit CMIO353

#### 4 to 20mA interface CGI420



#### **Typical applications:**

Enables simple interfacing between the fire system and other equipment such as nurse call systems or access control systems.

The ability of the output unit to switch 230V ac mains at 8A makes the unit ideal for plant control or mains powered door holders.

The input is monitored for open and short circuits therefore can be used for fire input applications such as monitoring sprinkler flow switches.

If you require higher current switching (10A) **please see page 76** for MAR724.

#### **Features**

	CZMU352/CSI350/ MSU840/CIO351	CMIO353	
Ingress protection	IP40	IP65	



#### **Typical applications:**

Designed to interface with gas detection modules and are compatible with Eaton intelligent addressable control panels.

The supply to the gas detector is taken directly from the interface.



#### Intelligent addressable systems

Devices - interfaces

## Interfaces continued

#### 4 way sounder controller unit CSC354CPR



#### **Dimensions**

Description	H (mm)	W (mm)	D (mm)
4 way sounder controller Unit	300	300	74

#### **Typical applications:**

The 4 way sounder controller unit (CSC354CPR) adds functionality to your addressable panel by powering up to 4 lines of conventional output devices.

The CSC354CPR gives access to Eaton's extensive range of conventional devices, including EN54-23 certified VADs, beacons, signboards, bells and sounders.

It is ideal in situations where there is a requirement for devices with a high current draw or where conventional sounder circuits are in a remote location away from the fire alarm control panel.

#### **Catalogue numbers**

Description	Code
4 way sounder controller unit)	CSC354CPR

#### **Mimic relay boards CIOP4 / CIOP8**



#### **Typical applications:**

These addressable mimic relay boards (CIOP4) and (CIOP8) are 4 and 8 way soft addressing output modules, incorporating integral short circuit isolators.

The units are suitable for switching low voltage (24V dc at 1A maximum), via a set of latching relay contacts.

The flexibility of these modules is further enhanced by the fact that each output can be programmed for a range of triggers such as disablement, fault, fire, test panel, test zone prealarm, fire routing equipment, fire protecting equipment and reset with up to 16 different trigger sources per output.

These units have an additional 4 inputs which can initiate a reset. silence, evacuate and test function.

#### **Dimensions**

Description	H (mm)	W (mm)	D (mm)		CSC354CPR	CIOP4/CIOP8	
CIOP4/8 mimic relay board	180	244	63	Ingress protection	IP30	IP65	

**Features** 



#### **Catalogue numbers**

Description	Code
Technical input/output unit	CFC301
4 way mimic relay board, 4 inputs, 4 outputs	CIOP4
8 way mimic relay board, 8 inputs, 8 outputs	CIOP8
4 to 20mA interface	CGI420

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### Intelligent addressable systems

Devices - micro interfaces

## **Micro interfaces**

Whereas our standard interfaces are designed to be installed in the position required on the loop, our range of micro interfaces are compact enough to sit within a panels' enclosure, or in our dedicated mini module enclosure (ULBU) which can house up to 3 mini modules.



#### Micro zone monitor unit MIU872

#### **Typical applications:**

The micro zone monitor unit (MIU872) is suitable for interfacing a zone of up to 20 conventional detectors onto an intelligent addressable control panel.

It will operate with any conventional detector in configuration with a schottky diode type base (CDBB300).

#### Micro single channel input unit MCIM

#### **Typical applications:**

The micro single channel input unit (MCIM) is suitable for monitoring a set of normally open, volt free contacts such as sprinkler system flow switches and auxiliary panel fire/fault signals. Other examples include non-fire input signals such as flow valve open contacts, generator start up, fire door closed etc.

#### Micro single channel output unit MCOM

#### **Typical applications:**

The micro single channel output unit (MCOM) is suitable for switching low voltage (24V dc at 1A maximum), via a set of non latching relay contacts.

It is also suitable for switching HVAC control circuits, plant shutdown control circuits, fire door closure etc.

#### Variants

The (MCOM-R) gives a 5 second pulse on reset, and is used for connecting/resetting beam detectors.

The (MCOM-S) is identified by the panel as a sounder and does not reset when put into 'silence' mode, only resets once panel has been reset.

#### Installation into mini module box

- 1. Fit the unit in position in accordance to the mounting diagram below.
- 2. Connect the unit according to standard connections.
- 3. Up to 3 units can be fitted inside a micro module box unit



#### **Features**

	MIU872	мсом	MCIM
Soft addressed	✓	✓	✓
Short circuit isolators	✓	✓	✓
Single address	✓	✓	✓
Ingress protection	IP40	IP40	IP40

#### **Catalogue numbers**

Description	Code
Micro zone monitor unit	MIU872
MCOM Output Module	400010FIRE-0024X
MCOM-S Output Module Sounder	400012FIRE-0026X
MCOM-R Output Module Resettable	400011FIRE-0025X
MCIM Micro single channel input unit	400008FIRE-0022X
Mini module box unit (empty box)	ULBU

## **Network interfaces**

Eaton offer multiple network interfaces which allow our panels and devices a wider variety of functionality. These network interfaces allow the connection of the Eaton network system to a computer network, and PC based applications such as site monitor, site graphic and web server.

## Lon to RS232 adaptor EC0232

Dual-channel LonWorks BMS interface EC200 TCP/IP interface EC400

#### Lon network booster EC540



#### **Typical applications:**

The EC0232 Lon to RS232 adapter allows connection of our system network (LonWorks) devices to PC based applications such as site monitor, site graphics and web server.

In addition to the standard adaptor, Eaton offer 2 variants for use with a HMX PA/VA system - the ECO232PAVA with no handshaking, and the EC0232PAVA3D with a 3 min time delay.

#### **Typical applications:**

COns

The EC200 dual-channel LonWorks BMS interface is an "add-on" to the network which translates the pre-configured network variables to a set of un-configured network variables which can then be bound to a BMS, giving full access to the fire network data.



#### **Typical applications:**

The EC400 is a high performance, reliable and secure network infrastructure device for accessing Eaton Lon Network of intelligent addressable control panels over intranet or ethernet.

The EC400's built in configuration server manages up to 256 IP devices on 1 IP channel without a dedicated management PC.

Easy to understand diagnostic LEDs allow installers to install and troubleshoot the device without expert knowledge and dedicated troubleshooting tool.



#### **Typical applications:**

The Lon network booster (EC540) is the solution to interconnect multiple EIA-709 channels.

This unit provides up to 5 ports and routes packets between these ports. In spite of its small size the (EC540) provides best class performance and flexibility in use.

In order to provide the optimal router configuration the (EC540) supports 2 to 5 ports as well as the 2 operating modes "smart switch mode" and "configured router mode".

Fibre optic multi-drop link example network diagram


# Intelligent addressable systems

Devices - network interfaces

## BACnet gateway EC650B



# Single mode Lon to fibre optic adapter CFSFL01

# Dual channel Lon to fibre optic adapter CFSFL02



# **Typical applications:**

The BACnet gateway (EC650B) is a CEA-709/BACnet gateway which maps CEA-709 network variables (NVs) to standard BACnet server objects. When ordered with this part code (EC650B), the LonWorks to BACnet address mapping is preloaded and ready for use with the the intelligent addressable CF3000 system interface board.



# **Typical applications:**

The modbus gateway is part of the InfraLINK range of network infrastructure components from partners.

All of the modbus gateways feature a robust hardware platform with high performance CPU and UART for fast communications without loss of data. The LonWorks to modbus address mapping is pre-loaded and ready for use with the CF3000 fire system interface board.

# LONWORKS HDER OPTICAL ADAPTER

# **Typical applications:**

The single mode Lon to fiber optic adapter (CFSFL01) allows connection of the system network (LonWorks) devices through optical fibre, and to allow both point to point or multi drop topology.



# **Typical applications:**

The dual channel Lon to fiber optic adapter (CFSFL02) allows connection of the system network (LonWorks) devices through optical fibre, and to allow both point to point or multi drop topology.

# **Features**

	EC400/EC540	EC700
Ingress protection	IP40 (IP20 screws)	IP20

Description	Code
Dual-channel lonworks BMS interface (non handshake)	EC200
Dual-channel lonworks BMS interface (self configuring for use with EC700)	EC200S
Lon to RS232 adapter	EC0232
Lon to RS232 adapter (For HMX pa/va system - no handshake)	EC0232PAVA
Lon to RS232 adapter (For HMX pa/va system - 3 min time delay)	EC0232PAVA3D
TCP/IP interface	EC400

Description	Code
Lon network booster	EC540
Bacnet gateway	EC650B
Modbus gateway	EC700
Single mode lon to fibre optic adaptor	CFSFL01
Dual channel lon to fibre optic adaptor	CFSFL02

# Intelligent addressable systems

Devices - ancillaries

# Ancillaries

A range of ancillaries are available to complement and extend the capability of our existing hardware.

# Loop splitter unit ZPCB2222

Mimic PCB ZPCB2252MML / ZPCB2252MSL



# **Typical applications:**

Allows expansion of the CF3000 intelligent addressable panel from 4 to 16 loops.

This interface is mainly applicable in countries where the mixing of detectors, sounders, callpoints and interfaces are not permissible on the same loop or the number of devices per loop is limited to a small number.



# **Typical applications:**

Up to 250 outputs can be connected to the mimic PCBs (ZPCB2252MML) and (ZPCB2252MSL). This offers more capability to the extensive options already offered by the CF3000 control panel.

These boards are typical used for geographical LED mimic displays.



# **Typical applications:**

**SPS Range -**

**SPS-2423** 

SPS-2433 SPS-2453

Offers a compact, robust and versatile power solution to installers, allowing them to safely power fire detection and signaling systems in small to large installations.

Compact and discrete design allows for these SPS to be installed in a visible location such as a hotel lobby for instance.

**Catalogue numbers** 

CE

# **Features**

	SPS-2423/SPS-2433/SPS-2453	Description	Code
Ingress protection	IP30	Loop splitter unit	ZPCB2222
		Mimic PCB (master)	ZPCB2252-MML
		Mimic PCB (slave)	ZPCB2252-MSL
		Safety power supply 24V / 1.5A (batteries not supplied)	SPS-2423
		Safety power supply 24V / 2.5A (batteries not supplied)	SPS-2433
		Safety power supply 24V / 4.5A (batteries not supplied)	SPS-2453



Devices - software and testing equipment

# Software

Eaton offer a number of specialised programs to aid with the installation, maintenance, functionality and servicing of our addressable systems. Installed using the USB analogue systems panel interface (see p41) and a PC or laptop, these software programs help to solidify our addressable systems' capabilities and make it easier for users to control and organise the system on their site.



# Catalogue numbers

## Description Code Graphical Visualisation Software license 1-2 EFGVS1-2 panels including an EC0232 interface Graphical Visualisation Software license up to 6 FEGVS3-6 panels including an EC0232 interface Graphical Visualisation Software license up to FEGVS7-10 10 panels including an EC0232 interface Graphical Visualisation Software license above EFGVS11-PLUS 10 panels including an EC0232 interface Graphical Visualisation Software license up to EFGVS7-10-TCPIP 10 panels with TCP/IP interlink Graphical Visualisation Software license above EFGVS11-PLUS-TC 10 panels with TCP/IP interlink

Graphical Visualisation Designer Software license - no panel connectivity

## **Graphical visualisation** software **EFGVS**



# **Typical applications:**

Eaton Fire Graphic Visualisation Software (EFGVS) is a state of the art and powerful supervision management tool for Eaton Fire addressable systems.

Users can monitor, visualise in 2D and 3D, control and interrogate their systems to ensure alarms are located quickly and dealt with efficiently.

Ergonomic and intuitive, EFGVS includes a comprehensive list of advanced features offering the system designer and site supervisor a very efficient tool ensuring all information and controls be available at their fingertips.

## **Site monitor** SITEMONITOR



# **Typical applications:**

Site monitor / webserver software is designed to monitor Eaton fire systems and allow quick PC based administration.

Using a simple interface, authorised users can view control panel event history, event status, device properties and other information depending on access permissions defined by the system administrator.

Description	Code
Graphical Visualisation Premium Designer Soft- ware license including an EC0232 interface	EFGVS-PREMIUM
Interface to connect panel network (LONWorks) to PC (RS232)	EC0322
Site monitor / webserver software	SITEMONITOR

All software products except SITEMONITOR include EC0232 (p36) as standard

EFGVS-DESIGN

# **Testing equipment**

As well as offering complete fire systems, Eaton can also provide testing equipment to ease the process of installation, commissioning, maintenance and fault finding.

Loop tester kit LP800KIT



# **Typical applications:**

The loop tester kit is a hardware/ software combination that can be used to test, commission and fault find a loop of up to 200 intelligent addressable devices (sensors, sounders, ancillary devices) without having to connect the loop to the intelligent addressable control panel.

The loop tester is connected between the loop and PC, and allows the engineer to quickly identify and locate any loop device that is operating outside its operating conditions.

## USB analogue systems panel interface USBINT2

programmer CF800PROG

**Addressable device** 



# **Typical applications:**

The analogue systems panel interface is a universal serial bus converter that provides conversions from RS232 to USB, TTL to USB or TTL to RS232.

These options provide the connectivity required between a PC and intelligent addressable control panels, wireless control panels, and wireless survey tools including our range of software solutions (see page 40).



# **Typical applications:**

The addressable device programmer is a versatile tool to aid the installation, commissioning, maintenance and servicing of current intelligent addressable devices and fire systems.

This unit is light, robust and easy to operate using a user friendly menu structure on  $2 \times 40$  character LCD display. It is powered from a single PP3 size, heavy duty battery or an external supply.

## CF800PROG can:

Program sensor modes (see p24).

Change address details

Change heat detector settings

Read analogue levels

Description	Code
Loop tester kit	LP800KIT
Addressable device programmer	CF800PROG
USB panel interface	USBINT2



# **UL Systems**

Underwriters Laboratories Inc. (UL) is an independent product safety certification organisation, established in 1894, to develop standards and test procedures for products, materials, components, assemblies, tools and equipment. Chiefly dealing with product safety it also evaluates and certifies the efficiency of a company's business processes through its magnificent system registration programs.

Since the launch of our UL Listed fire product range, several prestigious projects worldwide have been supplied including Hyatt Resort and Spa, Shangri-la at the Fort and Times Square projects in South East Asia and several major projects in the Middle East including a major projects within the prestigious Riyadh Financial District in the Kingdom of Saudi Arabia.

The Eaton UL range is designed to provide a solution for all sizes of project, from the simple small stand alone system to the large multi panel networked system with PA/VA and BMS integration.

# UL intelligent addressable systems Contents

# Contents UL listed fire systems range

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# Panels



## **Devices**

Addressable sensors



Horns and strobes



Interfaces

Micro interfaces

Pull stations

FIRE

Conventional detectors

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🚯 FIRE





PIII



# ULCF3000 series UL listed control panels



ULCF3000 (wall mount graphite)

The ULCF3000 series panels are UL listed, high specification, wall or rack mounted fire panels. Combining sophisticated functionality with simple operation and aesthetically pleasing design, the panels are available in a number of loop configurations. Each panel is networkable with up to 126 other Eaton UL fire panels.

The control panel has the ability to support complex cause and effect programming. A wide range of user controllable functions make the system ideal for a diverse range of projects, from industrial applications through to large multi-site commercial developments.

## **Benefits**

- Soft addressing
- Large versatile touchscreen user interface
- Integral printer (optional)
- Integral battery and power supply
- 2 x 12Ah batteries included
- Flexible distributed network capability
- Full range of compatible devices
- 4 notification appliance circuits (NACs) outputs
- 2 or 4 class A style 7 SLC loops
- PAS (Positive Alarm Sequence)



SIGNALING

# UL intelligent addressable systems ULCF3000 series

10gue Addressable Fire

ULCF

## **Dimensions**



Description	H (mm)	W (mm)	D1 (mm)	D2 (mm)	
ULCF3000	397	497	75	130	
ULCF3000RM	398	505	48	118	



The ULCF3000 has both a standard and a touchscreen repeater panel available. Ideal for larger sites, the repeater allows you to display the system information from multiple locations.





	ULCF3000PRG	ULCTPR3000
Active or passive option	×	✓
No programming required	√*	✓
Multi language capability	×	✓
Allows networking with other Eaton fire panels	×	✓
Integral power supply	✓	✓
Ingress protection	IP30	IP40

\*Except local text information



Description	Code
2 loop panel	ULCF30002G
4 loop panel	ULCF30004G
2 loop panel, integral printer	ULCF30002GP
4 loop panel, integral printer	ULCF30004GP
2 loop panel, network card	ULCF30002GNC
4 loop panel, network card	ULCF30004GNC
2 loop panel, integral printer, network card	ULCF30002GPNC
4 loop panel, integral printer, network card	ULCF30004GPNC
2 loop panel, red metal box	ULCF30002GRM
4 loop panel, red metal box	ULCF30004GRM
2 loop panel, integral printer, red metal box	ULCF30002GPRM

Description	Code
4 loop panel, integral printer, red metal box	ULCF30004GPRM
2 loop panel, network card, red metal box	ULCF30002GNCRM
4 loop panel, network card, red metal box	ULCF30004GNCRM
2 loop panel, integral printer, network card, red metal box	ULCF30002GPNCRM
4 loop panel, integral printer, network card, red metal box	ULCF30004GPNCRM
Rack mounted 2 loop panel	ULR3000L2
Rack mounted 4 loop panel	ULR3000L4
Rack mounted 2 loop panel c/w network card	ULR3000L2NC
Rack mounted 4 loop panel c/w network card	ULR3000L4NC
Loop connected repeater panel	ULCF3000PRG
Touchscreen network repeater panel	ULCTPR3000

# Sensors

Our UL range has multiple options for intelligent addressable sensors. All sensors are designed for optimum functionality in mid-large sized builds. They are all soft addressed and have integral short circuit isolators.

Addressable sensor base UCAB300





# **Typical applications:**

Specifically designed for use with all of our UL addressable sensors, the UCAB base will be used in all builds.



# **Typical applications:**

Suitable for most applications.

Fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.



**Photo-thermal sensor** 

ULCAPT340

## **Typical applications:**

Responds quickly to fast clean burning fires.

Maintains the advantage of optical sensors when detecting smouldering fires.



**Heat sensor** 

ULCAH330

## **Typical applications:**

Environments where the ambient conditions might cause false alarms with smoke detectors.

Examples include areas with high levels of dust or fumes.



Sensor detail



Addressable base detail



# Performance

Heat Class	ULCAP320	ULCAPT340	ULCAH330
Heat element rating	N/A	135°F	ROR + Fixed 135°F, Fixed 135°, Fixed 194°F
Heat detector spacing	N/A	50ft (heat alone operation)	50ft
Heat class	N/A	A2S	A2R

# **Dimensions**



Description	Diameter (mm) (incl base)	Depth (mm) (excl base)	Depth (mm) (incl base)
Optical	104	33	45
Photo-thermal	104	43	55
Heat	104	43	55
	-	-	

# **Features**

	ULCAP320	ULCAPT340	ULCAH330
Ingress protection	IP30	IP30	IP30

Description	Code
ULCAP320 Optical smoke sensor	400005FIRE-0011X
ULCAPT340 Photo-thermal sensor	400006FIRE-0012X
ULCAH330 Heat sensor	400007FIRE-0013X
Addressable sensor base	UCAB300



# Detectors

Our UL range has multiple options for conventional detectors. All detectors have a removable detector chamber and drift compensation. The range of detectors for different applications allow for all build requirements to be met.

As there is no UL certified conventional panel a ULMIU872 micro interface (**p55**) is required in conjunction with a UL intelligent addressable panel to use conventional detectors.

Optical smoke detector UCPD-2W



# **Typical applications:**

Suitable for most applications.

Fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.





## **Typical applications:**

Responds quickly to fast clean burning fires.

Maintains the advantage of optical sensors when detecting smouldering fires.



**Fixed heat detector** 

(135°F)

UCHT-2W

## **Typical applications:**

Environments where the ambient conditions might cause false alarms with smoke detectors.

Examples include areas with high levels of dust or fumes.

## Performance

Heat class	UCPD-2W	UCPT-2W	UCHT-2W	
Heat element rating	N/A	135°F	135°F	Ing
Heat detector spacing	N/A	50ft (heat alone operation)	50ft	
Mounting position	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	

## **Features**

HT-2W		UCPD-2W	UCPT-2W	UCHT-2W
'F	Ingress protection	IP40	IP40	IP40
ng in open				
s				



# UL intelligent addressable systems Devices - conventional detectors

# Conventional detector base CB2E



# **Typical applications:**

The CB2E has been specifically designed for compatibility with our UL range of conventional detectors. It can be be used in all builds with conventional detectors.



## **Dimensions**



Description	Diameter (mm) (incl base)	Depth (mm) (incl base)	Depth (mm) (excl base)
Optical	104	45	33
Photo-thermal	104	55	43
Heat	104	55	43

Description	Code
2 wire detector, optical	UCPD-2W
2 wire detector, opto-heat	UCPT-2W
2 wire detector, fixed heat 135°f	UCHT-2W
Standard detector base	CB2E

# Horns and strobes

Our UL range incorporates a variety of audio and visual notification devices. Each device has up to 48% savings in current draw compared to similar products. The whole range is easy to install and has voltage test points for quick troubleshooting and easy spot checking, saving time on both installation and maintenance.

# Wall mount horn HNR



# **Typical applications:**

The horns are ideal for retrofit jobs, limited space environments and pre-existing wire configurations.



**Ceiling mount horn** 

CN128972

# **Typical applications:**

The horns are ideal for retrofit jobs, limited space environments and pre-existing wire configurations.

Wall mount horn strobe/synchronised strobe CN127249/STR Ceiling mount horn strobe/synchronised strobe CN127464/CN127488





# **Typical applications:**

With the range of settings for both audio and visual purposes, these products are effectively 9 models in 1 appliance. With this functionality, and both ceiling and wall mount options available, it will meet almost any build requirements.

The synchronised option enhances both the sound and light output by keeping the outputs of multiple devices in sync.

# Dimensions





D

Description	H (mm)	W (mm)	D (mm)
Wall mount horn HNR	133	116	56
Wall mount horn strobe/ synchronised strobe CN127249/STR	131	131	110



Description	Diameter (mm)	Depth (mm)
Ceiling mount horn CN128972	166	34
Ceiling mount horn/ synchronised strobe CN127464/CN127488	166	34

SIGNALING

# UL intelligent addressable systems Devices - horns and strobes

## Wall mount outdoor synchronised strobe CN129013

# Ceiling mount outdoor synchronised strobe CN124338





# **Typical applications:**

The outdoor synchronised strobes are UL certified to meet adverse weather conditions. They are perfect for builds where outdoor indication is required.

These units use a universal, common mounting base making them ideal for retrofit jobs, limited space environments and pre-existing wire configurations.

# **Dimensions**



\*Both wall mount and ceiling mount variants



Description	Code
Wall mount horn	HNR
Ceiling mount horn	CN128972
Wall mount horn strobe	CN127249
Ceiling mount horn strobe	CN127464
Wall mount synchronised strobe	STR
Ceiling mounted synchronised strobe	CN127488
Wall mount outdoor synchronised strobe	CN129013
Ceiling mount outdoor synchronised strobe	CN124338
WPSBB -R Exposed conduit, surface mount back box (RED)	CN109751
WPSBB-R + WP-KIT Concealed conduit surface mount back box (RED)	CN109751 + CN104486

# UL intelligent addressable systems Devices - pull stations

# **Pull stations**

The addressable pull stations are constructed of high quality, die cast metal for long lasting performance. The range consists of the UL listed MPS range of pull stations and the UL listed fast response input initiating module (ULMCIM-C).

## Single action addressable pull station UMPS-100/ UMPS-100WP



# **Typical applications:**

Indoor/weatherproof pull station for use with addressable systems (UMPS-100/UMPS-100WP).

A dual action model is also available (UMPS-200, not shown), where the push bar rotates inward allowing the pull handle to be grasped in a one handed motion.





# **Typical applications:**

Cost effective conventional version of the single action pull station, must be used in conjunction with ULMIU872. **Back box ordered seperately.** 



Pull station detail

# **Dimensions**



H (mm)	W (mm)	D (mm)
118	80	80

Description	Code
Single action pull station, supplied with back box (addressable)	UMPS-100
Weatherpoof single action pull station	UMPS-100WP
Double action pull station	UMPS-200
Weatherproof double action pull station	UMPS-200WP
Micro zone monitor unit	ULMIU872
Micro single channel input unit (recognised as callpoint)	ULMCIM-C
Conventional single action pull station (back box ordered seperately)	SG42BK2
Conventional double action pull station (back box ordered seperately)	SG42BK1
Back box for conventional, surface mounting	SGB32S
Back box for conventional, weatherproof	SGB-32C





# Interfaces

We supply an extensive range of interfaces to support our UL control panels. Interfaces allow for a wide variety of installations to be simplified without the use of specialist or customised equipment. For assistance deciding which interfaces will benefit you the most, contact our technical support team; **firetechsupport@eatoncom** 

# 4 Way Sounder Controller Unit ULCSC354





# **Typical applications:**

The unit connects 4 lines of conventional output devices on a single address to an addressable panel. Ideal for when specialist devices with a high current draw are required, such as Eaton's UL ceiling and wall horns/strobes. Or where conventional sounder circuits are in a remote location away from the fire alarm control panel.



# **Typical applications:**

The shop monitor unit is designed to allow small units with conventional fire systems to be fully integrated with a main intelligent addressable fire system.

It is ideal for connecting individual shop units into a main shopping centre system.



Spur isolator unit

**ULCSI350** 

# **Typical applications:**

The spur isolator unit enables a spur of intelligent addressable devices to be connected to a main analogue loop. This simplifies the installation of remote parts of buildings or system extensions.

# 3 channel I/O unit ULCIO351



# **Typical applications:**

The 3 channel input/output unit enables simple interfacing between the fire system and other equipment such as nurse call systems or access control systems. The inputs are fully monitored for open and short circuits.

# 230V ac relay unit ULCMIO353



# **Typical applications:**

Enables simple interfacing between the fire system and other equipment such as nurse call systems or access control systems.

The ability of the output unit to switch mains also makes the unit ideal for plant control or mains powered door holders.

The input is monitored for open and short circuits so can be used for fire input applications such as monitoring sprinkler flow switches.

# **Dimensions**





Description	H (mm)	W (mm)	D (mm)
Interface units	129	180	60
4 way sounder controller unit	300	300	74

## Features

	ULCSC354	ULCSUM355 /ULCSI350/ ULCIO351/ULCMIO353
Ingress protection	IP30	IP40

# UL intelligent addressable systems

Devices - micro interfaces

# Micro interfaces

Whilst our standard UL interfaces are designed to be installed in the position required on the loop, our range of micro interfaces can sit within a panels' enclosure.

**Micro single channel** output units ULMCOM/ULMCOM-S

# **Micro single channel** input units **ULMCIM/ULMCIM-C**

## **Micro zone** monitor unit **ULMIU872**

# **Dimensions**



# **Typical applications:**

The Micro Single Channel Output Unit (ULMCOM) is suitable for switching low voltage (24V dc at 1A maximum), via a set of non latching relay contacts.

It is also suitable for switching HVAC control circuits, plant shutdown control circuits, fire door closure etc.

The ULMCOM-S is identified by the panel as a sounder.



**Typical applications:** 

The Micro Single Channel Input

open, volt free contacts such as

sprinkler system flow switches and auxiliary panel fire/fault

signals. Other examples include

valve open contacts, generator

start up, fire door closed etc.

The ULMCIM-C is identified

is designed for use with pull

stations.

by the panel as a call point and

non-fire input signals such as flow

Unit (ULMCIM) is suitable for

monitoring a set of normally



**Typical applications:** 

The Micro Zone Monitor Unit

monitoring a zone of up to 20 UL

approved conventional detectors.

(ULMIU872) is suitable for

## H (mm) W (mm) D (mm) 65 35 18 5

Please be aware, we offer an enclosure for our micro interfaces, see p35.

Code

ULBU

400015FIRE-0029X

400016FIRE-0030X

400013FIRE-0027X

400014FIRE-0028X

# Features

	ULMCOM/ ULMCOM-S	ULMCIM/ ULMCIM-C	ULMIU872	ULMIU872	ULBU
Ingress protection	IP40	IP40	IP40	IP40	IP40

Description	Code	Description
4 way sounder controller unit	ULCSC354	ULMCOM Micro single channel output unit
Shop monitor unit	ULCSUM355	(recognised as output unit)
Spur isolator unit	ULCSI350	ULMCOM-S Micro single channel output unit (recognised as sounder)
3 Channel input/output unit resets on reset	ULCIO351	ULMCIM Micro single channel input unit
3 Channel input/output unit rests on silence alarms	ULCIO351S	(recognised as input unit)
120V/230V ac relay unit	ULCMIO353	<ul> <li>ULMCIM-C Micro single channel input unit (recognised as callpoint)</li> </ul>
Micro zone monitor unit	ULMIU872	Mini module box unit (empty box)





# Conventional systems Contents

# Contents Conventional fire systems

## **Conventional fire system panels**



Conventional systems EFCV series

# EFCV8Z Conventional control panel



Eaton's 8 zone conventional fire system panel delivers a straightforward, intuituve interface that makes programming and maintenance simple.

Approved to EN54-2&4, it offers a comprehensive set of functionalities in a modern, robust and discrete enclosure. It's appearance and performance makes the panel well suited for life safety notification in a wide variety of small to medium sized buildings, particularly schools, warehouses, retail stores and office buildings.

With the addition of an isolator barrier the panel has the additional flexibility to monitor standard or **FECV8ZONE** 

	ELCASTONE
No. of zones	8
Detectors per zone	32
Maximum loading per zone	32mA
Repeater Port	✓
No. of sounder circuits	4
Maximum loading per sounder circuit	250mA
Ingress protection	IP30

intrinsically safe conventional zone circuits, making it suitable for industrial applications.

## **Benefits**

- Zones switchable between standard conventional and intrinsically safe zones (using isolator barrier)
- One man test facility
- Class change input
- Interlink relay functionality for connecting 2 panels together
- Interlink relay allows forgreater system flexibility
- Supports an expansion card for Fire Routing Equipment, Fire Protection Equipment and fire relays per zone
- Modern and discreet enclosure



# Conventional systems EFCVSeries



# **Dimensions**





Description	Code
Eaton 8 Zone Conventional Panel	EFCV8Z
End of Line Module	EOLM-1
8 Zone Relays + FRE/FPE	BW0B8Z

	H (mm)	W (mm)	D (mm)
Complete Panel	336	375	134
Back Box	273	338	88

# **FX2200CPD series** Conventional control panel

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	-	CONTRACTOR OF AN ADDRESS CONTRACTOR OF AN ADDRESS ADDRE	"A flexible
	-		conventional
2	-		solution that
-	-		ensures ease of use and high
1			reliability"

The FX2200CPD range of conventional control panels provide a solution to any conventional system requirement. The advanced features include a simple "one-shot" user test facility, class change contacts, battery voltage alarms and charger temperature compensation, all included as standard to ensure ease of use and high reliability.

Attention to detail is emphasised by the neat log book holder feature, allowing essential records to be stored close to hand, ready for quick reference. For larger installations, custom configuration of the panels offers even greater flexibility, allowing project specific requirements to be easily met, in a competitive and cost effective package.

# **Benefits**

- Compact design
- Surface or semi-flush mounting
- Numerical access code (no lost keys)
- 2 or 4 zones panels
- Flexible, high specification system
- Simple "one-shot" auto-reset user test facility
- Maintenance free poly switch circuit protection, with auto reset

	FX2202	FX2204	FXRP2200
Ingress protection	IP30	IP30	IP30

	FX2202	FX2204
No. of zones	2	4
Detectors per zone	32	32
No. of alarm circuits	2 (4 on FX2202CR)	2 (4 on FX2204CR)



# Conventional systems FX2200 series

# **Compatible Repeater Panel**

To complement the FX2200 range a repeater panel is available for connection to the 4 zone control panel. Specifically designed for ease of installation, it requires only 2 interconnecting wires from the main panel, saving material cost and labour time. Further repeater panels can be cascaded which does not affect standby time as each has its own mains supply and standby battery. The repeater displays all the same functions as the main panel and includes an indicator test facility.



# **Features**

- Charger with built in temperature compensation
- Displays essential information at other key locations in a large building/site
- Zone fire and fault conditions
- Test mode in operation
- Zones or alarm lines in disabled mode

# **Catalogue numbers**

Description	Code
Conventional 2 Zone Panel	FX2202CPD
Conventional 4 Zone Panel	FX2204CPD
Conventional Repeater Panel	FXRP2200
Steel Back Box (for use with FX2202/4/8)	FX22003300 MB
Fire Alarm System Log Book	MFALOG

## **Dimensions**



	H (mm)	W (mm)	D1 (mm)	D2 (mm)	
2/4 zone panel	270	332	45	47	
Cut-out	265	327	-	-	
Note: If surface mounting add D1 and D2 to obtain depth dimension					

EATON - FIRE AND VOICE ALARM SYSTEMS CF-CC2556 June 2017

# **CF5000 series** Conventional control panel



"Contemporary and compact panel design that provides a solution to any conventional system requirement"

The new FXP5000 conventional control panel is currently available in a 16 zone version. The panel features an array of user friendly features and are available at very competitive prices. The attractive flush or surface mountable plastic enclosure, with metal back box, has been designed through intensive voice of the customer research to provide ample space for termination of cables.

# CF50016No. of zones16Detectors per zone30No. of alarm circuits4Zonal relay card✓Ingress protectionIP30

# **Benefits**

- Zonal relay card as standard
- One man test facility
- Non latching zone feature
- Class change input
- Fire and fault relays
- Discreet enclosure
- Supplied complete with battery for 24 hour standby



# Conventional systems CF5000 series



# **Dimensions**



Description	H1 (mm)	W1 (mm)	D1 (mm)	H2 (mm)	W2 (mm)	D2 (mm)
	Total height	Total width	Total depth	Back box height	Back box width	Back box depth
16 Zone	276	375	136	232	335	96

Description	Code
16 zone control panel	CF50016
Fire alarm system log book	MFALOG

# **Detectors and remote indicator**

The conventional range offers a multi-mode, 5 in 1 detector (FXN922), covering many building needs. It's quick and simple to install with a stylish low profile design. The detector is mounted on our standard conventional base (FXN520) but can also be used in conjunction with our relay base (FXN520R) for local switching. Each detector is fitted with a 360° viewable LED for indication.

This multi-mode detector can be configured to operate as either an optical detector, photo-thermal detector or 1 of 3 heat detector modes (A1R, BS, CS) using the four position switches located at the back of the detector. The FXN922 is certified for use in all 5 modes.

# Multimode detector FXN922



Base not included. See p66 for compatible bases.

# Remote indicator CIR301



# **Typical applications:**

The remote indicator is ideal for applications such as void spaces or outside locked or inaccessible rooms to provide indication of the activation of an automatic detector.

# Optical smoke detector mode

# **Typical applications:**

Suitable for most applications.

Fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.

# Rate of rise heat detector mode

# **Typical applications:**

Environments where the ambient conditions might cause false alarms with smoke detectors.

Examples include areas with high levels of dust or fumes.

# Fixed heat detector (92°) mode

# **Typical applications:**

Environments where the ambient heat levels are likely to be above normal temperatures, such as restaurant kitchens.

# Photo-thermal detector mode

# **Typical applications:**

Responds quickly to fast clean burning fires.

Maintains the advantage of optical sensors when detecting smouldering fires.

# Fixed heat detector (77°) mode

# **Typical applications:**

Environments where a change in temperature is a likely occurrence. Using a fixed heat negates false alarms from insignificant temperature rises.

# Note:

We can also supply separate detectors for each individual mode if they are required. These are displayed in the catalogue numbers in the table over the page.



Description	H (mm)	W (mm)	D (mm)
Remote indicator	87	87	49



# Performance

Feature	Optical smoke mode	Photo-thermal mode	Rate of rise mode	Fixed heat 77 °C mode	Fixed heat 92 °C mode
Area coverage (subject to local standards)	100m <sup>2</sup>	100m <sup>2</sup>	50m <sup>2</sup>	50m <sup>2</sup>	50m <sup>2</sup>
Heat class	N/A	A2S	A1R	BS	CS
Alarm temperature	N/A	60 °C	60 °C	77 °C	92 °C

# **Dimensions**



Description	Diameter (mm) (incl base)	Depth (mm) (incl base)	Depth (mm) (excl base)
Multimode detector*	104	42	55
Optical smoke detector	104	33	45

\* All other conventional detectors share same dimensions



# **Switch settings**



Description	SW1	SW2	SW3	SW4
Optical mode	-	OFF	OFF	OFF
Photo-thermal mode	-	OFF	OFF	ON
Rate of rise mode	-	ON	OFF	OFF
Fixed heat 77° mode	-	OFF	OFF	ON
Fixed heat 92° mode	-	ON	ON	OFF

	FXN922/CPD321/ CPT341/CFR330/ CMT360/CMT390	CIR301/CIR301WP	
Ingress protection	IP40	IP30	

Description	Code
5 in 1 Multi-Mode Detector	FXN922
Optical Smoke Detector	CPD321
Photo-Thermal Detector	CPT341
Rate of Rise Heat detector	CFR330
Fixed Heat Detector 77 °C	CMT360
Fixed Heat Detector 92 °C	CMT390
Remote Indicator	CIR301
Weatherproof Remote Indicator	CIR301WP

# Bases

There are two types of conventional detector bases, compatible with our range of detector heads to provide a wide functionality for different applications. The standard base (FXN520) is a general use product, providing a foundation for our conventional detectors, whereas the relay base (FXN520R) provides a local relay signal in the event of its host detector being triggered, making it ideal for instigating a local response.

# **Beam detectors**

There are two zone powered reflective beam detectors designed to be fully compatible with our conventional control panels. The MBD50R has a range of up to 50 meters and the MBD100R has a range of up to 100 metres. Neither require a power supply and both are equipped with a simple set up mode to enable easy and quick alignment during installation.

# Standard base CDBB300



Typical applications:

General use product, suitable for use in most indoor applications.



**Relay base** 

**FXN520R** 

Typical applications: Areas where a local response is required.

# Conventional reflective Dimensions beam detector MBD50R / MBD100R



**Typical applications:** 

Large open areas such as

etc

Fosturos

warehouses, manufacturing plants, shopping centres, airports

H (mm)	W(mm)	D (mm)	
210	130	120	

# Dimensions



Standard base



Relay base

Description	Dia (mm)	D (mm)
Standard base	104	22
Relay base	102	40

i caluica		
	MBD50R	MBD100R
Operating range	5 to 50 metres	50 to 100 metres
Tolerance to beam misalignment at 35%	Detector ± 0.8°, prism ± 5.0°	Detector ± 0.8°, prism ± 5.0°
Fire alarm thresholds	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)
Optical wavelength	880nm	880nm
Ingress protection	IP40	IP40

Beam detectors have 3 operating modes:

**Prism targeting mode** designed to provide simple initial alignment of beam and reflector assembly.

**Alignment mode** enables accurate fine tuning of beam alignment without the need for additional calibration equipment or a second operator.

Normal running mode during standard operation.



/dS

# **Duct probe detector**

The presence of smoke in a ventilation duct is detected by sampling the airflow through the duct via two sampling tubes. An optical detector and base are mounted within the sampling chamber, which is located on the external skin of the duct, with sample and exhaust probes passing into the duct in an area of low turbulence.

# Duct probe unit MDP201



Typical applications:

Detecting presence of smoke in ventilation ducts.



Duct probe unit shown with optical detector - **detector and base must be ordered separately**.

# **Features**

Duct width range	300mm to 1500mm 5 to 50 metres
Duct air speed range	1m/s to 20m/s Detector ± 0.8° Prism ± 5.0°
Temperature range	-20°C or +60°C
Ingress protection	IP67

Description	Code
Standard base	FXN520
Relay base	FXN520R
Reflective beam detector (50m range)	MBD50R
Reflective beam detector (100m range)	MBD100R
Mounting bracket	MRBFP
Duct probe unit	MDP201



# Callpoints

Two versions of the conventional callpoint are available, the surface or flush mounted FX201 or the weatherproof FX203. Both have an integral short circuit isolator and are very simple to install. The callpoints are packaged with 2 frangible glass elements and test key, with a comprehensive range of further devices available.

Surface/flush mounted Weatherproof callpoint callpoint CX201



CX203

**Typical applications:** 

General use product, suitable for use in most indoor applications.



harsh conditions. For example, outside or in a wash down area.

	• W
H	

**Dimensions** 

Description	H (mm)	W (mm)	D (mm)
Surface mounted	87	87	57
Flush mounted	87	87	36
Weatherproof	87	87	59

## **Features**

	FX201	FX203	
Fast fit clip	$\checkmark$	$\checkmark$	
Heavy duty terminals	✓	✓	
Ingress protection	IP42	IP65	

# **Catalogue Numbers**

Description	Code
Surface/flush callpoint	FX201
Weatherproof callpoint	FX203
CXPC Protective hinged cover (pack of 10)	4990001FUL-0022
Spacer plates (pack of 10)	MBGSP
MBGBEZ Recessing bezels (pack of 10)	4990005FUL-0194
MBGREKIT Resettable element kit (pack of 10)	4990010FUL-0045
FX5G Spare break glasses (pack of 10)	516200FULL-5017
Earth continuity links (pack of 5)	MBG119
MFBGKEY3 Callpoint keys (pack of 10)	4990009FUL-0040

# **Further accessories:**



Callpoint shown with protective hinged cover



Callpoint recessing bezel



# Bells

Bells still remain a popular choice for many applications where they can sometimes be used as a signal for non-fire purposes, such as class change in a school.

# Internal 6 inch bell FX006



# **Typical applications:**

Can be used for non-fire applications, such as class change in a school.



# **Dimensions**



# Internal 6 inch bell

Sound output
Sound Output

# Features

	FX006
Ingress protection	IP21C

93-95dB(A) at 24V dc

**MWB824** 

95dB(A) (+/-2)

FX006

Description	Dia (mm)	D (mm)	Description	Code
6 inch internal bell	152	63	FX006 Internal 6 inch bell	521601FULL-1601

# Sounders

Flush sounder

FX003

We have an extensive range of conventional sounders, designed to meet every specification's functional and aesthetic needs. Completely EN54 Pt. 3 certified, each sounder offers a unique solution to your conventional system requirements.



# **Typical applications:**

Ideal for retail, hotel and residential applications such as sheltered housing.





## **Typical applications:**

This all-purpose sounder has been designed to be both robust and aesthetically pleasing to meet many build requirements.



Weatherproof

surface sounder

## **Typical applications:**

The weatherproof sounder is perfect for harsh weather conditions where a sounder is needed. With selectable tones a high volume can be easily achieved meaning this sounder functions well in outdoor settings. High output wall sounder FX007



## **Typical applications:**

With a maximum output of 120dB(a), this sounder is ideal for areas with high ambient noise levels like warehouses.

## Low current wall sounder MLC624





# Typical applications:

Designed to provide a high sound output with a low current consumption the MLC624 is perfect for areas where high sound levels need to be achieved but sounder circuit capacity is limited.



# **Typical applications:**

With a slim and aesthetically pleasing design this base sounder is ideal for applications such as hotel bedrooms where a detector/ sounder or a detector/sounderbeacon is required.

Please note a detector base is still required when used in conjunction with a detector





Sound output					
	FX003	FX002	FX007	MLC624	FXN824
Sound output	98dB(a) at 1 Metre (+/-2)	105dB(a) max (+/-2) at 24V dc	120dB(a) (+/-2) Max at 1m (tone 5)	100dB(a) at 24V dc	80/90dB(a) (+/-3) @ 1 Metre
			114dB(a) (+/-2) Max at 1m (tone3)		
Tones	32	32	32	3	8

# Dimensions





Flush sounder

Wall sounder

Description	H (mm)	W (mm)	D (mm)
Flush sounder	86	86	36
High output wall sounder	105	105	95
Low current wall sounder	105	105	95

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Surface sounder

Weatherproof surface sounder

Base mountable sounder

Description	Dia (mm)	D (mm)
Surface sounder	93	63
Weatherproof surface sounder	93	93
Base mountable sounder	111	26

# **Features**

	FX003/ FX003W	FX002SB	FX002DB
Ingress protection	IP20	IP54	IP65
	FX007	MLC624	FXN824
Ingress protection	IP42	IP30	IP65

Description	Code
FX003 Flush sounder, red	550001FULL-0001X
FX003W Flush sounder, white	550015FULL-0017X
MFSSBB Back box for FX003, red	591001FULL-0016
FX002SB Low profile surface sounder, red	540501FULL-0389X
FX002DB Weatherproof deep base surface sounder back box, red (IP65)	540503FULL-0403X
FX007 High output wall sounder	651004FULL-0009X
MLC624 Low current wall sounder	650001FULL-0003X
FXN824 Base mountable sounder	666058FULL-0098X
MDS824COV Blanking plate for FXN824 (pack of 5)	590037FULL-0305



# Visual alarm devices (VADs)

From 31st December 2013 a new beacon standard, EN 54-23 became mandatory throughout the EU where Construction Product Regulation (CPR) applies. It directly affects the use of visual alarm devices (VADs) in fire detection and alarm systems for non-domestic premises. Its purpose is to standardise the requirements, test methods and functional criteria of VADs to ensure that their visual performance is measured and presented in a uniform manner.

Eaton's LX range has been designed to comply with the new EN 54-23 standard. With current consumption as low as 10mA, the range has been developed to provide the lowest current consumption with the highest possible coverage. Three years in the making, the LX range, available for wall and ceiling applications, features a number of patented technologies including an innovative lens and flash pattern.



**Typical applications:** 

With both a shallow base and deep base option the Solista meets requirements of a large range of builds.

## Solista LX ceiling FXSOLCWS



**Typical applications:** 

The ceiling option Solista helps to cover different types of room sizes to meet the requirements of the CoP 0001 design guidelines.

# RoLP LX wall FXROLPWR



# **Typical applications:**

The RoLP LX Wall is ideal for dual use applications where a visual alarm device is required in addition to an audible alarm.

The RoLP LX Wall is available to use with any standard RoLP sounder.

Performance

# Symphoni LX wall FXSYG1WR



## **Typical applications:**

The Symphoni LX Wall base can be used in combination with any standard Symphoni sounder.

Its high sound output makes it suitable for open areas or areas where there is higher than normal background noise.

## Symphoni LX WP wall (weatherproof) FXSYG1WR-WP



**Typical applications:** 

The Symphoni LX WP Wall device offers a weatherproof alternative to the Symphoni LX Wall device. With an ingress protection rating of IP66, it is suited for wet and outdoor environments. These products are all **red flash**, for more options please contact:

firetechsupport@eaton.com

	Solista LX wall	Solista LX ceiling	RoLP LX wall	Symphoni LX wall	Symphoni LX WP wall
Sound output	N/A	N/A	102dB(A) (Typical tone 3 - RoLP)	100dB(A) (Typical tone 3 - Symphoni)	100dB(A) (Typical tone 3 - Symphoni)
Minimum current consumption	10mA	10mA	22mA	15mA	15mA
EN54-23 coverage reference	W-2.4-7.5	C-3-7.5	W-2.4-7.5	W-2.4-7.5	W-2.4-7.5
Coverage volume	135m <sup>3</sup> (15m <sup>3</sup> )	132m <sup>3</sup> (21m <sup>3</sup> )	135m <sup>3</sup> (15m <sup>3</sup> )	135m <sup>3</sup> (15m <sup>3</sup> )	135m <sup>3</sup> (15m <sup>3</sup> )
Flash rate	1Hz (switchable to 0.5Hz)	1Hz (switchable to 0.5Hz)	1Hz (switchable to 0.5Hz)	1Hz (switchable to 0.5Hz)	1Hz (switchable to 0.5Hz)
Ingress protection	IP33C	IP33C	IP65	IP21C	IP66


#### **Dimensions**





Solista LX wall





Dia

н

RoLP LX wall





Symphoni LX wall

Symphoni LX WP wall

Description	Dia (mm)	D (mm)	W (mm)	H (mm)
Solista LX wall deep base	93	66	-	-
Solista LX wall shallow base	93	38	-	-
Solista LX ceiling shallow base	93	37		
RoLP LX wall	-	95	95	135
Symphoni LX wall	-	92	106	147
Symphoni LX WP wall	-	92	106	147
Symphoni LX WP wall	-	92	106	147



#### **Catalogue numbers**

Description	Code
FXSOLWRS Solista wall red body shallow base	812013FULL-0237X
FXSOLWRD Solista wall red body deep base	812005FULL-0107X
FXSOLCWS Solista LX ceiling	812022FULL-0123X
FXROLPWR RoLP wall red body base and sounder	8500025FULL-0025X
FXROLPWR-B RoLP wall red body base only	8500040FULL-0219X
FXSYG1WR Symphoni LX wall red body	8500045FULL-0233X
FXSYR-B Symphoni LX wall base red body	8500095FULL-0231X
FXSYG1WR-WP Symphoni LX wall weatherproof red body	8500050FULL-0249X
FXSYR-B-WP Symphoni LX wall weatherproof base red body	8500100FULL-0247X

For more guidance on EN-54-23 and placement of VADs, refer to our Fire Installer's Mate pocket guide.

(Part code CFS-CC2478-FIM)



# Indicators

In areas which do not have to meet the new regulations regarding EN54-23 visual alarm devices, our range of indicators can still provide reliable light indication.

Low profile LED indicator MLB124SB



### **Typical applications:**

In regions where the EN54-23 VADs standard is not a requirement, the LED indicator can be used as an indicating device.



Weatherproof

Typical applications:

The weatherproof version of the LED indicator provides an IP65 option ideal for outdoor use.



#### **Dimensions**





Low profile LED indicator

Weatherproof LED indicator

Description	W (mm)	D (mm)
Low profile LED indicator	95	53
Weatherproof LED indicator	95	80

**Note:** From 31st December 2013 a new beacon standard, EN 54-23 became mandatory across Europe where Construction Product Regulation (CPR) applies. If you are in a region where this standard applies please understand that these indicators do not meet the requirements of the new standards - **see p72 for compliant beacons and sounder beacons** 

### Features

	MLB124SB	MLB124DB
Ingress protection	IP54	IP65

Description	Code
MLB124SB Low profile LED beacon	811012FULL-0006
MLB124DB Weatherproof LED beacon	811013FULL-0007

# Sounder indicators

In areas which do not have to meet the new regulations regarding EN54-23 visual alarm devices, our range of sounder indicators can still provide excellent sound quality and light indication.



### Sound output

indication.

option to the xenon indicator - where an audible warning is required in addition to light

	XENON sounder indicator, FL-RL-R-S/FL-RL-R-D
Sound output	101dB(a) at 24V dc (typical tone 3)
Tones	32

### **Features**

	FL-RL-R-S	FL-RL-R-D
Ingress protection	IP54	IP65

**Note:** From 31st December 2013 a new beacon standard, EN 54-23 became mandatory across Europe where Construction Product Regulation (CPR) applies. If you are in a region where this standard applies please understand that these indicators do not meet the requirements of the new standards - **see p72 for compliant beacons and sounder beacons** 

Description	Code
FL-RL-R-S Conventional xenon sounder indicator	640001FULL-0003X
FL-RL-R-D Weatherproof IP65 xenon sounder indicator	640031FULL-0111X

# Door retainers and relay unit

Door retainers enable doors to be held open under normal conditions but automatically be released in the event of fire alarm activation.

Eaton have a range of door retainers which are robust and simple to install. Both floor and wall mounted retainers, with either mains or 24V dc power supplied variations, are available.



#### Performance

	MDR240	MDR24L	FX021240LC	FX02124VLC
Holding force	40kg	40kg	45kg	40kg
Power consumption	1.2VA	40mA	1.2VA	40mA
Ingress protection	IP40	IP40	IP42	IP40

Description	Code
Mains powered heavy duty door retainer	MDR240
24V dc heavy duty door retainer	MDR24L
Floor mounting bracket for heavy duty door retainers	ZMDRFBB
Mains powered compact door retainer	FX021240LC
24V dc compact door retainer	FX02124VLC
Floor mounting bracket for compact door retainers	FX021LCFB
Spare striker plate for either magnet	ZMDRSWIV
Heavy duty relay unit	MAR724

# Power supply

Specifically recommended as an auxiliary power supply unit for fire detection system components such as electromagnets, notification devices, etc.

Using the unit in large systems eliminates the problem of long power cable runs which simplifies installation.

EN54 pt.4 approved power supply unit SPS Range



### **Typical applications:**

The new range of EN 54-4 certified safety power supplies offer a compact, robust and versatile power solution to installers, allowing them to safely power fire detection and signaling systems in small to large installations.

Compact and discrete design allows for these SPS to be installed in a visible location such as a hotel lobby for instance. Comprehensive yet simple status indicators on the front of the unit help installers, commissioners and maintainers assess status of the unit.

### **Features**

Ingress	protection

IP30

SPSS-2423/2433/2453

Description	Code
Safety power supply 24V / 1.5A (batteries not supplied)	SPS-2423
Safety power supply 24V / 2.5A (batteries not supplied)	SPS-2433
Safety power supply 24V / 4.5A (batteries not supplied)	SPS-2453







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# Network exchange units

Our range of EVCS control units cover functionality for all builds, whether small and basic or larger and more complex. All parts are designed to fully comply with BS5839 part 9 2011 with EN54-4-A2 compliant power supplies and chargers.

#### Network master handset CFVCWM



#### **Features**

Up to 8 network master handsets per system	✓
Controls up to 128 lines (16 x 8 line exchange units)	✓
Monitored handset	✓
Large high contrast display (4 x 20 character)	✓
Dual network ports	✓
Remote powered handsets, no mains required	✓
Full system event log (fault & configuration)	✓

#### **Dimensions**



Description	H (mm)	W (mm)	D (mm)
VoCALL Network Master Handset	300	300	65

\*Please check with our technical team if dimensions are critical as they may have changed from time of print

Each system can have up to 8 VoCALL Network Master Handsets which gives great flexibility to larger installations allowing all calls to be monitored from various control points. As an example, an installation may have security offices, reception and numerous entrances that need to be monitored by master handsets.

- Wall or desk mount
- Graphical display
- Calls can be made by dialling or selecting the outstation name

#### 8 line network exchange unit CFVCX8



The VoCALL Network 8 Line Exchange Unit is a small wall mounted unit which can be distributed throughout a site and concealed from view in convenient locations such as risers, stairwells and cupboards.

- Greatly reduces cabling requirement
- Less equipment 'on view' in key places such as reception areas
- Aesthetically pleasing system with minimal equipment

Up to 8 lines can be connected to each distributed exchange, and each cable is fully monitored for open, short or earth faults. Up to 168 outstation Exchange Units can be attached to a VoCALL Network master system giving a maximum system size of 128 independent lines.

# Emergency voice communications Network exchange units

#### VoCALL Compact 9 Line Master and 10 Line Slave Exchange Unit CFVCCM9\*/ CFVCCS10\*



\*See website for further details



Description	Code
VoCALL 8 line network master handset	CFVCWM
VoCALL 8 line network exchange unit	CFVCX8
VoCALL Compact 9 Line Master Unit	CFVCCM9
VoCALL 10 Line Slave Exchange Unit	CFVCCS10

# Standalone master exchange units (non networkable)

Our range of EVCS control units cover functionality for all builds, whether small and basic or larger and more complex. All units are fully certified to EN54-4:A2 with compliant power supplies and chargers. The EFVCC5 and EFVCM10 are our non-networkable standalone options for small and medium sized builds.

#### VoCALL Compact 5 EFVCC5



#### **Typical applications:**

The VoCALL Compact 5 Line Unit is ideal for smaller installations which require just a limited number of outstations and Emergency Assist Alarms.

The EFVCC5 is a standalone unit containing the systems master handset, EN54-4 approved power supply and connectivity for the 5 outstations. 20mm knockouts are provided for all system cabling and the housing is of ample size to support 2x 3.2Ah backup batteries.

#### **Features**

	Compact 5
Bs5839 pt9 2011 compliant	√
Monitored handset	✓
Monitored supply and charger	✓
Relay outputs	✓
No programming	✓
Functional with emergency assist alarms	✓

## Dimensions

Dimensions	H1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)		D2 (mm)
VoCALL Compact 5 surface mounted	280	-	397	-	77	-
VoCALL Compact 5 flush mounted	280	309	397	427	77	16





Description	Code
VoCALL compact 5 line master exchange unit, non-network, surface mount, graphite	EFVCC5
VoCALL compact 5 line master exchange unit, non-network, flush mount, stainless steel	EFVCC5SS

# **Outstations**

For disabled refuge systems we offer a number of devices for call functions. Outstations can offer functionality as a fire telephone or disabled refuge call point. All outstations are available as a wall mountable unit, or with an optional bezel to allow the product to be flush mounted.

**Type A outstation CFVCSHP** 



## **Type B outstation CFVCSHF**



#### **Typical applications:**

All builds which require a disabled refuge EVC system.

The Type A should be used for evacuation or firefighting use.

#### Note:

There is a weatherproof, IP65 rated version of the Type A outstation available with a lockable door. Please enquire for more information.

### **Typical applications:**

Type B outstations can only be used where the background noise is below 40dBA (therefore there can be no sounder or voice alarm coverage in the area).

#### **Typical applications:**

**Roaming handset** 

and jack plate **CFVCRJP/CFVCRHS** 

When used together, the roaming handset and jack plate form a Type A outstation. This can be used in countries whose fire codes allow for roaming handsets.

(These units are not suitable for installation in the UK under BS5839 Pt9.)

### **Dimensions**







Jack plate

Type B outstation

Description	H1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	D1 (mm)	D2 (mm)
Type A outstation backbox	320	-	152	-	85	-
Type A outstation flush mounted	320	334	152	191	85	2
Type B outstation backbox	135	-	135	-	45	-
Type B outstation flush mounted	135	154	135	154	45	2
Jack plate	86	-	86	-	25	-

# Emergency voice communications Devices - outstations



Description	Code
VoCALL Type A outstation, surface mount, red	CFVCSHP
VoCALL Type A outstation, flush mount, red	CFVCFHP
VoCALL Type A outstation, flush mount stainless	CFVCFHPSS
VoCALL Type A outstation, IP65 lockable, surface mount, red	CFVCIPA
VoCALL Type B outstation, surface mount, red	CFVCSHF
VoCALL Type B outstation, surface mount, green	CFVCSHFG

Description	Code
VoCALL Type B outstation, surface mount, stainless steel	CFVCSHFSS
VoCALL flush mounting bezel for use with any Type B outstation, stainless steel	CFVCFHB
VoCALL jack plate	CFVCRJP
VoCALL roaming handset	CFVCRHS

# **Emergency assist alarm equipment**

Emergency assist alarms are required by building regulation document M. We offer either a stand-alone kit or a kit which integrates the Emergency Assist equipment with our VoCALL products.



#### VoCALL kit

This Emergency Assist Alarm - VoCALL kit has been specifically designed to integrate disabled call functions into the VoCALL network or VoCALL compact ranges.

It is fully monitored and battery backed by the VoCALL system. The Emergency Assist Alarm shows up as a call on the VoCALL system, but has no speech path so a conversation cannot be had with the occupant, use of the Type B Outstations would allow this.

#### Stand alone kit

The Emergency Assist Alarm - stand alone kit provides the perfect solution for conformity with the building regulations document M and Equality Act 2010.

The Emergency Assist Alarm - stand alone kit comprises of all the components needed to install a fully compliant system, with additional parts available separately.

#### **4 Way Splitter**

The 4 Way Splitter unit allows up to 4 stand alone disabled toilets to be monitored in one specific area. Staff can then, at the designated area such as a reception or security desk, react to an alarm swiftly and efficiently.

# **Emergency voice communications**

Emergency assist alarm

#### EAA VoCALL kit CFVCEA



#### EAA standalone kit CFEAPULLKIT



### **Typical applications:**

Disabled Toilets.

#### Includes:

- Over door indicator
- Cancel button
- Pull cord unit
- Disabled sticker pack

Does not include PSU as the kit is powered by a master unit (the Compact 5, see p82)

#### Accessories:



Pull cord unit

# Typical applications:

Disabled Toilets.

Includes:

- Power supply unit
- Over door indicator
- Cancel button
- Pull cord unit
- Disabled sticker pack



4 way splitter

Description	Code
Emergency assist alarm - vocall kit	CFVCEA
Emergency assist alarm - stand alone kit	CFEAPULLKIT
4 way splitter	CFEASL4
Pull cord unit	CFEAPULL



Emergency assist alarm stand alone kit, basic usage schematic





# Contents Voice alarm system

#### Panels









# **VoCALL emergency evacuation systems**

The VoCALL Voice series of public address and voice alarm systems are scalable, so can be used in any sized installation.

#### Voice distributed amplifier unit (DAU) EESDAU100



The Emergency Evacuation System Distributed Amplifier Unit (DAU) is a complete VA system, which has been developed to replace talking sounders in many voice alarm applications.

It is supplied in a single wall mount box which is complete with messages, contacts, dual 50W monitored amplifiers, EN54-4 approved power supply, monitored battery charger and the ability to connect non-monitored paging and music sources directly.

The boxes can be connected together using the network ports so a system with up-to 128 nodes is achievable. The system can be paged from the All Call EESEMA fire microphones.

#### Can function as a stand alone or networked system

- EN54-16 and EN54-4 LPCB certified for CPR
- BS5839 part 8, 2008 compliant
- Dual 50W 100V line outputs
- 3 Messages 130 second total
- Wall mounted
- Common fault out
- Paging input
- Full fault monitoring
- EN54-4 battery charging and monitoring
- Direct music input
- Music ramping
  - Up to 128 units per network

The Emergency Evacuation System Emergency Microphone All Call (EMA) is designed to provide an All Call emergency microphone as the top priority of the network.

All connections are fully monitored for open, short and earth faults and the microphone capsule is also monitored for open and short conditions.

The pre-amplifier is a high quality compressor limiter, which prevents the system from being overdriven by poor microphone use, it also corrects for quiet speakers. Tone controls allow the microphone to be equalised for maximum clarity and the chime is selectable (1,2 or 3 note) and volume controlled independently

of the voice level.

EESEMA

**Emergency microphone all call (EMA)** 



- EN54-16 CPR certified by LPCB
- Fully monitored
- Close coupled noise cancelling fist microphone
- Studio quality compressor limiter
- Wall mounted enclosure
- Bass and treble controls
- Selectable message chime
- Secure controls inside panel
- Three message trigger buttons and cancel button
- Compliant high visibility signage
- BS5839 part 8, 2008 compliant
- Network powered



# Voice alarm system EESDAU100 - voice distributed amplifier unit



#### **Dimensions**



# H (mm) W (mm) D (mm) Voice DAU panel 400 320 180 EMA panel 400 320 180

Description	Code
100W addressable DAU	EESDAU100
Emergency microphone all call	EESEMA

# **Speakers**

Whether the call is for discreet ceiling speakers in a hotel or for vandal resistant weatherproof columns on a station, there is a suitable model within the range to match the most demanding environments. Where the speakers are required to operate in a highly secure life safety Voice Alarm system then versions are available which are fire rated and have been designed to fully comply with BS5839-Pt8 and EN54-24.



Feature	SENTRY6ST-ENC	CADIOT-ENC	APHIOT-ENC	MC5-EN	MC6-EN
Output	100dB at 10W	104dB at 20W	101db at 20W	103dB at 10W	103dB at 10W
Sensitivity	90dB at 1W	92dB at 1W	88dB at 1W	93dB at 1W	93dB at 1W
IP rating	IP66	IP33	IP66	NA	N/A

Description	Code
Vandal resistant loudspeaker	SENTRY6ST-ENC
Projector speaker	CAD10T-ENC
Weatherproof horn	APH10T-ENC
5" ceiling loudspeaker	MC5-EN
6" ceiling loudspeaker	MC6-EN




Notes




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Visit www.uk.eaton.com for the following resources:

- 24/7 online product support ٠ •
  - Catalogue and literature
- Product profiles
- Datasheets, installation and user manuals

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