

# Complete fire systems for the protection of life and property



**EATON**

*Powering Business Worldwide*

Eaton and Cooper united.

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.



*Powering Business Worldwide*



## 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 2013 sales of \$22 billion, Eaton has approximately 102,000 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](http://Eaton.com)

Leadenhall Building  
London, UK



# 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.

Operating out of Doncaster, UK, Eaton's fire business 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 which 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 products 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.



# Introduction

Distinctive capabilities



Ankara Esenboğa International Airport  
Ankara, Turkey



St Pancras Station  
London, UK



Doncaster Cultural and Civic Quarter  
Doncaster, UK

# 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's fire business 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 have a great deal of experience handling major projects, including; Doncaster Civic and Cultural Quarter, London St Pancras and the Hyatt Resort and Spa, Vietnam. 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 fire business' 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.



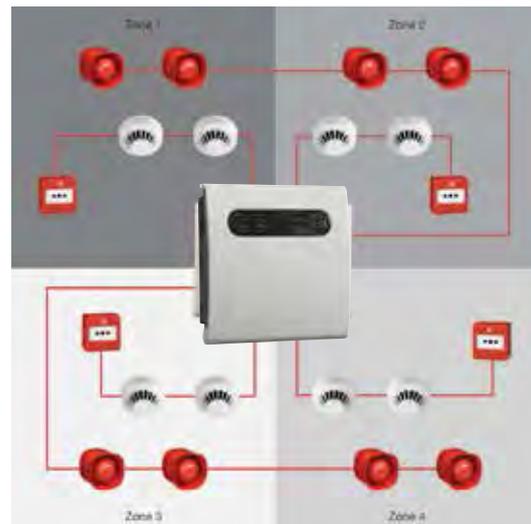


## Conventional systems (p56-75)

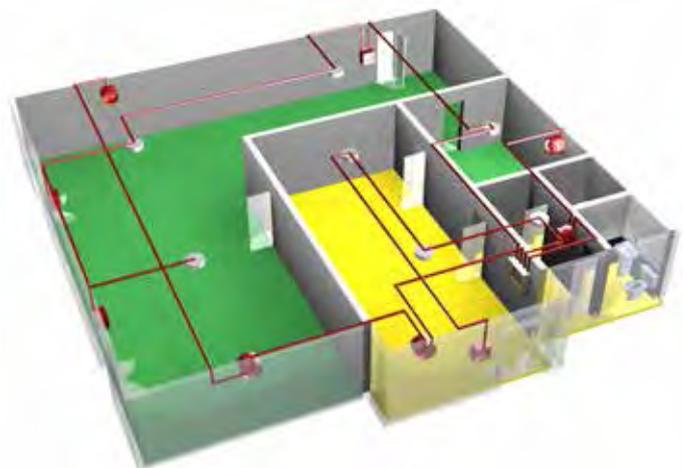
The philosophy of a conventional system revolves around dividing the building into a number of areas called zones. The detectors and call points within each zone are then wired on a dedicated separate circuit.

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 addressable system layout



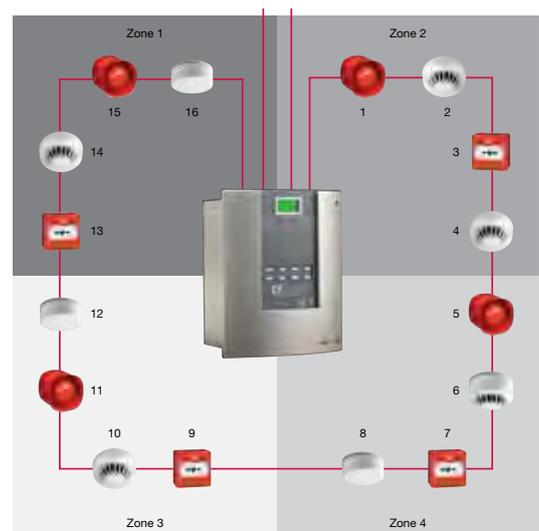
## Addressable systems (p16-41)

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.

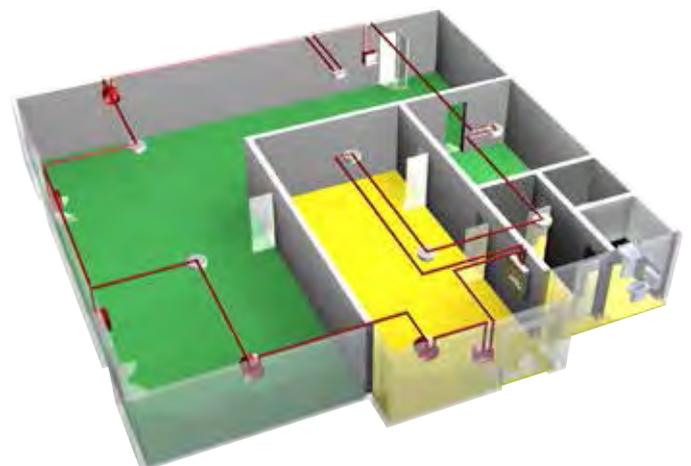
By using each devices' unique address, the control panel is able to conduct two way communication with any of the addressable devices connected to the system.

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

# Introduction

## Emergency voice communication systems



## Emergency voice communication systems (EVCS) (p76-85)

### 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 4 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 (p42-55)

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.



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## Public address/voice alarm systems (p86-91)

Under BS5839 Pt.8 2013, Voice Alarm (VA) systems are recommended for all public buildings and multi-storey 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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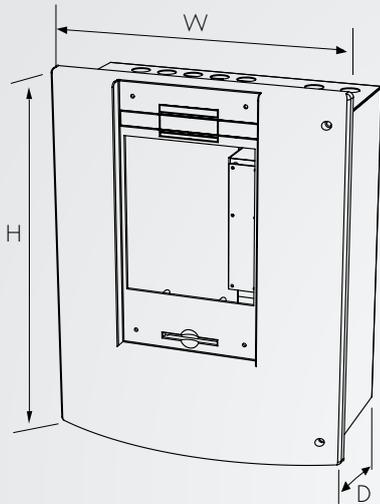


Test equipment **41**





### Dimensions



H (mm)	W (mm)	D (mm)
400	320	170

### 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	✓



# 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 our highest specification addressable panel for medium sized builds and is equipped with a versatile touch screen user interface. Available as a 1 (CF1100VDS) or 2 (CF1200VDS) loop panel, offering sophisticated functionality with simple end user operation. 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).

### 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)

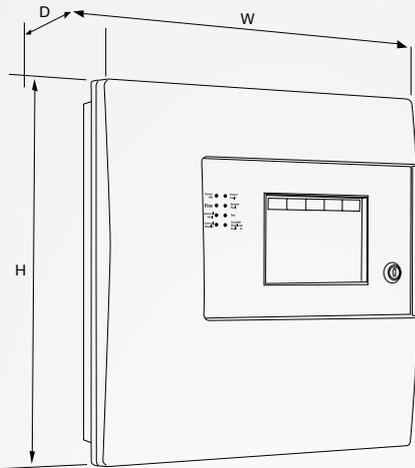
	CF1100VDS	CF1200VDS*
No. of loops	1*	2*
Addresses per loop	200**	200**
No. of conventional sounder circuits	2***	2***

\* No zonal LEDs

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

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

## 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, and 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.

	CF30001G	CF30002G	CF30004G
No. of Loops	1	2	4
Addresses per Loop	200*	200*	200*
No. of Conventional Sounder Circuits	4**	4**	4**

\* 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

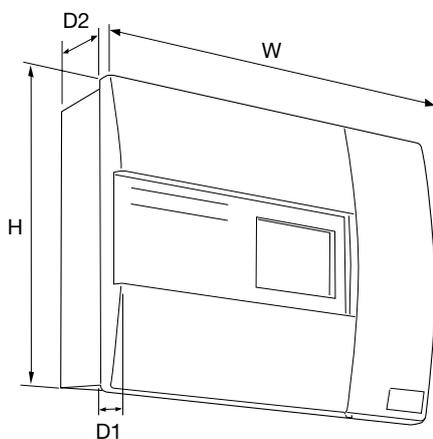
The CF3000 has both a passive and a touchscreen repeater panel available. Ideal for larger sites, the repeater allows you to display the system information at multiple locations.



Features	CF3000PRG	CTPR3000
Active or passive option	✓	✓
No programming required	✗*	✓
Programmable input	✗	✓
Integral battery and power supply	✓	✓
Supervisor and engineer modes through code access	✓	✓
Fire and fault volt free programmable relays	✗	✓
Adjustable volume from panel	✗	✓

\*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

Description	Code
1 loop control panel	CF30001G
2 loop control panel	CF30002G
4 loop control panel	CF30004G
1 loop control panel, integral printer	CF30001GP
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	CF30002GPB
4 loop control panel, integral printer, extended battery	CF30004GPB
Add to end of product code if network card required	NC
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

## 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.

### 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.

### Photo-thermal sensor CAPT340\*



#### Typical applications:

Responds quickly to fast clean burning fires.  
Maintains the advantage of optical sensors when detecting smouldering fires.

### Heat sensor CAH330

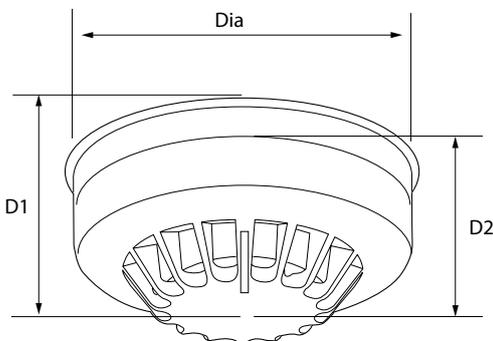


#### Typical applications:

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

\*(subject to local standards)

### Catalogue numbers

Description	Code
Optical smoke sensor	CAP320
Photo-thermal sensor	CAPT340
Heat sensor	CAH330

# Indicators

Our indicators are designed as an 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:

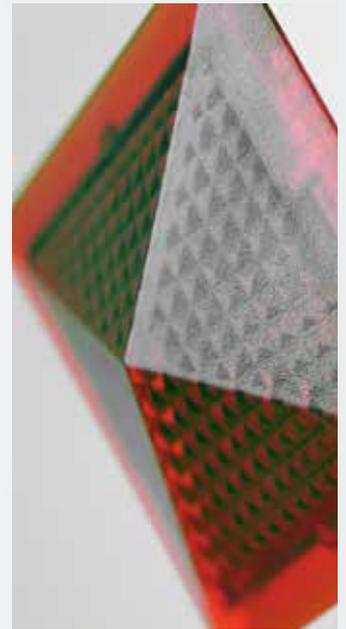
The CIR301 can only be connected to one sensor and is powered by this sensor.  
There is a weather resistant version also available. (Not IP65).

## Staff warning device CAB382



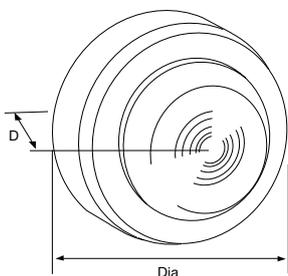
### Typical applications:

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.

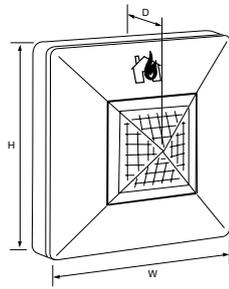


Remote indicator lens detail

## 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
Staff warning device	CAB382

## 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

### Sounder base CAS380



#### Typical applications:

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

### Sounder beacon base CASBB394



#### Typical applications:

This product is an EN54-23 certified Visual Alarm Device.  
Areas of limited extent, where lower output volume is required  
Areas with limited cable space  
Concrete ceilings, to save cabling  
Low visibility areas (note, certified VADs are a requirement as of Jan. 2014)

**This product is white flash only.**

### 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

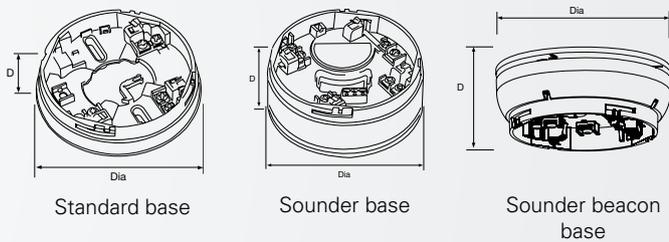
	CAB300	CAS380	CASBB394
First fix base	✓	✓	✓
Loop integrity switch	✓	✓	✓
Multiple cable entry points	✓	✗	✗
Selectable tones	✗	✓	✓

## Performance

	CAS380	CASBB394
<b>Sound output</b>		
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
<b>Flash rate</b>		
	n/a	0.5 Hz flash*

\*Polar dispersion information available on datasheet

## Dimensions



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
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



# Intelligent addressable systems

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.

### Surface/flush mounted callpoint CBG370S



#### Typical applications:

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

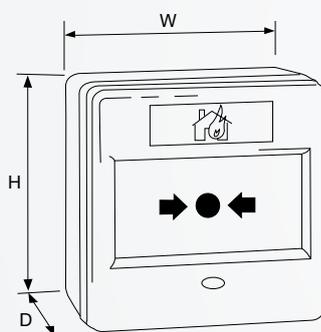
### Weatherproof callpoint CBG370WP



#### 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	✓	✓
High Visibility LED	✓	✓
Heavy duty terminals	✓	✓
Ingress protection	IP24D	IP65

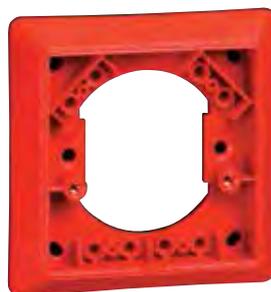
### Catalogue numbers

Description	Code
Surface/flush callpoint	CBG370S
Weatherproof callpoint	CBG370WP
Protective hinged cover (pack of 10)	CXPC
Spacer plates (pack of 10)	MBGSP
Recessing bezels (pack of 10)	MBGBEZ
Resettable element kit (pack of 10)	MBGREKIT
Spare break glasses (pack of 5)	UBSG
Callpoint keys (pack of 10)	MFBGKEY3

### 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.

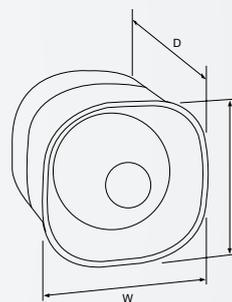
### VAD wall sounder beacon CASB393/CASB393WP



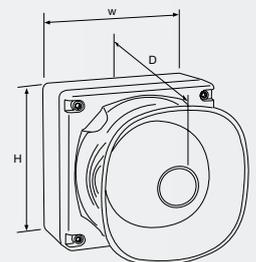
#### Typical applications:

With both an indoor and weatherproof variant, this addressable open class VAD is suitable for all markets where EN54-23 VADs are now a requirement. **White flash only.**

### Dimensions



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	CAS381B/ CAS381WPB	CAS381AU/ CAS381WPAU	CASB394B
Continuous	✓	✓	✓	✓	✓
Two tone @ 1Hz cycle	✓	✓	✓	✗	✓
Slow whoop 500-1200Hz in 3.5 seconds / 0.5secs gap	✓	✓	✗	✗	✗
Pulsed 1Hz (Virtual Tone)	✓	✓	✓	✓	✓
Pulsed sweep ISO8201 3x500ms 800-970Hz 1 1/2 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
<b>Flash rate</b>	n/a	0.5Hz Flash

### Catalogue numbers

Description	Code
Internal wall sounder	CAS381
Weatherproof wall sounder	CAS381WP
Vad wall sounder beacon	CASB393
Weatherproof VAD wall sounder beacon	CASB393WP
Internal wall sounder bell tone	CAS381B
Weatherproof wall sounder bell tone	CAS381WPB
Australian internal wall sounder	CAS381AU
Australian weatherproof wall sounder	CAS381WPAU
VAD wall sounder beacon bell tone	CASB393B
Weatherproof VAD wall sounder beacon bell tone	CASB393WPB



## Addressable fire systems

Devices - beam detectors



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

## 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.

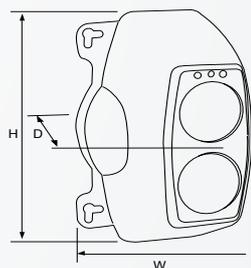
The beam detector is loop powered with one unique address, and has the ability to add address text at the panel. There is a maximum limit of 20 per loop (based on loop loading calculations).

### Addressable reflective beam detector MAB50R / MAB100R



### Dimensions

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



### 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.

## 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.

### Duct probe unit MDP201



### Typical applications:

Detecting presence of smoke in ventilation ducts.

Requires base and detector to be ordered separately.

Duct probe unit shown with optical detector fitted

### Features

	MAB50R	MAB100R
Operating range	5 to 50 metres	50 to 100 metres
Tolerance to beam misalignment at 35%	Detector $\pm 0.8^\circ$ , Prism $\pm 5.0^\circ$	Detector $\pm 0.8^\circ$ , Prism $\pm 5.0^\circ$
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

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.

### Features

Duct width range	300mm to 1500mm 5 to 50 metres
Duct air speed range	1m/s to 20m/s Detector $\pm 0.8^\circ$ Prism $\pm 5.0^\circ$
Temperature range	-20°C or +60°C
Optical wavelength	880nm

### 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

## 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 [techsupport@cooperfire.com](mailto:techsupport@cooperfire.com)

### Zone monitor unit CZMU352



#### 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.

### Spur isolator unit CSI350



#### 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.

### Shop monitor unit CSUM355



#### 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 p70). Please note: A PSU (see p38) is required to operate conventional sounder circuits.

The CSUM355 can have 2 sounder circuits, each with up to 0.3A of power.

### 3 channel I/O unit CIO351

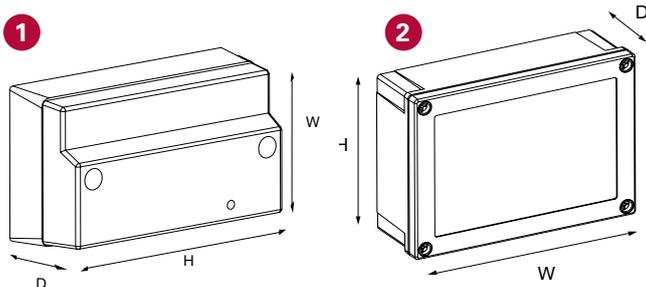


#### Typical applications:

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.

## Dimensions



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

## Catalogue numbers

Description	Code
Zone monitor unit	CZMU352
Shop monitor unit	CSUM355
Spur isolator unit	CSI350
3 channel input/output unit resets on reset (recognised as 1 address)	CIO351
3 channel input/output unit resets on reset (recognised as 3 addresses)	CIO351T
3 channel input/output unit resets on silence alarms	CIO351S
230V ac relay unit	CMIO353

---

**230V ac relay unit  
CMIO353**



**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 p60 for MAR724.

**4 to 20mA interface  
CGI420 / CGI420R**



**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.



## Interfaces continued

### Fan controller unit FC6 / FC18



#### Typical applications:

The fan controller units are designed to work with our range of intelligent addressable control panels, providing the capability to control and display the status of AHU fans.

They are connected to a control panel by means of the communications loop, utilising only one address whilst providing the ability to monitor and control up to 6/18 AHU fans.

### Technical I/O unit CFC301



#### Typical applications:

This device has been designed specifically for use with the FC6/FC18.

It meets the requirements of today's building management systems, switching controls and dampers offering manual control, cause and effect programming and monitoring capabilities when integrated with the Eaton range of control modules.

### 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.

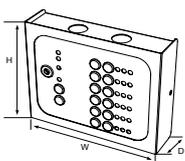
These units have an additional 4 inputs which can initiate a reset, silence, evacuate and test function.

### Dimensions

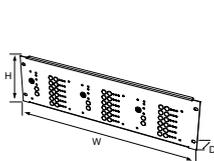
Description	H (mm)	W (mm)	D (mm)
FC6 fan controller	125	155	42
FC18 fan controller	133	482	30
CFC301 technical I/O unit	129	180	60
CIOP4/8 mimic relay board	180	244	63

### Catalogue numbers

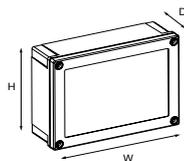
Description	Code
Fan controller unit (surface mount)	FC6
Fan controller unit (rack mount)	FC18
Fan controller unit (australia standard - supplied w/o back box)	FC6-AU
Technical input/output unit	CFC301
4 way mimic relay board, 4 inputs, 4 outputs	CIOP4
8 way mimic relay board, 8 inputs, 8 outputs	CIOP8
4 to 20mA interface	CGI420
4 to 20mA interface (relay output)	CGI420R



FC6 fan controller



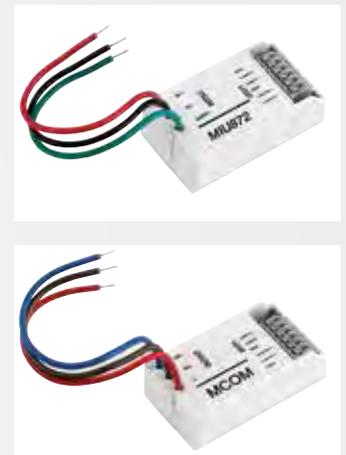
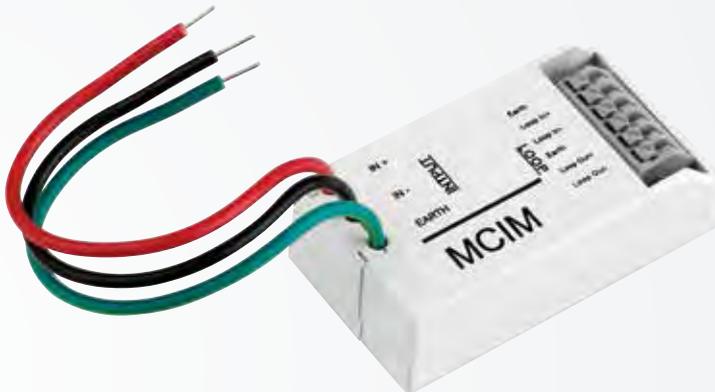
FC18 fan controller



I/O unit / mimic relay

# 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.

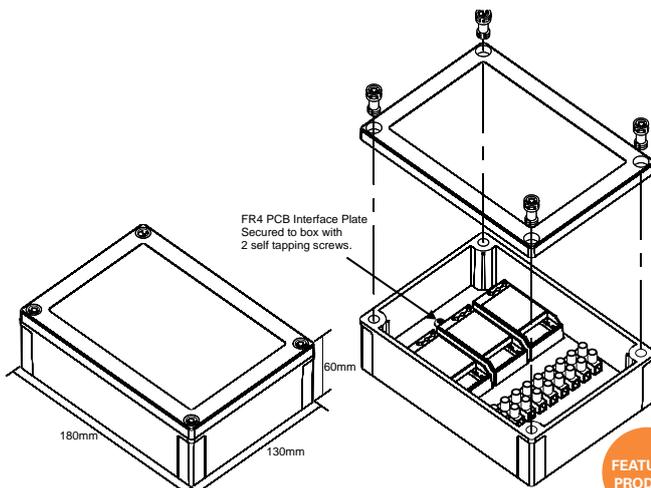
### Variants

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	MCOM	MCIM
Soft addressed	✓	✓	✓
Short circuit isolators	✓	✓	✓
Single address	✓	✓	✓

## Catalogue numbers

Description	Code
Micro zone monitor unit	MIU872
Micro single channel output unit (recognised as output unit)	MCOM
Micro single channel output unit (recognised as sounder)	MCOM-S
Micro single channel output unit (5 second reset pulse)	MCOM-R
Micro single channel input unit	MCIM
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



#### Typical applications:

The EC0232 Lon to RS232 adaptor 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 PAVA system - the ECO232PAVA with no handshaking, and the EC0232PAVA3D with a 3 min time delay.

### Dual-channel LonWorks BMS interface EC200



#### Typical applications:

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.

### TCP/IP interface EC400



#### 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.

### Lon network booster EC540



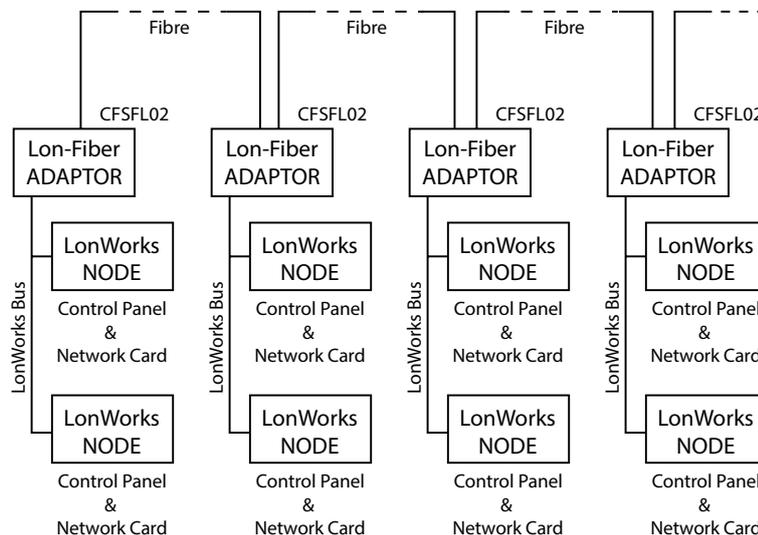
#### Typical applications:

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



## BACnet gateway EC650



### Typical applications:

The BACnet gateway (EC650) is a CEA-709/BACnet gateway which maps CEA-709 network variables (NVs) to standard BACnet server objects. When ordered with this part code (EC650), the LonWorks to BACnet address mapping is pre-loaded and ready for use with the intelligent addressable CF3000 system interface board.

## Modbus gateway EC700



### 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.

## Single mode Lon to fibre optic adapter CFSL01



### Typical applications:

The single mode Lon to fiber optic adapter (CFSL01) allows connection of the system network (LonWorks) devices through optical fibre, and to allow both point to point or multi drop topology.

## Dual channel Lon to fibre optic adapter CFSL02



### Typical applications:

The dual channel Lon to fiber optic adapter (CFSL02) allows connection of the system network (LonWorks) devices through optical fibre, and to allow both point to point or multi drop topology.

## Catalogue numbers

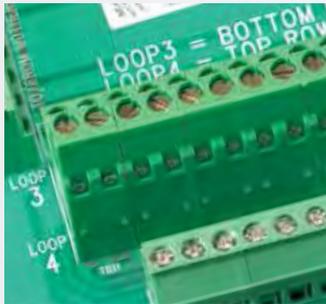
Description	Code
Dual-channel lonworks BMS interface (non handshake)	EC200
Dual-channel lonworks BMS interface (handshaking)	EC200H
Dual-channel lonworks BMS interface (self configuring for use with EC700)	EC200S
Lon to RS232 adapter	EC0232
Lon to RS232 adapter (For HMX pa/va system - no handshake)	EC0232PAVA
Lon to RS232 adapter (For HMX pa/va system - 3 min time delay)	EC0232PAVA3D

Description	Code
TCP/IP interface	EC400
Lon network booster	EC540
Bacnet gateway	EC650
Modbus gateway	EC700
Single mode lon to fibre optic adaptor	CFSL01
Dual channel lon to fibre optic adaptor	CFSL02

## Ancillaries

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

### Loop splitter unit ZPCB2222



#### 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.

### Mimic PCB ZPCB2252MML / ZPCB2252MSL



#### 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.

### EN54 pt.4 approved power supply unit FX Range



#### Typical applications:

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.

The unit is a high efficiency switching power supply; protected from overloads, polarity reversals and short circuits.

The FX range power supplies come equipped with batteries included as standard.

## Catalogue numbers

Description	Code
Loop splitter unit	ZPCB2222
Mimic PCB (master)	ZPCB2252MML
Mimic PCB (slave)	ZPCB2252MSL
24V 1.5A PSU P CASE (2 x 4Ah batteries included)	FX1-5ABP
24V 1.5A PSU G CASE (2 x 4Ah batteries included)	FX1-5ABG
24V 2.5A PSU G CASE (2 x 7Ah batteries included)	FX2-5ABG
24V 5.0A PSU G CASE (2 x 12Ah batteries included)	FX5-0ABG

Destination	Time	Status	Gate
BRUECK	13:00	A	260-338 A8
13:00	A	260-338 A23	
13:00	A	260-338 A22	
13:10	A	260-338 B26	
13:10	C	734-748 C8	
13:10	A	260-338 B1	
13:10	A	773-783 A40	
13:10	A	260-338 B58	
13:10	A	260-338 B12	
13:20	A	260-338 A42	
13:20	A	260-338 B25	
13:20	A	260-338 B60	
13:20	A	260-338 A30	
13:20	A	260-338 A14	
13:20	A	260-338 B44	
13:20	A	260-338 B31	
13:20	A	260-338 A15	
13:20	A	260-338 B61	
13:20	C	769-772 C14	
13:20	A	260-338 B45	
13:30	A	260-338 A18	
13:35	A	260-338 A	
13:35	A	260-338 A1	
13:35	A	260-338 B5	

Destination	Time	Status	Gate
SOUTHAMPTON	13:00	A	260-338 A50
ASSADON	13:00	A	260-338 A50
AMERICAN	13:00	A	260-338 A50
SANKT PETERSBURG	13:00	A	260-338 A50
DELHI	13:00	A	260-338 A50
LONDON HEATHROW	13:00	A	260-338 A50
TOKIO NARITA	13:00	A	260-338 A50
PARIS CDG	13:00	A	260-338 A50
LOS ANGELES HOUSTON	13:00	A	260-338 A50
PORTO	13:00	A	260-338 A50
ATHEN	13:00	A	260-338 A50
HONGKONG	13:00	A	501-911 Z30
HO CHI MINH CITY	13:00	A	260-338 A32
BUKAREST	13:00	E	915-920 A34
SANKT PETERSBURG	13:00	D	805-814 D1
SAN FRANCISCO	13:00	D	260-338 B33
OSAKA	13:00	D	997-999 E2
BERLIN-TEGEL	13:00	D	501-511 Z23
REYKJAVIK	13:00	A	260-338 B42
HELSINKI	13:00	A	260-338 A21
TALLINN	13:00	E	945-947 D
ORLANDO	13:00	A	260-338 A17
MOSKAU-SHEREMETYEVO	13:00	A	260-338 B10
TORONTO	13:00	E	261-983 D
MEXICO CITY	13:00	A	260-338 B
	13:00	A	260-338 B 5

Destination	Time	Status	Gate
DETROIT	13:00	A	260-338 A50
MILWAUKEE	13:00	A	260-338 A50
AGORA	13:00	A	260-338 A50
PRAG	13:00	A	260-338 A50
ATLANTA	13:00	A	260-338 A50
BARCELONA	13:00	A	260-338 A50
AMSTERDAM	13:00	A	260-338 A50
BRUSSELS	13:00	A	260-338 A50
VIENNA	13:00	A	260-338 A50
ZURICH	13:00	A	260-338 A50
STUTTGART	13:00	A	260-338 A50
ARAD	13:00	A	260-338 A50
IBIZA	13:00	A	260-338 A50

**B,C,Z Terminal** **D,E**

**A,B,C,Z Terminal** **D,E**

**A,B,C,Z Terminal** **D,E**



# Intelligent addressable systems

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.



### Graph pack software GRAPHPACK



#### Typical applications:

Graph pack software is a powerful alarm management tool and graphical user interface designed to work with many of Eaton's fire system products.

Users can monitor, control and interrogate their systems to ensure alarms are detected and dealt with quickly and efficiently.

### Site monitor SITEMONITOR



#### Typical applications:

Site monitor / webservice 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.

## Catalogue numbers

Description	Code
Graph pack software (lite)	GRAPHPACK1-2LITE
Graph pack software (1 panel)	GRAPHPACK1
Graph pack software (2-5 panels)	GRAPHPACK2-5
Graph pack software (6-10 panels)	GRAPHPACK6-10
Graph pack software (11-20 panels)	GRAPHPACK11-20
Graph pack software (21-99 panels)	GRAPHPACK21-99
Graph pack and site monitor	GRAPHPACKSITEMON
Site monitor / webservice software	SITEMONITOR

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

## 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



#### 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).

### Addressable device programmer CF800PROG



FEATURED  
PRODUCT

#### 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 x 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

### Catalogue numbers

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 PAVA and BMS integration.

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# ULCF3000 series

## UL listed control panels



ULCF3000RM (wall mount red metal)



ULCF3000 (wall mount graphite)

FEATURED  
PRODUCT

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.

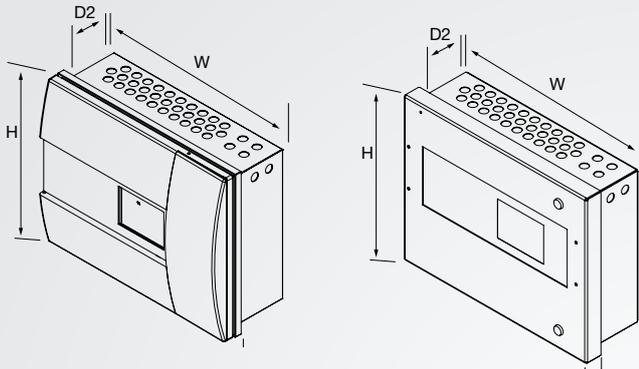
The control panel has the ability to support complex cause and effect programming. A wide range of user controllable functions make the system ideal for a diverse range of projects, from industrial applications through to large multi-site commercial developments.

### 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  
  
**LISTED**  
4AC5  
FIRE ALARM  
EQUIPMENT

### Dimensions



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



### Compatible repeater panels

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.



### Features

	ULCF300PR	ULCTPR3000
Active or passive option	x	✓
No programming required	✓*	✓
Multi language capability	x	✓
Allows networking with other Eaton fire panels	x	✓
Integral power supply	✓	✓

\*Except local text information



### Catalogue numbers

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

## 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.

### Optical smoke sensor ULCAP320



#### 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

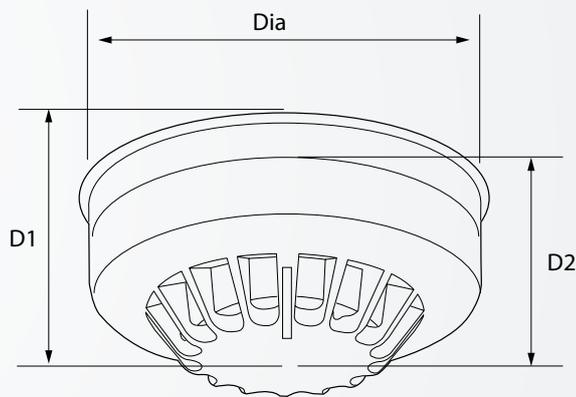


Addressable base detail

## 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

## Catalogue numbers

Description	Code
Optical smoke sensor	ULCAP320
Photo-thermal sensor	ULCAPT340
Heat sensor	ULCAH330
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 (page 55) 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.

### Photo-thermal detector UCPT-2W



#### 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.

### Additional heat detector options

#### Code

UCHTI-2W:  
Fixed heat, 194°F detector

UCHR-2W:  
Rate of rise & fixed heat 135°F

UCHRI-2W:  
Rate of rise & fixed heat 194°F

## Performance

Heat class	UCPD-2W	UCPT-2W	UCHT-2W	UCHTI-2W	UCHR-2W	UCHRI-2W
Heat element rating	N/A	135°F	135°F	194°F	135°F	194°F
Heat detector spacing	N/A	50ft (heat alone operation)	50ft	50ft	50ft	50ft
Mounting position	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas

### Conventional detector base CB2E

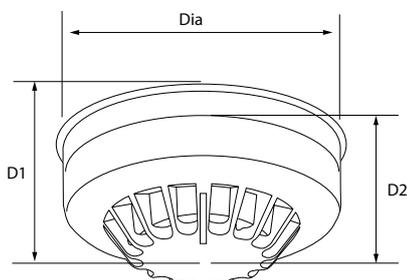


#### Typical applications:

The CB2E has been specifically designed for compatibility with our UL range of conventional detectors. They will both 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

### Catalogue numbers

Description	Code
2 wire detector, optical	UCPD-2W
2 wire detector, opto-heat	UCPT-2W
2 wire detector, fixed heat 135°f	UCHT-2W
2 wire detector, fixed heat 194°f	UCHTI-2W
2 wire detector, rate of rise and fixed heat 135°f	UCHR-2W
2 wire detector, rate of rise and fixed heat 194°f	UCHRI-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 HNWC



#### Typical applications:

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

### Wall mount horn strobe/synchronised strobe HSR/STR



#### Typical applications:

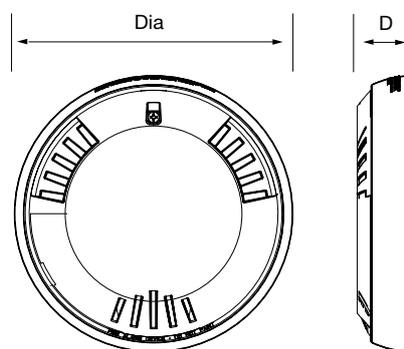
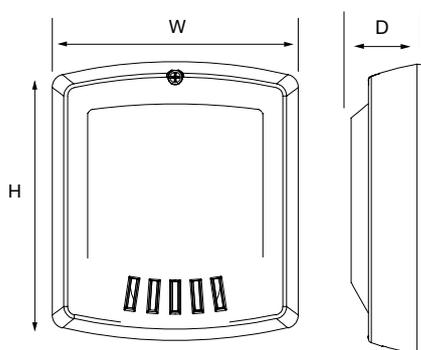
With the range of settings for both audio and visual purposes, these products are effectively 9 models in 1 appliance. With this functionality, and both ceiling and wall mount options available, it will meet almost any build requirements.

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

### Ceiling mount horn strobe/synchronised strobe HSWC/STWC



## Dimensions



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

Description	Diameter (mm)	Depth (mm)
Ceiling mount horn HNWC	166	34
Ceiling mount horn/ synchronised strobe HSWC/STWC	166	34

## Wall mount outdoor synchronised strobe RSSWP-2475W-FR



## Ceiling mount outdoor synchronised strobe RSSWP-2475C-FW



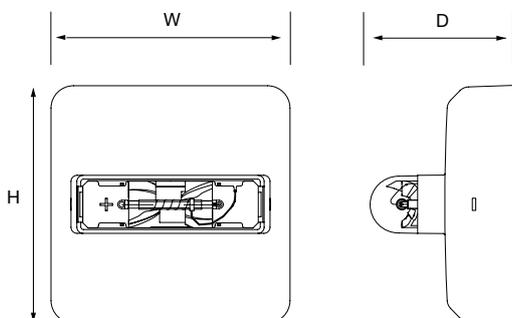
### Typical applications:

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



Description	H (mm)	W (mm)	D (mm)
RSSWP*	131	131	110

\*Both wall mount and ceiling mount variants

### Catalogue Numbers

Description	Code
Wall mount horn	HNR
Ceiling mount horn	HNWC
Wall mount horn strobe	HSR
Ceiling mount horn strobe	HSWC
Wall mount synchronised strobe	STR
Ceiling mounted synchronised strobe	STWC
Wall mount outdoor synchronised strobe	RSSWP-2475W-FR
Ceiling mount outdoor synchronised strobe	RSSWP-2475C-FW
Exposed conduit, surface mount	WPSBB
Concealed conduit surface mount	WPSBB + WPKIT
Back box, flush mount	WFP

## 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.

### Single action conventional pull station

**UCMPS-100**



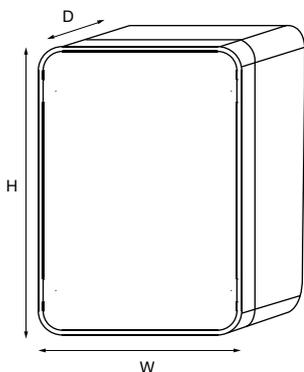
#### Typical applications:

Cost effective conventional version of the single action pull station, must be used in conjunction with ULMIU872.



Pull station detail

## Dimensions



H (mm)	W (mm)	D (mm)
--------	--------	--------

118	80	80
-----	----	----

## Catalogue numbers

Description	Code
Single action pull station (addressable)	UMPS-100
Weatherproof single action pull station	UMPS-100WP
Single action pull station (conventional)	UCMPS-100
Double action pull station	UMPS-200
Micro zone monitor unit	ULMIU872
Micro single channel output unit (recognised as output unit)	ULMCOM
Micro single channel output unit (recognised as sounder)	ULMCOM-S
Micro single channel input unit (recognised as input unit)	ULMCIM
Micro single channel input unit (recognised as callpoint)	ULMCIM-C
Mini module box unit (empty box)	ULBU



## 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; [techsupport@cooperfire.com](mailto:techsupport@cooperfire.com)

### 4 Way Sounder Controller Unit ULCSC354



#### Typical applications:

The unit connects a zone of suitable conventional detectors 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 the devices used are compatible.

### Zone monitor unit ULCZMU352



#### Typical applications:

The unit connects a zone of suitable conventional detectors 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 the devices used are compatible.

### Shop monitor unit ULCSUM355



#### 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



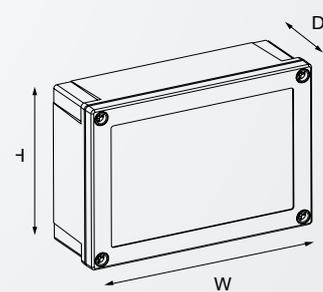
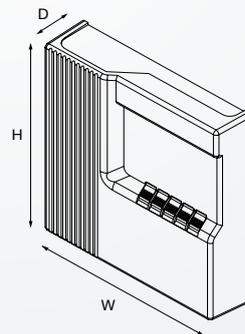
#### Typical applications:

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

## 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



#### 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.

### Micro Single Channel Input Units ULMCIM/ULMCIM-C



#### Typical applications:

The Micro Single Channel Input Unit (ULMCIM) 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.

The ULMCIM-C is identified by the panel as a call point and is designed for use with pull stations.

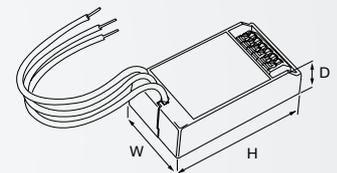
### Micro zone Monitor unit ULMIU872



#### Typical applications:

The Micro Zone Monitor Unit (ULMIU872) is suitable for monitoring a zone of up to 20 UL approved conventional detectors.

### Dimensions



H (mm)	W (mm)	D (mm)
65	35	18.5

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

## Catalogue numbers

Description	Code
4 way sounder controller unit	ULCSC355
Zone monitor unit	ULCZMU352
Shop monitor unit	ULCSUM355
Spur isolator unit	ULCSI350
3 Channel input/output unit resets on reset	ULCIO351
3 Channel input/output unit rests on silence alarms	ULCIO351S
120V/230V ac relay u.nit	ULCMIO353

Description	Code
Micro zone monitor unit	ULMIU872
Micro single channel output unit (recognised as output unit)	ULMCOM
Micro single channel output unit (recognised as sounder)	ULMCOM-S
Micro single channel input unit (recognised as input unit)	ULMCIM
Micro single channel input unit (recognised as callpoint)	ULMCIM-C
Mini module box unit (empty box)	ULBU



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## FXP4000 series Conventional control panel



"A high specification system with the flexibility to make it suitable for a large range of projects"

FEATURED PRODUCT

The FXP4000 series panels are fully certified to EN54 parts 2 & 4. The panel is the perfect 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.

### Benefits

- Flexible, high specification system
- Very easy to maintain and service
- Suitable for a large range of projects
- No fuses required
- Maintenance free poly switch circuit protection, with auto reset
- Class change and programmable fire/fault relay as standard
- Discreet panel design
- Numerical access code (no lost keys)
- The 8 zone variant features configurable zonal relay card option and interlink
- Supplied complete with battery for 24 hour standby

	FXP4002	FXP4004	FXP4008
No. of zones	2	4	8
Detectors per zone	30	30	30
No. of alarm circuits	2	2	4

### Compatible Repeater Panel

The FXP4000 series includes a repeater panel (FXPRP4000) which is compatible with the 8 zone 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.

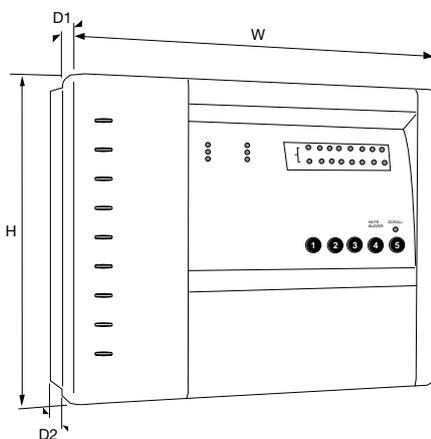


### Features

- Charger with built in temperature compensation
- Test mode in operation
- Zones or alarm lines in disabled mode
- Zone fire and fault conditions
- Requires only a single pair of wires to receive signals from the main control panel, plus local mains power supply, reducing installation cost



### Dimensions



	H (mm)	W (mm)	D1 (mm)	D2 (mm)
2/4/8 zone panel	270	332	45	47
Cut-out	265	327	-	-

**Note:** If surface mounting add D1 and D2 to obtain depth dimension

### Catalogue numbers

Description	Code
2 zone control panel	FXP4002
4 zone control panel	FXP4004
8 zone control panel	FXP4008
Repeater panel (only compatible with 8 and 16 zone panel)	FXPRP4000
Steel back box	FX22003300 MB
Fire alarm system log book	MFALOG

## Conventional systems

FXP5000 series

# FXP5000 series

## Conventional control panel



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

The new FXP5000 series of conventional control panel is currently available in 8 and 16 zone versions. Each 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.

### Benefits

- Built in detector removal indication facility
- One man test facility
- Non latching zone feature
- Class change input
- Earth fault monitoring
- Fire and fault relays
- Discreet enclosure
- Short circuit fire by zone
- Supplied complete with battery for 24 hour standby

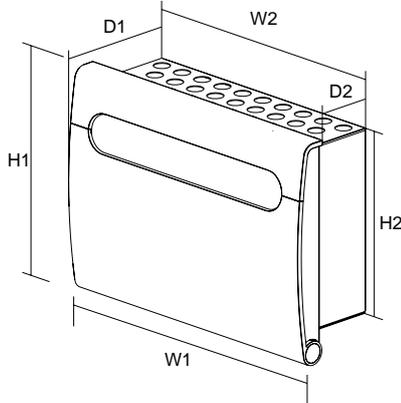
	FXP5008	FXP50016
No. of zones	8	16
Detectors per zone	30	30
No. of alarm circuits	4	4
Zonal relay card	✓	✓

### Compatible repeater panel

The FXP5000 series includes a repeater panel (FXP5000RP) which is compatible with the standard 8 and 16 zone 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.



### 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
8 Zone	276	375	108	232	335	68
16 Zone*	276	375	136	232	335	96

\*Repeater panel dimensions same as 16 zone control panel

### Catalogue numbers

Description	Code
8 zone control panel	FXP5008
16 zone control panel	FXP50016
Repeater panel (only compatible with 8 zone panel)	FXP5000RP
Fire alarm system log book	MFALOG

## Conventional systems

Devices - detectors and remote indicator

# 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 p64 for compatible bases.

### 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.

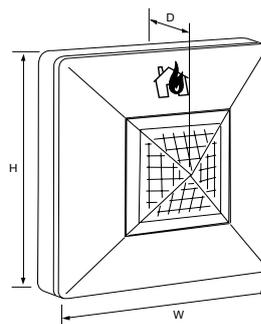
### Remote indicator FX251D



#### 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.

### Dimensions

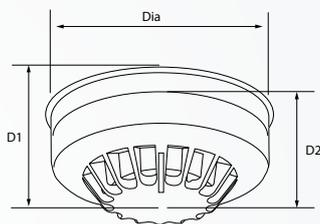


Description	H (mm)	W (mm)	D (mm)
Remote indicator	87	87	49

## 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	A2R	BS	CS
Alarm temperature	N/A	60 °C	60 °C	77 °C	92 °C

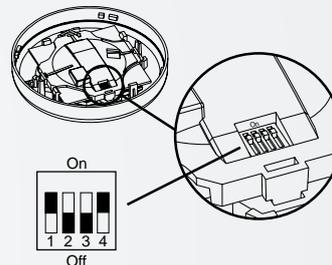
## Dimensions



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



## Catalogue numbers

Description	Code
5 in 1 Multi-Mode Detector	FXN922
Optical Smoke Detector	FXN533
Photo-Thermal Detector	FXN632
Rate of Rise Heat detector	FXN525
Fixed Heat Detector 77 °C	FXN524
Fixed Heat Detector 92 °C	FXN526
Remote Indicator	FX251D
Weatherproof Remote Indicator	FX251DWP

## Conventional systems

Devices - bases and beam detectors

### 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.

#### Standard base FXN520



#### Typical applications:

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

#### Relay base FXN520R



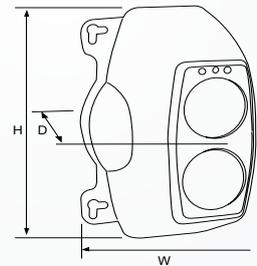
#### Typical applications:

Areas where a local response is required.

### Beam detectors

There are two zone powered reflective beam detectors designed to be fully compatible with our conventional control panels. The MB50R has a range of up to 50 meters and the MB100R 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.

#### Conventional reflective beam detector MB50R / MB100R

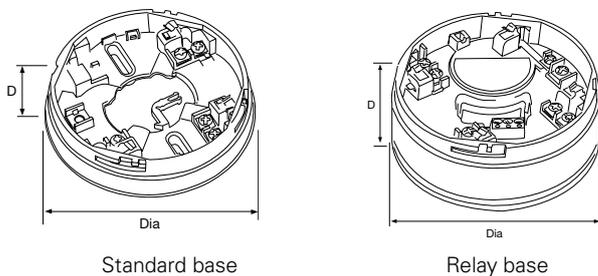


#### Typical applications:

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

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

### Dimensions



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

### Features

	MBD50R	MBD100R
Operating range	5 to 50 metres	50 to 100 metres
Tolerance to beam misalignment at 35%	Detector $\pm 0.8^\circ$ , prism $\pm 5.0^\circ$	Detector $\pm 0.8^\circ$ , prism $\pm 5.0^\circ$
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

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 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 $\pm 0.8'$ Prism $\pm 5.0'$
Temperature range	-20°C or +60°C

### Catalogue numbers

Description	Code
Standard base	FXN520
Sounder base	FXN520R
Reflective beam detector (50m range)	MB50R
Reflective beam detector (100m range)	MB100R
Mounting bracket	MRBFP
Duct probe unit	MDP201



Duct probe units can be used to detect the presence of smoke in a ventilation duct

## Conventional systems

Devices - callpoints

# 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 callpoint FX201



#### Typical applications:

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

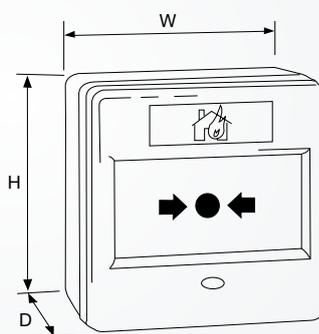
### Weatherproof callpoint FX203



#### 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

	FX201	FX203
Fast fit clip	✓	✓
Heavy duty terminals	✓	✓
Ingress protection	IP24D	IP65

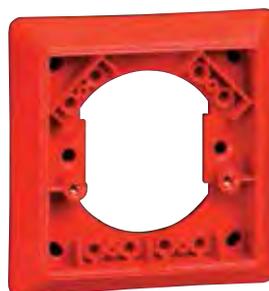
### Catalogue Numbers

Description	Code
Surface/flush callpoint	FX201
Weatherproof callpoint	FX203
Protective hinged cover (pack of 10)	CXPC
Spacer plates (pack of 10)	MBGSP
Recessing bezels (pack of 10)	MBGBEZ
Resettable element kit (pack of 10)	MBGREKIT
Spare break glasses (pack of 5)	FX5G
Earth continuity links (pack of 5)	MBG119
Callpoint keys (pack of 10)	MFBGKEY3

### Further accessories:



Callpoint shown with protective hinged cover



Callpoint recessing bezel

# Bells

Bells still remain a popular choice for many applications such as schools 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.

## Weatherproof 8 inch bell MWB824

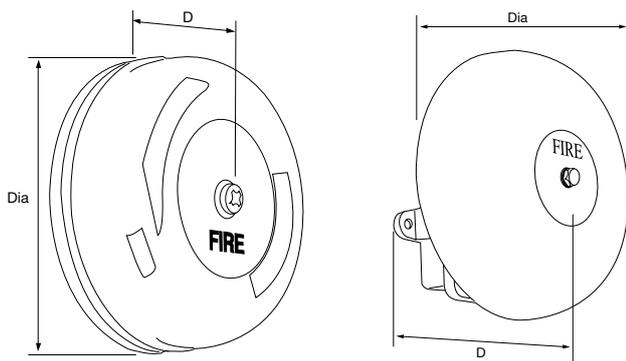


### Typical applications:

Enables a common bell sound to be achieved throughout a complete site, including areas where a weatherproof device is required.



## Dimensions



Internal 6 inch bell

External 8 inch bell

Description	Dia (mm)	D (mm)
6 inch internal bell	152	63
8 inch weatherproof bell	200	104

## Sound output

	FX006	MWB824
Sound Output	93-95dB(A) at 24V dc	95dB(A) (+/-2)

## Catalogue numbers

Description	Code
Internal 6 inch bell	FX006
Weatherproof 8 inch bell	MWB824

## Conventional systems

Devices - sounders

# Sounders

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.

### Flush sounder FX003



#### Typical applications:

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

### Surface sounder FX002SB



#### Typical applications:

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

### Weatherproof surface sounder FX002DB



#### 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.

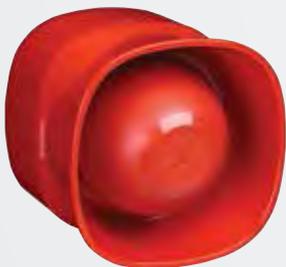
### High output wall sounder FX007



#### 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.

### Base mountable sounder FXN824



#### 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/sounder-beacon is required.

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

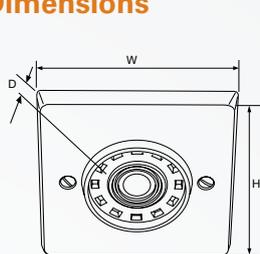


Wall sounder detail

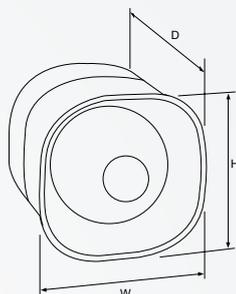
## Sound output

	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) 114dB(a) (+/-2) Max at 1m (tone3)	100dB(a) at 24V dc	80/90dB(a) (+/-3) @ 1 Metre
Tones	32	32	32	3	8

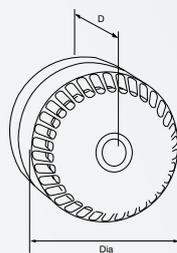
## Dimensions



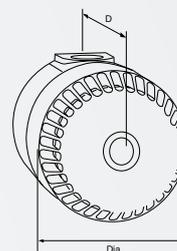
Flush sounder



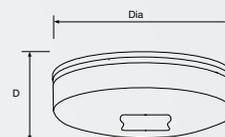
Wall sounder



Surface sounder



Weatherproof surface sounder



Base mountable 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

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

## Catalogue Numbers

Description	Code
Flush sounder, red	FX003
Flush sounder, white	FX003W
Back box for FX003, red	MFSSBB
Low profile surface sounder, red	FX002SB
Weatherproof deep base surface sounder back box, red (IP65)	FX002DB
High output wall sounder	FX007
Low current wall sounder	MLC624
Base mountable sounder	FXN824
Blanking plate for MDS824 (pack of 5)	MDS824COV



## Conventional systems

Devices - EN54-23 visual alarm devices

# Visual alarm devices (VADs) FEATURED PRODUCTS

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.

### Solista LX wall FXSOLWRS



#### 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.

### 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.

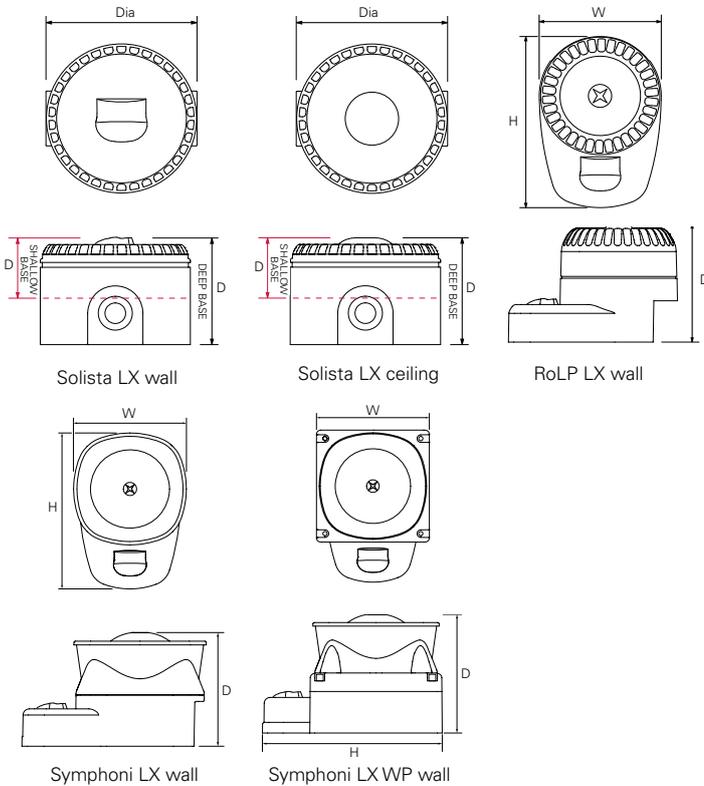
These products are all **red flash**, for more options please contact:

[techsupport@cooperfire.com](mailto:techsupport@cooperfire.com)

## Performance

	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)				

## Dimensions



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 deep base	93	65	-	-
Solista LX ceiling shallow base	93	37	-	-
RoLP LX wall	-	95	95	135
Symphoni LX wall	-	92	106	147
Symphoni LXWP wall	-	92	106	147

## Catalogue numbers

Description	Code
Solista wall red body shallow base	FXSOLWRS
Solista wall red body deep base	FXSOLWRD
Solista wall red body U shaped base	FXSOLWRU
RoLP wall red body base and sounder	FXROLPWR
RoLP wall red body base only	FXROLPWR-B
Symphoni LX wall red body	FXSYG1WR
Symphoni LX wall base red body	FXSYR-B
Symphoni LX wall weatherproof red body	FXSYG1WR-WP
Symphoni LX wall weatherproof base red body	FXSYR-B-WP



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)



## Conventional systems

Devices - indicators

# 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 LED indicator MLB124DB

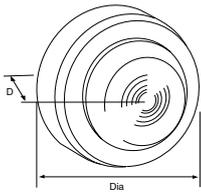


#### Typical applications:

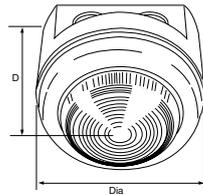
The weatherproof version of the LED indicator provides an IP65 option ideal for outdoor use.



## Dimensions



Low profile LED indicator



Weatherproof LED indicator

**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 p70**

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

## Catalogue numbers

Description	Code
Low profile LED beacon	MLB124B
Weatherproof LED beacon	MLB124DB

# 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.

## LED sounder indicator FL-RL-R-S



### Typical applications:

In regions where the EN54-23 VADs standard is not a requirement, the LED sounder indicator provides an alternative option to the xenon indicator. The LED light source is low current to help with reducing the total current draw.

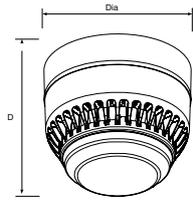
## Weatherproof LED sounder indicator FL-RL-R-D



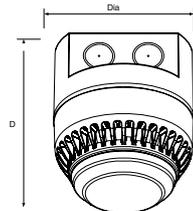
### Typical applications:

The weatherproof version of the sounder indicator is IP65 rated which allows for installation in harsher environments.

## Dimensions



LED sounder indicator



Weatherproof LED sounder indicator

Description	W (mm)	D (mm)
LED sounder indicator	93	80
Weatherproof LED sounder indicator	95	109

## Sound output

### LED sounder indicator, FL-RL-R-S/FL-RL-R-D

Sound output	102dB(a) (typical tone 3)
Tones	32

## Catalogue numbers

Description	Code
Low profile led sounder indicator	FLRLR-S
Weatherproof IP65 led sounder indicator	FLRLR-D

## Conventional systems

Devices - door retainers and relay unit

# 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.

### Heavy duty door retainer MDR240/MDR24L



#### Typical applications:

Robust and simple to install, the heavy duty door retainer is ideal for a wide range of applications, such as nursing homes, hospitals, schools and industrial premises.

### Compact door retainer FX02124LC/ FX02124VLC



#### Typical applications:

Equally as reliable, the compact door retainer is also a good choice for nursing homes, hospitals and also busy corridors.

### Heavy duty relay unit MAR724



#### Typical applications:

Designed for interfacing heavy loads such as door release units or plant shut down equipment with fire alarm systems.

This unit is simple to fix and install and the neat unobtrusive design makes it suitable for use in a wide range of areas.

The heavy duty relay unit is powered by 24V dc external supply and is provided with 2 separate sets of changeover contacts.

Can switch 230V ac mains at 10A

## Performance

	MDR240	MDR24L	FX02124LC	FX02124VLC
Holding force	40kg	40kg	45kg	40kg
Power consumption	1.2VA	40mA	1.2VA	40mA

## Catalogue numbers

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	FX02124LC
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 FX Range



### Typical applications:

The unit is a high efficiency switching power supply; protected from overloads, polarity reversals and short circuits.

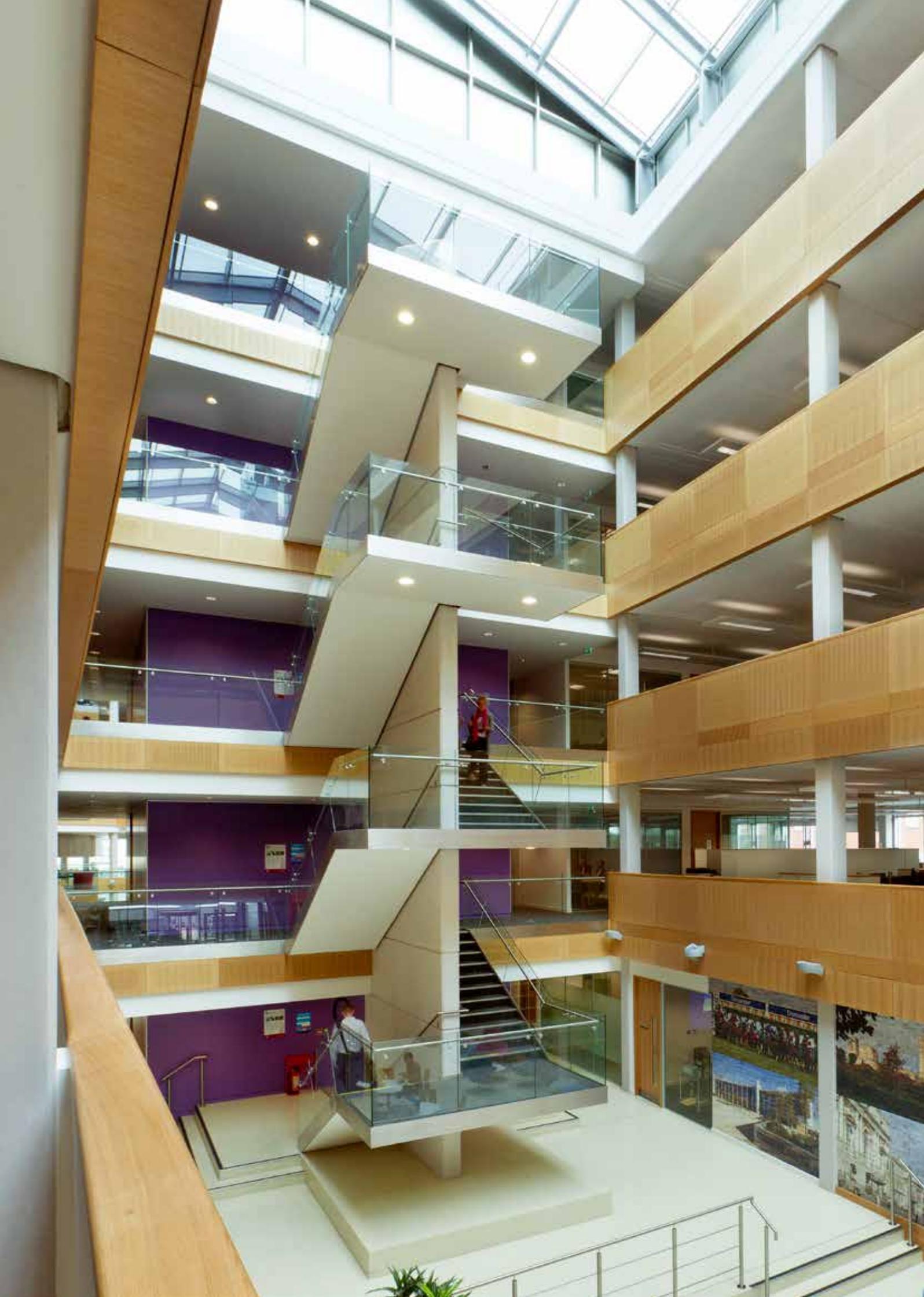
The FX range power supplies come equipped with batteries included as standard.

### Catalogue numbers

Description	Code
24V 1.5A PSU P CASE (2 x 4Ah batteries included)	FX1-5ABP
24V 1.5A PSU G CASE (2 x 4Ah batteries included)	FX1-5ABG
24V 2.5A PSU G CASE (2 x 7Ah batteries included)	FX2-5ABG
24V 5.0A PSU G CASE (2 x 12Ah batteries included)	FX5-0ABG



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



# Contents

## Emergency voice communications

### Panels

Network exchange units **78**



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### Devices

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Emergency assist alarm **84**



# Network exchange units

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 MX10 is our networkable unit, along with the 10 way slave unit (NX10) it can be networked to up to 320 lines.

### Network master handset EFVCWSMX10



NEW  
PRODUCT

### Network master desk mount variant EFVCMX10



NEW  
PRODUCT

Each system can have up to 16 VoCALL Network Master Handsets which gives great flexibility to the larger installations allowing all calls to be monitored from various control points. As an example, an installation may have security offices requiring a master handset, reception and numerous entrances that need to be monitored.

- Wall or desk mount
- Clear, 4 line backlit display which shows the calling outstation name
- Calls can be made by dialling or selecting the outstation name

### 10 line network exchange unit EFVCNX10



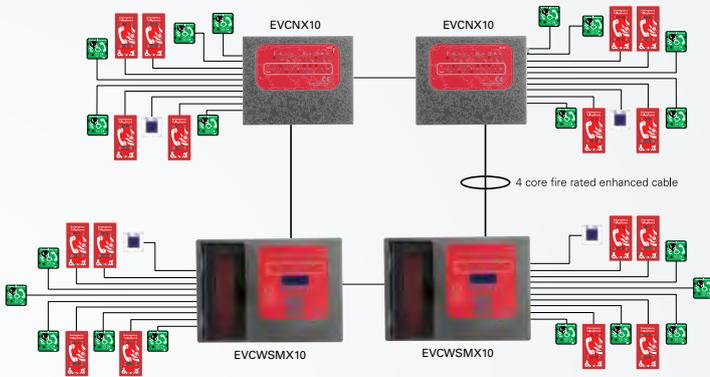
NEW  
PRODUCT

The VoCALL Network 10 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 10 lines can be connected to each distributed exchange, and each line is fully monitored for open, short or earth faults. Up to 31 10 Line Exchange Units can be attached to a VoCALL Network master system giving a maximum system size of 320 independent lines.

## System architecture



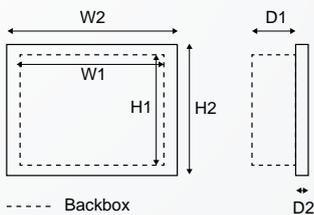
This example system architecture for the networkable exchange units can be scaled up. Maximum lines: 320

Maximum handsets: 16

## Features

Up to 16 network master handsets per system	✓
Monitored handset	✓
Directory dual function	✓
Dual network ports	✓
Mains powered, EN54-4 battery backup	✓
4 core fire rated enhanced cable	✓
Can be wired in a loop, complying with BS5839 Pt9 2011	✓

## Dimensions



Description	H1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	D1 (mm)	D2 (mm)
VoCALL 10 line networkable master system desk mounted	73	-	316	-	278	-
VoCALL 10 line networkable master system surface mounted	280	-	397	-	77	-
VoCALL 10 line networkable master system flush mounted	280	309	397	427	77	16
VoCALL 10 line network ready exchange unit surface mounted*	256	-	281	-	90	-

\*Please check with our technical team if dimensions for the NX10 are critical as they may have changed from time of print

## Catalogue numbers

Description	Code
VoCALL 10 line networkable master system, desk mount, graphite	EFVCMX10
VoCALL 10 line networkable master system, wall surface mount, graphite	EFVCWSMX10
VoCALL 10 line networkable master system, wall flush mount, graphite	EFVCWFMX10
VoCALL 10 line networkable master system, surface mount, stainless steel	EFVCWSMX10SS
VoCALL 10 line networkable master system, flush mount, stainless steel	EFVCWFMX10SS
VoCALL 10 line network ready exchange unit, graphite	EVCNX10

## Emergency voice communications

Master exchange units (non networkable)

# 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 ESVCC5 and EFVCM10 are our non-networkable standalone options for small and medium sized builds.

### VoCALL Compact 5 ESVCC5



NEW  
PRODUCT

### VoCALL 10 way master exchange unit EFVCM10



NEW  
PRODUCT

#### Typical applications:

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

The non-network standalone systems are comprised of a Master Exchange Unit and outstations (Type A, Type B, Emergency Assist Alarms or in Far East and Middle East applications jack plates). The diagram here shows an example system architecture for a 5 way panel.

#### Typical applications:

The VoCALL Compact 10 Line Master Unit is ideal for small to medium sized installations which don't require the complexity of a full network solution.

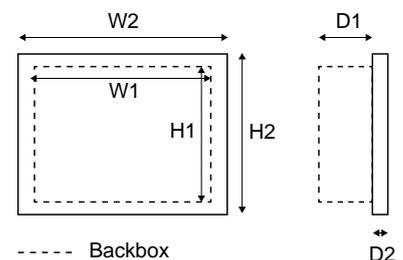
The 5 way unit requires no programming and the 10 requires minimal programming so they are very easy to use units. They are both fitted with end of line resistors which are simply discarded when an outstation is connected making installation quick and simple.

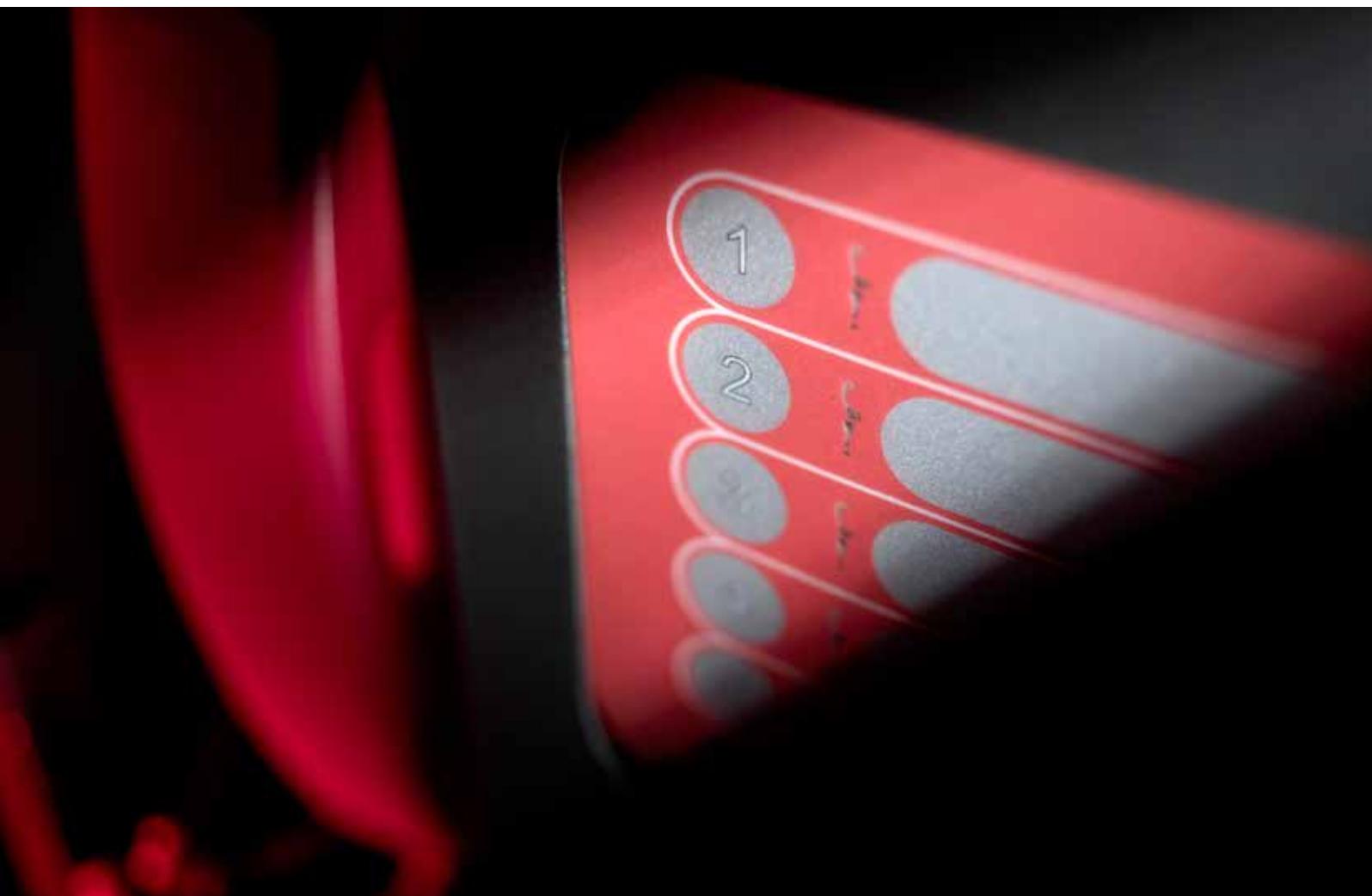
## Features

	Compact 5	Compact 10
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)	D1 (mm)	D2 (mm)
VoCALL Compact 5 surface mounted	280	-	397	-	77	-
VoCALL Compact 5 flush mounted	280	309	397	427	77	16
VoCALL 10 line master exchange unit desk mounted	73	-	316	-	278	-
VoCALL 10 line master exchange unit surface mounted	280	-	397	-	77	-
VoCALL 10 line master exchange unit flush mounted	280	309	397	427	77	16





## Catalogue numbers

Description	Code	Description	Code
VoCALL compact 5 line master exchange unit, non-network, surface mount, graphite	ESVCC5	VoCALL 10 line non-network, master exchange unit , wall surface mount, graphite	EFVCWSM10
VoCALL compact 5 line master exchange unit, non-network, flush mount, graphite	EFVCC5	VoCALL 10 line non-network, master exchange unit, wall flush mount, graphite	EFVCWFM10
VoCALL compact 5 line master exchange unit, non-network ,surface mount, stainless steel	ESVCC5SS	VoCALL 10 line non-network, master exchange unit, wall surface mount, stainless steel	EFVCWSM10SS
VoCALL compact 5 line master exchange unit, non-network, flush mount, stainless steel	EFVCC5SS	VoCALL 10 line non-network, master exchange unit, wall flush mount, stainless steel	EFVCWFM10SS
VoCALL 10 line, master exchange unit, non-network, desk mount, graphite	EFVCM10		

# 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



#### 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.

### Type B outstation CFVCSHF



#### 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).

### Combined Type A & B outstation CFVCDUO



#### Typical applications:

For situations where both a fire telephone and a disabled refuge point are required in the same location.

In normal use the Type B Green disabled refuge point operates and rings, however if the door is opened and the Fire telephone handset is lifted, a call from the handset is directed to the control point instead.

### Roaming handset and jack plate CFVCRJP/CFVCRHS

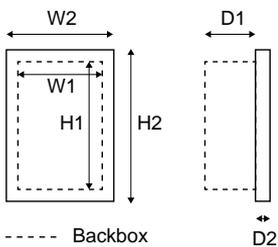


#### Typical applications:

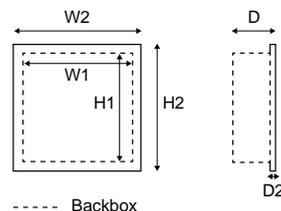
When used together, the roaming handset and jack plate form a Type A outstation. This can be used in countries whose fire codes allow for roaming handsets.

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

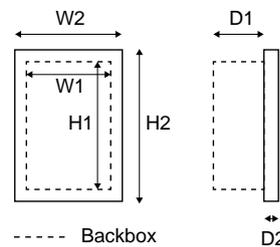
## Dimensions



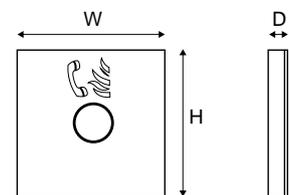
Type A outstation



Type B outstation



Duo outstation



Jack plate

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
Duo outstation backbox	480	-	190	-	82	-
Duo outstation flush mounted	480	494	190	204	82	2
Jack plate	86	-	86	-	25	-



### Catalogue numbers

Description	Code	Description	Code
VoCALL Type A outstation, surface mount, red	CFVCSHP	VoCALL Type B outstation, surface mount, red	CFVCSHF
VoCALL Type A outstation, surface mount, stainless steel	CFVCSHPSS	VoCALL Type B outstation, surface mount, green	CFVCSHFG
VoCALL Type A outstation, flush mount, red	CFVCFHP	VoCALL Type B outstation, surface mount, stainless steel	CFVCSHFSS
VoCALL Type A outstation, flush mount stainless	CFVCFHPSS	VoCALL flush mounting bezel for use with any Type B outstation, stainless steel	CFVCFHB
VoCALL Type A uncased red handset	CFVCHFS	VoCALL combined Type A and Type B flush mount outstation	CFVCDUO
VoCALL Type A outstation, IP65 lockable, surface mount, red	CFVCIPA	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 the VoCALL products.



Our emergency assist alarm kits supply everything you need to install a fully compliant system.

### 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 and PSU

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.

The Emergency Assist Power Supply Unit (PSU) is designed to power the 4 way splitter. When using the 4 Way Splitter each disabled toilet does not need its own PSU as each toilet is powered by the 4 way splitter.

## EAA VoCALL kit CFVCEA



## EAA standalone kit CFEAPULLKIT



## 4 way splitter CFEASL4



## High current PSU CFEAPSU



### 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 p80)

### Typical applications:

Disabled Toilets.

Includes:

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

### Typical applications:

Builds with multiple disabled toilets.

### Typical applications:

Is used to power up to 4 stand alone pull kits (CFVCEA).



Power supply unit



Over door indicator



Cancel button



Pull cord unit

## Catalogue numbers

Description	Code
Emergency assist alarm - vocall kit	CFVCEA
Emergency assist alarm - stand alone kit	CFEAPULLKIT
4 way splitter	CFEASL4
High current power supply unit	CFEAPSU
Low current power supply unit	CFEAPSUKIT
Over door indicator	CFEAODI
Cancel button	CFEARSP
Pull cord accessory pack	CFEACORD
Disabled sticker (pack of 5)	CFEADS



Emergency assist alarm stand alone kit, basic usage schematic





# Contents

## Voice alarm system

### Panels

Distributed amplifier unit **88**



Emergency mic all call **88**



### Devices

Speakers **90**



## Voice alarm system

CFVDAU - voice distributed amplifier unit

# VoCALL voice alarm control units

FEATURED PRODUCTS

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) CFVADAU



The VoCALL Voice 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, fire interface, single or dual 50W monitored amplifiers, 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 available and paged from the All Call CFVAEMA fire microphones.

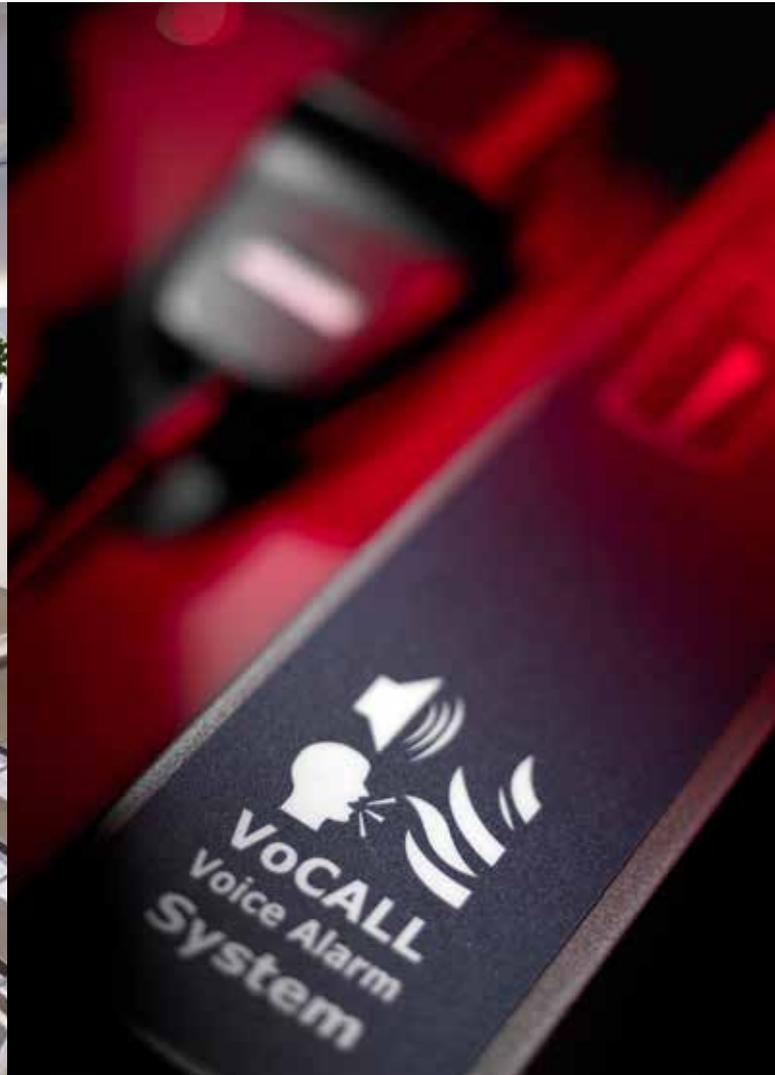
- Can function as a stand alone or networked system
- EN54-16 and EN54-4 LPCB certified for CPD
- BS5839 part 8 compliant
- Single or dual 50W 100V line outputs
- 3 Messages (65 Seconds) or 130 second with new module
- Dual VoCALL voice network ports
- Wall mounted
- Common fault out
- Paging input
- Full fault monitoring
- EN54-4 battery charging and monitoring
- Direct music input
- Music ramping

## Emergency microphone all call (EMA) CFVAEMA

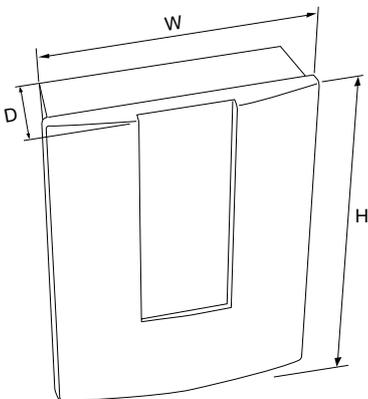


The VoCALL Voice EMA is designed to provide an All Call emergency microphone as the top two priorities of the VoCALL Voice DAU network. The pre-amplifier is a high quality compressor limiter, which prevents the system from being overdriven by poor microphone use, it also corrects for quiet speakers. Tone controls allow the microphone to be equalised for maximum clarity and the chime is selectable (1,2 or 3 note) and the level controlled independently of the voice level.

- EN54-16 CPD certified by LPCB
- Dual VoCALL voice network ports
- Fully monitored
- Close coupled noise cancelling fist microphone
- Studio quality compressor limiter
- Wall mounted enclosure
- Bass and treble controls
- Selectable 1, 2 or 3 note chime
- Secure controls inside panel
- Three message buttons and cancel
- Compliant high visibility signage
- BS5839 pt8 compliant



### Dimensions



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

### Catalogue numbers

Description	Code
50W single channel addressable DAU	CFVADAU50
2 x 50W dual addressable DAU	CFVADAU100
Emergency microphone all call	CFVAEMA

# Speakers

Whether the call is for discrete 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.

### Vandal resistant loudspeaker SAFEV6-EN



#### Typical applications:

Recommended for voice evacuation systems, these units are ideally suited for use in shopping centres, prisons, schools, railway stations etc.

### Sound projector PAC15-EN/RAC15-EN



#### Typical applications:

With rugged construction, these units are ideally suited for use in corridors, passageways, shopping centres, prisons, car parks, railway stations and other public places.

The RAC-15, robust bi-directional speaker has a slide fitting mounting bracket whereas the PAC-15 projector speaker has a fitted U-bracket.

### Weatherproof column loudspeaker CM20-EN



#### Typical applications:

Designed for installation with the kind of appeal normally associated with foreground music, these weatherproof speakers can be used in airports, the rail industry, churches, small theatres and other places of entertainment.

### Ceiling loudspeaker MC range



#### Typical applications:

Ideal for general public address, background music and voice evacuation systems.

These 10W speakers come in a variety of sizes from 4" to 6" in diameter, designated by the part codes MC4-EN, MC5-EN and MC6-EN.

## Performance

Feature	SAFEV6-EN	RAC15-EN	PAC15-EN	CM20-EN	MC4-EN	MC5-EN	MC6-EN
Output	100dB at 10W	98dB at 15W	104dB at 20W	101db at 20W	100dB at 10W	103dB at 10W	103dB at 10W
Sensitivity	90dB at 1W	90dB at 1W	92dB at 1W	88dB at 1W	90dB at 1W	93dB at 1W	93dB at 1W
IP rating	IP66	IP54	IP54	IP65	N/A	NA	N/A

## Catalogue numbers

Description	Code
Vandal resistant loudspeaker	SAFEV6-EN
Bi-directional speaker	RAC15-EN
Projector speaker	PAC15-EN
20W weatherproof column speaker	CM20-EN
4" ceiling loudspeaker	MC4-EN
5" ceiling loudspeaker	MC5-EN
6" ceiling loudspeaker	MC6-EN



# General terms and conditions for the sale of goods

## 1. Scope

1.1. These general terms and conditions for the sale of goods (the "Terms") shall apply to any sale by Eaton (together with any of its affiliated entities, subsidiaries or holding companies referred to as "Eaton") of any Eaton products (the "Supplies") to the person or entity placing an order with Eaton which is accepted by Eaton under these Terms (the "Buyer"). The Buyer and Eaton are collectively referred to as the "Parties" and each individually as a "Party".

1.2. Eaton shall only be bound and an agreement for the sale of Supplies between Eaton and the Buyer on these Terms shall only be concluded once Eaton accepts, in writing, any purchase order(s) placed by the Buyer for any Supplies (the "Acceptance").

1.3. Notwithstanding any language to the contrary in the Buyer's standard terms and conditions of purchase, in any purchase order, any correspondence or any other form of acknowledgment, the Buyer shall be bound by these terms and any other terms and conditions are hereby expressly rejected and excluded.

1.4. No variation to these Terms shall be binding unless agreed in writing by an authorised representative of Eaton. Prior dealings, usage of the trade or a course of performance shall not be relevant to determine the meaning of this contract even though the accepting or acquiescing party had knowledge of the nature of the performance and opportunity for objection.

1.5. The scope of the sale (the quantity, part number(s), price(s) and description of the Supplies) shall be as set out or as referred to in the Acceptance.

## 2. Price, Terms of Payment and Set -Off

2.1. The price of the Supplies shall be the price set out in the Acceptance or, where no price has been set out, the price listed in Eaton's published price list current at the date of the Acceptance.

2.2. Unless otherwise agreed by Eaton in writing, all prices shall be Ex Works (Incoterms 2010) and shall include packaging costs.

2.3. The price is exclusive of Value Added Tax or any other applicable tax which the Buyer shall pay in addition when it is due to pay for the Supplies.

2.4. Eaton shall issue an invoice for the Supplies upon shipment. The price shall be paid free from any deductions or set-off to Eaton's bank account within 30 (thirty) days of the date of invoice unless otherwise specified or referred to in an Acceptance. Time for payment shall be of the essence. If the due date for payment calculated in terms of this clause 2.4 falls on a Saturday, Sunday or public holiday, payment shall be due on the last business day immediately preceding the relevant Saturday, Sunday or public holiday. Payment shall not be deemed to have been made until Eaton has received sums due to it in full in cleared funds.

2.5. If the Buyer fails to make any payments as and when they fall due under these Terms, Eaton may, without prejudice to its other rights (i) suspend performance of its obligations under these Terms until such payments have been made; and (ii) charge interest on such overdue amounts at a rate of 8% above the European Central Bank's reference rate per annum from the due date to the date of payment in full.

2.6. Eaton shall be entitled in its sole discretion to set off any payments due from Eaton to the Buyer from time to time from any receivables due from the Buyer to Eaton. The Buyer shall not be entitled to set off any payments due to Eaton from the Buyer without the prior written agreement of Eaton.

2.7. Acceptance of all orders is subject to the Buyer meeting Eaton's credit requirements. Terms of payment are subject to change for failure to meet such requirements. Eaton reserves the right at any time to demand full or partial payment before proceeding with a sale if in the judgment of Eaton, the financial condition of the Buyer does not justify the terms of payment specified.

## 3. Minimum Billing

3.1. Orders less than five hundred (500) Euro or local currency equivalent will be assessed a shipping and handling charge of five (5) % of the price of the order, with a minimum charge of twenty five (25) Euro or local currency equivalent unless noted differently by Eaton on Acceptance.

## 4. Delivery

4.1. Unless otherwise agreed in writing by Eaton, delivery shall be made by Eaton Ex Works (Incoterms 2010) at Eaton's warehouse as notified to the Buyer. Supplies must be collected by the Buyer within fourteen (14) days of notification by Eaton of the Supplies being ready for collection.

4.2. As notified to the Buyer any dates quoted for delivery of the Supplies are approximate only and may not be made of the essence by notice. Eaton shall not be liable for any delay in delivery of the Supplies howsoever caused. If no delivery dates are specified, delivery will be within a reasonable time.

4.3. If Eaton is satisfied that the Supplies have been short delivered, Eaton shall at its option:-

4.3.1. make up any short delivery by dispatching to the Buyer such Supplies as Eaton is satisfied were not delivered; or

4.3.2. allow the Buyer credit in respect thereof.

4.4. Eaton's liability shall be limited to making up the delivery or allowing credit as above.

4.5. Where the Supplies are to be delivered in instalments, each delivery shall constitute a separate contract and defective delivery by Eaton of any one or more of the instalments in accordance with these Terms shall not entitle the Buyer to treat these Terms as a whole as repudiated.

4.6. If Eaton fails to deliver the Supplies for any reason (other than the Buyer's fault) and Eaton is accordingly liable to the Buyer, Eaton's liability shall be limited to the excess (if any) of the cost to the Buyer (in the cheapest available market) of similar goods to replace those not delivered over the price of the Supplies.

4.7. If the Buyer fails to take delivery of the Supplies or fails to give Eaton adequate delivery instructions at the time stated for delivery (otherwise than by reason of any cause beyond the Buyer's reasonable control or by reason of Eaton's fault) then, without prejudice to any other right or remedy available to Eaton, Eaton may:-

4.7.1. require payment on any reasonable basis, including but not limited to the selling price, and any additional expenses, or costs resulting from such a delay;

4.7.2. store the Supplies until actual delivery at the sole cost and risk of the Buyer and charge the Buyer for the reasonable costs (including handling and insurance) of storage; or

4.7.3. sell the Supplies at the best price readily obtainable and (after deducting all reasonable storage and selling expenses) account to the Buyer for the excess over the price under these Terms or charge the Buyer for any shortfall below the price under these Terms; and

4.7.4. payment of any amounts contemplated in clauses 4.7.1, 4.7.2 or 4.7.3 shall be due by the Buyer within thirty (30) days from the date of Eaton's invoice.

4.8. If Eaton holds any of the Supplies contemplated in clause 4.7 on the Buyer's behalf in excess of 3 (three) months from the time stated for delivery, Eaton shall be entitled to terminate the agreement in respect of such Supplies. In the event that any part of the price for such Supplies was paid by the Buyer prior to such termination, Eaton shall repay such amounts after deducting all costs incurred by Eaton in respect of such Supplies prior to termination.

4.9. The Buyer shall not refuse to receive Supplies due to minor defects.

4.10. Buyer shall provide any information and documents required for export, transport and import purposes.

## 5. Title and Risk

5.1. Title to all Supplies shall be retained by Eaton until all amounts due to Eaton in respect of such Supplies, including any charges or interest, are paid in full.

5.2. Until ownership of the Supplies has passed to the Buyer, the Buyer must hold the Supplies for Eaton's benefit taking all reasonable measures to keep the Supplies in a satisfactory condition to the reasonable satisfaction of Eaton.

5.3. The Buyer shall not be entitled to pledge or in any way charge by way of security for any indebtedness any of the Supplies which remain Eaton's property, but if the Buyer does so all monies owing by the Buyer to Eaton shall, without prejudice to any of Eaton's other rights or remedies, become due and payable immediately.

5.4. To the extent that any provision of furnishing security to Eaton is invalid according to the laws where the Supplies that are retained by Eaton are located, any other security which is recognised by the local law and which gives Eaton an equivalent safeguard, shall be deemed to have been agreed upon between the Buyer and Eaton. The Buyer shall be bound to perform all acts and take all steps necessary for the creation and upholding of security rights for the benefit of Eaton.

5.5. Risk of any loss or damage to the Supplies shall pass from Eaton to the Buyer upon the delivery of the Supplies in accordance with the applicable Incoterm (Incoterms 2010) set out or referred to in the Acceptance.

## 6. Returning Products

Authorisation and shipping instructions for the return of any Supplies must be obtained from Eaton in writing before any Supplies may be returned to Eaton by the Buyer.

## 7. Intellectual Property Rights

7.1. Each Party shall remain the owner of its Background IP and nothing contained in this Agreement shall imply any transfer of title of Background IP. Eaton shall be the sole owner of all Foreground IP and shall have full title to such rights.

7.2. The Buyer shall not do or authorise any third person to do any act which would or might damage or be inconsistent with the trademarks (which term for purposes of these Terms shall include but not be limited to trademarks, trade names, service marks, logo marks, trade dress other trade names, whether registered or unregistered) used by Eaton in relation to the Supplies or to the goodwill associated therewith and, in particular, will not do or authorise the alteration, obliteration, covering up or incorporation of other marks (in whole or in part) on to the Supplies. The Buyer shall not use or authorise any third person to use the trademarks used by Eaton in relation to the Supplies on any stationery, advertising, promotion or selling material other than the Supplies or other such materials supplied by Eaton to the Buyer. All advertising, promotion and selling materials supplied by Eaton to the Buyer shall remain the property of Eaton and the Buyer shall not permit any other person to make use thereof. The use in any form of the name "EATON" or Eaton's logo in the official name, company name, trading or business name, domain name or other similar name of the Buyer requires the prior written approval of Eaton.

7.3. The Buyer agrees to inform Eaton promptly about any infringement of any of Eaton's trademarks or other Intellectual Property Rights or of any act of unfair competition of which the Buyer has knowledge. Eaton and the Buyer shall then jointly decide on appropriate action. The Buyer agrees to assist in every way possible in legal actions taken by Eaton or its affiliated entities in this regard.

7.4. If any claim is made against the Buyer that the Supplies infringe or that their use or resale infringes the rights of any third party, Eaton may (at its option) either secure the Buyer's right to continue to use the Supplies or replace or modify the Supplies to make them non-infringing, or if neither of these alternatives is reasonably available to Eaton, refund the purchase price.

## 7.5. In these Terms:

7.5.1. "Background IP" means any intellectual property and Intellectual Property Rights existing before the date of the Acceptance, and any Intellectual Property Rights generated after the date of Acceptance but outside the scope of these Terms;

7.5.2. "Foreground IP" means all intellectual property and Intellectual Property Rights generated under these Terms; and

7.5.3. "Intellectual Property Rights" means any intellectual and industrial property rights including, but not limited to, copyright, moral rights and neighbouring rights, all rights in relation to: inventions (including patent rights and utility models), trademarks, confidential information (including trade secrets and know how), drawings, prototypes, algorithms, software, mask works and semiconductor topographies and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic field, afforded by law anywhere in the world whether registered or unregistered or capable of registration and all applications therefore.

## 8. Termination, Cancellation and Changes

8.1. Without prejudice to any other rights of termination provided herein, the agreement between the Parties under these Terms may be terminated immediately at any time effective upon written notice under the following conditions:

8.1.1. by either Party if the other Party commits a material breach of these Terms, and such breach is not cured within 30 business days of written notice of such breach, if such breach is not reasonably subject to cure within 30 business days, the Party in breach has not commenced a continuous good faith effort to cure the default;

8.1.2. by either Party if the other Party commits any act of bankruptcy or has a receiver, administrative receiver or manager, administrator appointed or compounds with its creditors or takes or suffers any similar action in consequence of debt or if being a company it enters into liquidation whether compulsorily or voluntarily, in which event any outstanding amounts under these Terms shall become immediately due and payable notwithstanding any previous agreement or arrangement to the contrary.

8.2. The Parties may agree to make changes to an order after Acceptance in writing from time to time.

# General terms and conditions for the sale of goods

## 9. Warranty

9.1. Unless otherwise agreed in writing by the Parties, Eaton warrants to the Buyer that the Supplies shall be free from defects in design, material, and workmanship ("Defects"), under normal use, for a maximum period of 24 months ("Warranty") from the date of invoice for such Supplies. Eaton shall, subject to the provisions of these Terms and for the duration of the Warranty, remedy any material Defect in the Supplies resulting from faulty design, material or workmanship which impairs the functioning of the relevant Supplies. There shall be no claims based on Defects in cases of insignificant deviations, of only minor impairment of usability or from non-reproducible software errors.

9.2. This limited Warranty shall not apply to any Supplies or component thereof which:

9.2.1. has been repaired or altered outside of Eaton's factory in any manner so as, in Eaton's sole judgment, to affect its serviceability;

9.2.2. has been subject to alteration, accident, misuse, abuse, neglect or abnormal wear;

9.2.3. has been installed, operated or used in a manner contrary to Eaton's instructions, or due to failure to follow Eaton's instructions for operation and maintenance; or

9.2.4. has been subjected to abnormal or unusual physical or electrical stress or environmental conditions misused or negligently handled or operated.

9.3. Eaton shall not be liable for damage due to third party acts, atmospheric discharges, excess voltage, chemical influences and for loss and damage in transit. The Warranty does not cover the replacement of parts subject to normal wear and tear. Eaton gives no warranty for the sale of used Supplies. If the Supplies are manufactured by Eaton on the basis of design data, design drawings, models or other specifications supplied by the Buyer, Eaton's warranty shall be restricted to non compliance with the Buyer's specifications as approved by Eaton under these Terms.

9.4. Eaton's sole obligation and Buyer's sole remedy under the Warranty shall be, at Eaton's option and discretion, to either repair or replace at no additional charge, the defective Supplies (or the defective part of the Supplies) thereof, which is proved to breach such Warranty.

9.5. EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, EATON MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, REGARDING THE SUPPLIES, THEIR FITNESS FOR ANY PARTICULAR PURPOSE, THEIR MERCHANTABILITY, THEIR QUALITY, THEIR NON INFRINGEMENT, OR OTHERWISE.

9.6. The Buyer shall expressly not have any claim with regard to expenses incurred in the course of supplementary performance, including costs for travel, transport, labour, and material, to the extent that expenses are increased because the subject-matter of the Supplies has subsequently been brought to another location than the place of delivery.

9.7. All drawings, descriptive matter, specifications and advertising issued by Eaton and any descriptions or illustrations contained in Eaton's catalogues or brochures are issued or published for the sole purpose of giving an approximate idea of the Supplies described in them. They will not form part under these Terms in general or this Warranty specifically. Eaton may make any changes in the specifications, design or materials of the Supplies which are required to conform with any applicable safety or other statutory requirements, or where the Supplies are to be supplied to Eaton's specifications, which do not in Eaton's reasonable opinion materially affect the quality or performance of the Supplies.

9.8. The Buyer shall only have a claim for damage based on Defects within the limits set forth in these Terms.

## 10. Liability

10.1. THE REMEDIES OF THE BUYER UNDER THESE TERMS ARE EXCLUSIVE AND ARE IT'S SOLE REMEDIES FOR ANY FAILURE OF EATON TO COMPLY WITH ITS OBLIGATION HEREUNDER.

10.2. SUBJECT TO CLAUSE 10.4, IN NO EVENT, WHETHER UNDER CONTRACT, STATUTORY LAW OR TORT, SHALL THE AGGREGATE LIABILITY OF EATON UNDER THESE TERMS EXCEED THE PRICE PAID IN RESPECT TO THE SUPPLIES TO WHICH SUCH LIABILITY RELATES. THIS LIMIT OF LIABILITY IS CUMULATIVE AND NOT PER-INCIDENT (I.E. THE EXISTENCE OF TWO OR MORE CLAIMS WILL NOT ENLARGE THIS LIMIT). FURTHERMORE, IT APPLIES CUMULATIVELY TO ALL OF EATON'S AFFILIATED ENTITIES.

10.3. SUBJECT TO CLAUSE 10.4, IN NO EVENT, WHETHER UNDER CONTRACT, STATUTORY LAW OR TORT, SHALL EATON OR ITS AFFILIATED ENTITIES, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, BE LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFIT, LOSS OF USE, LOSS OF PRODUCTION OR PENALTY PAYMENTS.

10.4. NOTHING IN THESE TERMS SHALL EXCLUDE OR LIMIT EATON'S LIABILITY FOR (I) DEATH OR PERSONAL INJURY CAUSED BY ITS NEGLIGENCE, (II) FRAUD OR FRAUDULENT MISREPRESENTATION AND/OR (III) ANY OTHER LIABILITY WHICH CANNOT BE EXCLUDED BY APPLICABLE LAW.

10.5. CLAIMS FOR DAMAGES ARISING FROM A BREACH AS SET FORTH IN CLAUSE 7.3 SHALL BE LIMITED TO THE FORESEEABLE DAMAGE WHICH IS INTRINSIC TO THE RESPECTIVE BREACH.

## 11. Transfer of Rights and Obligations; Indemnification

11.1. The Buyer is only entitled to transfer any rights to its customers resulting out of these Terms within the limits set forth herein. Any obligations exceeding these Terms remain at the sole responsibility of the Buyer. The Buyer shall provide the user (including its employees) of the Supplies with all Eaton supplied product notices, warnings, instructions, recommendations and similar materials.

11.2. The Buyer shall indemnify and hold Eaton harmless from and against all losses, claim damages or other costs of any nature or kind whatsoever (including attorneys' fees) arising from a breach of any provision of these Terms by the Buyer or the negligence, misconduct or actions of the Buyer, its officers, employees, agents or contractors. The same applies to any loss, cost or expenses incurred by Eaton for claims made by any customer of the Buyer to the extent that such loss, cost or expense is in excess of the liability limits set forth in these Terms including, without limitation, the provisions of the Warranty.

## 12. Export Regulations and Anti-Corruption

12.1. The performance of any obligations under these Terms is conditional upon that no hindrances attributable to applicable local, United Nations (UN) or United States of America (US) or otherwise applicable national, European Union or international rules of foreign trade law or any sanctions or any embargoes exist.

12.2. The Buyer shall comply with all laws as set forth in clause 12.1. The Buyer shall not take any action which could place Eaton or any other associated company in jeopardy of breaching or violating any such laws, regulations, provisions and/or acts or any interpretations thereof.

12.3. The Buyer shall not – without the prior written consent of Eaton – support or sell, directly or indirectly, products to customers in the military sector or to customers, which may use the products for military purposes. 12.4. The Buyer agrees to comply fully with all applicable laws, including (but not limited to) the jurisdiction in which the Buyer is registered, the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. The Buyer agrees to comply with Eaton's Worldwide Anti-Corruption Policy and Worldwide Gift & Entertainment Policy, copies of which are available on request.

12.5. The Buyer shall observe at all times Eaton's Code of Ethics and related policies, copies of which are available upon request.

12.6. The Buyer agrees to indemnify, defend and hold Eaton harmless from any breach of the Buyer's obligations under this clause 12.

## 13. Force Majeure

13.1. If Eaton is prevented, hindered or delayed from or in performing any of its obligations under these Terms (other than a payment obligation) by a Force Majeure Event, Eaton's obligations under these Terms are suspended while the Force Majeure Event continues and to the extent that it is prevented, hindered or delayed.

13.2. "Force Majeure Event" means an event beyond the reasonable control of Eaton including, without limitation, strike, lock out, labour dispute, (but excluding strikes, lockouts and labour disputes involving employees of Eaton, supply difficulties and delays, breach of contract or disputes with the sub-contractors of Eaton, act of God, war, riot, civil commotion, malicious damage (but excluding malicious damage involving the employees of Eaton) compliance with a law or governmental order, rule, regulation or direction, accident, breakdown of plant or machinery fire, flood, storm and difficulty or increased cost in obtaining workers, goods or transport.

13.3. Where a Force Majeure Event in the meaning of clause 13.2 substantially changes the economic importance of the contents of the Supplies or considerably affect the Buyer's business, the contract shall be adapted taking into account the principles of reasonableness and good faith. To the extent this is not justifiable for economic reasons; Eaton shall have the right to rescind the contract. If Eaton intends to exercise its right to rescind the contract, it shall notify the Buyer thereof without undue delay after having realized the repercussions of the event; this shall also apply even where an extension of the delivery period has been agreed with the Buyer.

## 14. Confidentiality and Announcements

14.1. "Confidential Information" means all information (whether communicated in writing, verbally, electronically or by any other means and whether communicated directly or indirectly), including information in connection with these Terms and the transactions contemplated therein, or any related agreement, which by its nature is intended to be for the knowledge of the receiving Party alone, which is marked as "confidential" or "proprietary" or which is otherwise confidential, and all information concerning the business transactions and the financial arrangements of any Party with any person with whom that Party is in a confidential relationship with regard to the matter in question.

14.2. Neither Party, including but not limited to its affiliated entities, owners, managers and employees shall, without the prior written consent of the disclosing Party, for any purpose other than the proper performance of its obligations under these Terms make use of or disclose or permit the use or disclosure to any third party of any trade secrets or other Confidential Information, whether relating to the method of operation or business of the other Party or the Supplies which it may receive or obtain either directly or indirectly, or make any public announcement, communication or circular concerning the transactions to which these Terms shall apply. This obligation shall remain in force after fulfilment of the Supplies with no limitation on time, but shall not apply to any information which (i) was publicly known at the time of disclosure to the receiving Party or becomes publicly known through no fault of the receiving Party subsequent to the time of communication thereof to the receiving Party; (ii) was in the receiving Party's possession free from any obligation of confidence at the time of communication thereof to the receiving Party; (iii) is developed independently by the receiving Party or its affiliates, and without reference to any of the disclosing Party's Confidential Information or other information that was disclosed in confidence to any third party, as evidenced by contemporaneous written records; (iv) required by law, by a rule of a listing authority or stock exchange to which either Party is subject or submits provided that only such Confidential Information as is strictly required is disclosed; or (v) is rightfully obtained by the receiving Party from third party authorised to make disclosure thereof without restrictions.

14.3. A disclosing Party has no liability or responsibility for errors or omissions in, or any decisions made by the receiving Party in reliance on any Confidential Information disclosed under these Terms. No warranties of any kind (whether express, implied or statutory) are made in connection with the Supplies as to the accuracy or completeness of the Confidential Information disclosed.

## 15. Governing Law and Jurisdiction

15.1. These Terms, their interpretation and any contractual or non-contractual obligations arising out of or in connection with them are governed by and shall be construed in accordance with the laws of England without regard to any conflict of law rules.

15.2. Any dispute arising directly or indirectly out of these Terms shall be resolved exclusively by the competent courts in England.

## 16. General

16.1. If any provision of these Terms is held to be invalid or unenforceable, then such provision shall (so far as it is invalid or unenforceable) be given no effect and shall be deemed not to be included in these Terms but without invalidating any of the remaining provisions of these Terms. The Parties shall then use all reasonable endeavours to replace the invalid or unenforceable provisions by a valid and enforceable substitute provision the effect of which is as close as possible to the intended effect of the invalid or unenforceable provision.

16.2. The Buyer may not assign, licence or sub-contract all or any of its rights or obligations under these Terms without Eaton's prior written consent. Eaton may assign, license or sub-contract all or any part of its rights or obligations under these Terms without the Buyer's consent.

16.3. The failure to exercise or delay in exercising a right or remedy provided by these Terms or by law does not constitute a waiver of the right or remedy or a waiver of other rights or remedies. No single or partial exercise of a right or remedy provided by these Terms or by law prevents further exercise of the right or remedy or the exercise of another right or remedy.

16.4. Any notice hereunder shall be deemed to have been duly given if sent by registered post or fax to the Party concerned at its registered office or principal place of business. Notices sent by registered post shall be deemed to have been given seven days after despatch and notices sent by fax shall be deemed to have been given 24 hours from the date of despatch.

# Product code cross reference

Description	Cooper Code	Menvier Code	JSB Code
<b>Addressable</b>			
1 Loop Control Panel	CF1100VDS	DF6100VDS	FX6100VDS
1 Loop Control Panel	CF30001G	DF60001G	FX60001G
1 Loop Control Panel, Integral Printer	CF30001GP	DF60001PG	FX60001PG
2 Loop Control Panel	CF1200VDS	DF61002VDS	FX61002VDS
2 Loop Control Panel	CF30002G	DF60002G	FX60002G
2 Loop Control Panel	CF2000GCPD	DF2000GCPD	FX2000GCPD
2 Loop Control Panel, Extended Battery	CF30002GEB	DF60002GEB	FX60002GEB
2 Loop Control Panel, Integral Printer	CF30002GP	DF60002PG	FX60002PG
2 Loop Control Panel, Integral Printer, Extended Battery	CF30002GPGB	DF60002PGB	FX60002PGB
230V ac Relay Unit	CMIO353	MIO1240	FXN511
24V 1.5A PSU G CASE	FX1-5ABG	FX1-5ABG	FX1-5ABG
24V 1.5A PSU P CASE	FX1-5ABP	FX1-5ABP	FX1-5ABP
24V 2.5A PSU G CASE	FX2-5ABG	FX2-5ABG	FX2-5ABG
24V 5.0A PSU G CASE	FX5-0ABG	FX5-0ABG	FX5-0ABG
3 Channel Input/Output Unit Resets on reset	CIO351	MIO324	FXN510
3 Channel Input/Output Unit Rests on silence alarms	CIO351S	MIO324S	FXN524S
4 Loop Control Panel	CF30004G	DF60004G	FX60004G
4 Loop Control Panel, Extended Battery	CF30004GEB	DF60004GEB	FX60004GEB
4 Loop Control Panel, Integral Printer	CF30004GP	DF60004PG	FX60004PG
4 Loop Control Panel, Integral Printer, Extended Battery	CF30004GPGB	DF60004PGB	FX60004PGB
4 to 20mA Interface	CGI420	CGI420	CGI420
4 to 20mA Interface (relay output)	CGI420R	CGI420R	CGI420R
4 Way Mimic Relay Board, 4 Inputs, 4 Outputs	CIOP4	CIOP4	CIOP4
8 Way Mimic Relay Board, 8 Inputs, 8 Outputs	CIOP8	CIOP8	CIOP8
Add to end of product code if network card required	NC	NC	NC
Add to end of product code if network card required	NC	NC	NC
Addressable Device Programmer	CF800PROG	CF800PROG	CF800PROG
BACnet Gateway	EC650	EC650	EC650
Callpoint Keys (pack of 10)	MFBGKEY3	MFBGKEY3	MFBGKEY3
Cover Plate	CASC	CASC	CASC
Dual Channel Lon to Fibre Optic Adaptor	CFSL02	CFSL02	CFSL02
Dual-channel LonWorks BMS Interface (handshaking)	EC200H	EC200H	EC200H
Dual-channel LonWorks BMS Interface (non handshake)	EC200	EC200	EC200
Dual-channel LonWorks BMS Interface (self configuring for use with EC700)	EC200S	EC200S	EC200S
Duct Probe	MDP201	MDP201	MDP201
Earth Continuity Links (pack of 5)	MBG119	MBG119	MBG119
Fan Controller Unit (Australia standard - supplied w/o back box)	FC6-AU	FC6-AU	FC6-AU
Fan Controller Unit (rack mount)	FC18	FC18	FC18
Fan Controller Unit (surface mount)	FC6	FC6	FC6
Fire Alarm System Log Book	MFALOG	MFALOG	MFALOG
Fire Alarm System Log Book	MFALOG	MFALOG	MFALOG
Heat Sensor	CAH330	MAH830	FXN725
Heavy Duty Relay Unit	MAR724	MAR724	MAR724
Hinged Protective Cover Kit	CF3000COV	DF6000COV	FX6000COV
Internal Wall Sounder	CAS381	MAS850LPS	FXN538LPS
Lon Network Booster	EC540	EC540	EC540
Lon to RS232 Adapter	EC0232	EC0232	EC0232
Lon to RS232 Adapter (for HMX PA/VA system - 3 min time delay)	EC0232PAVA3D	EC0232PAVA3D	EC0232PAVA3D
Lon to RS232 Adapter (for HMX PA/VA system - no handshake)	EC0232PAVA	EC0232PAVA	EC0232PAVA
Loop Connected LED Beacon	CAB382	MAB870	MAB870
Loop Connected Remote Indicator	MRIAD	MRIAD	MRIAD
Loop Splitter Unit	ZPCB2222	ZPCB2222	ZPCB2222
Loop Tester Kit	LP800KIT	LP800KIT	LP800KIT
Micro Single Channel Input Unit	MCIM	MCIM	MCIM
Micro Single Channel Output Unit (5 second reset pulse)	MCOM-R	MCOM-R	MCOM-R
Micro Single Channel Output Unit (recognised as output unit)	MCOM	MCOM	MCOM
Micro Single Channel Output Unit (recognised as sounder)	MCOM-S	MCOM-S	MCOM-S
Micro Zone Monitor Unit	MIU872	MIU872	MIU872
Mimic PCB (master)	ZPCB2252MML	ZPCB2252MML	ZPCB2252MML

## Product code cross reference

Description	Cooper Code	Menvier Code	JSB Code
Mimic PCB (slave)	ZPCB2252MSL	ZPCB2252MSL	ZPCB2252MSL
Modbus Gateway	EC700	EC700	EC700
Mounting Bracket	MRBFP	MRBFP	MRBFP
Network kit (for retro fit)	DF61NETKIT	DF61NETKIT	DF61NETKIT
Network kit (for retro fit)	DF6000NETKIT	DF6000NETKIT	DF6000NETKIT
Optical Smoke Sensor	CAP320	MAP820	FXN723
Passive Repeater Panel	CF3000PRG	DF6000PR	FX6000PR
Passive Repeater Panel	CF3000PRG	DF6000PR	FX6000PR
Photo-Thermal Sensor	CAPT340	MAOH850	FXN722
Protective Hinged Cover	CXPC	CXPC	CXPC
Recessing Bezels (ack of 10)	MBGBEZ	MBGBEZ	MBGBEZ
Reflective Beam Detector (100m range)	MAB100R	MAB100R	MAB100R
Reflective Beam Detector (50m range)	MAB50R	MAB50R	MAB50R
Resettable Element Kit (pack of 10)	MBGREKIT	MBGREKIT	MBGREKIT
Shop Monitor Unit	CSUM355	MSU840	FXN516
Single Mode Lon to Fibre Optic Adaptor	CFSL01	CFSL01	CFSL01
Sounder Base	CAS380	MAS850	FXN538
Spacer Plates (pack of 10)	MBGSP	MBGSP	MBGSP
Spare Break Glasses (pack of 5)	UBSG	MBG118	FX5G
Spur Isolator Unit	CSI350	MSI850	FXN513
Standard Base	CAB300	MAB800	FXN720
Surface/Flush Callpoint	CGBG370S	MBG813	FXN501
TCP/IP Interface	EC400	EC400	EC400
Technical Input/Output Unit	CFC301	CFC301	CFC301
Touch-Screen Repeater Panel	CTPR3000	DTPR6000	FXTPR6000
VAD Sounder Beacon Base	CASBB394	MASB890	FXN557
VAD Wall Sounder Beacon	CASB393	MASB880	FXN559LPS
Weatherproof VAD Wall Sounder Beacon	CASB393-WP	MASB880WP	FXN559LPSWP
Weatherproof Callpoint	CBG370WP	MBG817	FXN503
Weatherproof Wall Sounder	CAS381WP	MAS850LPSWP	FXN538LPSWP
Zone Monitor Unit	CZMU352	MIU871	FXN512
<b>Conventional</b>			
16 Zone Control Panel	CF50016	MF50016	FXP50016
2 Zone Control Panel	CFP4002	MFP4002	FXP4002
2 Zone Control Panel	CF5002	MF5002	FXP5002
24V 1.5A PSU G CASE	FX1-5ABG	FX1-5ABG	FX1-5ABG
24V 1.5A PSU P CASE	FX1-5ABP	FX1-5ABP	FX1-5ABP
24V 2.5A PSU G CASE	FX2-5ABG	FX2-5ABG	FX2-5ABG
24V 5.0A PSU G CASE	FX5-0ABG	FX5-0ABG	FX5-0ABG
24V dc Compact Door Retainer	FX02124VLC	FX02124VLC	FX02124VLC
24V dc Heavy Duty Door Retainer	MDR24L	MDR24L	MDR24L
4 Zone Control Panel	CFP4004	MFP4004	FXP4004
4 Zone Control Panel	CF5004	MF5004	FXP5004
5 in 1 Multi-Mode Detector	FXN922	FXN922	FXN922
8 Zone Control Panel	CFP4008	MFP4008	FXP4008
8 Zone Control Panel	CF5008	MF5008	FXP5008
Back Box For FX003, Red	MFSSBB	MFSSBB	MFSSBB
Base Mountable Sounder	MDS824	MDS824	FXN824
Base Mountable Sounder Beacon	MDS824B	MDS824B	MDS824B
Blanking Plate for MDS824 (pack of 5)	MDS824COV	MDS824COV	MDS824COV
Callpoint Keys (pack of 10)	MFBGKEY3	MFBGKEY3	MFBGKEY3
Conventional Reflective Beam Detector, 100m Range	MBD100R	MBD100R	MBD100R
Conventional Reflective Beam Detector, 50m Range	MBD50R	MBD50R	MBD50R
Duct Probe	MDP201	MDP201	MDP201
Earth Continuity Links (pack of 5)	MBG119	MBG119	MBG119
Fire Alarm System Log Book	MFALOG	MFALOG	MFALOG
Fire Alarm System Log Book	MFALOG	MFALOG	MFALOG
Floor Mounting Bracket for Compact Door Retainers	FX021LCFB	FX021LCFB	FX021LCFB
Floor Mounting Bracket for Heavy Duty Door Retainers	ZMDRFBB	ZMDRFBB	ZMDRFBB
Flush Sounder, Red	FX003	MFS324	FX003
Flush Sounder, White	FX003W	MFS324W	FX003W

# Product code cross reference

Description	Cooper Code	Menvier Code	JSB Code
High Output Wall Sounder	FX007	FX007	FX007
Internal 6 Inch Bell	FX006	MBM246	FX006
Low Current Wall Sounder	MLC624	MLC624	MLC624
Low Profile LED Beacon	MLB124B	MLB124B	MLB124B
Low Profile LED Sounder Beacon	MSB124SB	MSB124SB	MSB124SB
Low Profile Surface Sounder, Red	FX002SB	FX002SB	FX002SB
Low Profile Surface Sounder, Red	FX002	FX002	FX002
Mains Powered Compact Door Retainer	FX021240LC	FX021240LC	FX021240LC
Mains Powered Heavy Duty Door Retainer	MDR240	MDR240	MDR240
Mounting Bracket	MRBFP	MRBFP	MRBFP
Protective Hinged Cover	CXPC	CXPC	CXPC
Recessing Bezels (ack of 10)	MBGBEZ	MBGBEZ	MBGBEZ
Relay Base	FXN520R	MDB800R	FXN520R
Remote Indicator	FX251D	FX251D	FX251D
Repeater Panel (only compatible with 8 zone panel)	CFPRP4000	MFPRP4000	FXPRP4000
Repeater Panel (only compatible with 8 zone panel)	CF5000RP	MF5000RP	FXP5000RP
Resettable Element Kit (pack of 10)	MBGREKIT	MBGREKIT	MBGREKIT
RoLP Wall Red Body Base	FXROLPWR-B	FXROLPWR-B	FXROLPWR-B
RoLP Wall Red Body Base & Sounder	FXROLPWR	FXROLPWR	FXROLPWR
RoLP Wall White Body Base	FXROLPWWW-B	FXROLPWWW-B	FXROLPWWW-B
RoLP Wall White Body Base & Sounder	FXROLPWWW	FXROLPWWW	FXROLPWWW
Solista Ceiling White Body Deep Base	FXSOLCWD	FXSOLCWD	FXSOLCWD
Solista Ceiling White Body Shallow Base	FXSOLCWS	FXSOLCWS	FXSOLCWS
Solista Wall Red Body Deep Base	FXSOLWRD	FXSOLWRD	FXSOLWRD
Solista Wall Red Body Shallow Base	FXSOLWRS	FXSOLWRS	FXSOLWRS
Solista Wall Red Body U Shaped Based	FXSOLWRU	FXSOLWRU	FXSOLWRU
Solista Wall White Body Deep Base	FXSOLWWD	FXSOLWWD	FXSOLWWD
Solista Wall White Body Shallow Base	FXSOLWWS	FXSOLWWS	FXSOLWWS
Solista Wall White Body U Shaped Base	FXSOLWWU	FXSOLWWU	FXSOLWWU
Spacer Plates (pack of 10)	MBGSP	MBGSP	MBGSP
Spare Break Glasses (pack of 5)	FX5G	FX5G	FX5G
Spare Striker Plate For Either Magnet	ZMDRSWIV	ZMDRSWIV	ZMDRSWIV
Standard Base	CDBB300	MDB800	FXN520
Steel Back Box	FX22003300 MB	FX22003300 MB	FX22003300 MB
Surface/Flush Callpoint	CX201	MBG914	FX201
Symphoni LX Wall Base Red Body	FXSYR-B	FXSYR-B	FXSYR-B
Symphoni LX Wall Base White Body	FXSYW-B	FXSYW-B	FXSYW-B
Symphoni LX Wall Red Body	FXSYG1WR	FXSYG1WR	FXSYG1WR
Symphoni LX Wall Weatherproof Base Red Body	FXSYR-B-WP	FXSYR-B-WP	FXSYR-B-WP
Symphoni LX Wall Weatherproof Base White Body	FXSYW-B-WP	FXSYW-B-WP	FXSYW-B-WP
Symphoni LX Wall Weatherproof Red Body	FXSYG1WR-WP	FXSYG1WR-WP	FXSYG1WR-WP
Symphoni LX Wall Weatherproof White Body	FXSYG1WWW-WP	FXSYG1WWW-WP	FXSYG1WWW-WP
Symphoni LX Wall White Body	FXSYG1WWW	FXSYG1WWW	FXSYG1WWW
Weatherproof 8 Inch Bell	MWB824	MWB824	MWB824
Weatherproof Callpoint	CX203	MBG917	FX203
Weatherproof Deep Base Surface Sounder Back Box, Red (IP65)	FX000WP	FX000WP	FX000WP
Weatherproof Deep Base Surface Sounder Back Box, White (IP65)	FX000WWP	FX000WWP	FX000WWP
Weatherproof IP65 LED Sounder Beacon	MSB124DB	MSB124DB	MSB124DB
Weatherproof IP65 Sounder Beacon Back Box, Red	FX000WP	FX000WP	FX000WP
Weatherproof IP65 Sounder Beacon Back Box, White	FX000WWP	FX000WWP	FX000WWP
Weatherproof LED Beacon	MLB124DB	MLB124DB	MLB124DB
Weatherproof Surface Sounder, Red	FX002DB	FX002DB	FX002DB
Weatherproof Surface Sounder, White	FX002W	FX002W	FX002W
<b>UL Approved</b>			
120V/230V ac Relay Unit	ULCMIO353	ULCMIO353	ULCMIO353
2 Loop Panel	ULCF30002G	ULDF30002G	ULFX30002G
2 Loop Panel, Integral Printer	ULCF30002GP	ULDF30002GP	ULFX30002GP
2 Loop Panel, Integral Printer, Network Card	ULCF30002GPNC	ULDF30002GPND	ULFX30002GPND
2 Loop Panel, Integral Printer, Network Card, Red Metal Box	ULCF30002GPNCRM	ULDF30002GPNDRM	ULFX30002GPNDRM
2 Loop Panel, Integral Printer, Red Metal Box	ULCF30002GPRM	ULDF30002GPRM	ULFX30002GPRM
2 Loop Panel, Network Card	ULCF30002GNC	ULDF30002GND	ULFX30002GND

# Product code cross reference

Description	Cooper Code	Menvier Code	JSB Code
2 Loop Panel, Network Card, Red Metal Box	ULCF30002GNCRM	ULDF30002GNDRM	ULFX30002GNDRM
2 Loop Panel, Red Metal Box	ULCF30002GRM	ULDF30002GRM	ULFX30002GRM
2 Wire Detector, Fixed Heat 135°F	UCHT-2W	UCHT-2W	UCHT-2W
2 Wire Detector, Fixed Heat 194°F	UCHTI-2W	UCHTI-2W	UCHTI-2W
2 Wire Detector, Optical	UCPD-2W	UCPD-2W	UCPD-2W
2 Wire Detector, Opto-Heat	UCPT-2W	UCPT-2W	UCPT-2W
2 Wire Detector, Rate of Rise and Fixed Heat 135°F	UCHR-2W	UCHR-2W	UCHR-2W
2 Wire Detector, Rate of Rise and Fixed Heat 194°F	UCHRI-2W	UCHRI-2W	UCHRI-2W
3 Channel Input/Output Unit Resets on reset	ULCIO351	ULCIO351	ULCIO351
3 Channel Input/Output Unit Rests on silence alarms	ULCIO351S	ULCIO351S	ULCIO351S
4 Loop Panel	ULCF30004G	ULDF30004G	ULFX30004G
4 Loop Panel, Integral Printer	ULCF30004GP	ULDF30004GP	ULFX30004GP
4 Loop Panel, Integral Printer, Network Card	ULCF30004GPNC	ULDF30004GPND	ULFX30004GPND
4 Loop Panel, Integral Printer, Network Card, Red Metal Box	ULCF30004GPNCRM	ULDF30004GPNDRM	ULFX30004GPNDRM
4 Loop Panel, Integral Printer, Red Metal Box	ULCF30004GPRM	ULDF30004GPRM	ULFX30004GPRM
4 Loop Panel, Network Card	ULCF30004GNC	ULDF30004GND	ULFX30004GND
4 Loop Panel, Network Card, Red Metal Box	ULCF30004GNCRM	ULDF30004GNDRM	ULFX30004GNDRM
4 Loop Panel, Red Metal Box	ULCF30004GRM	ULDF30004GRM	ULFX30004GRM
4 Way Sounder Controller Unit	ULCSC355	ULCSC355	ULCSC355
4 Wire Detector	UCPTR-4W	UCPTR-4W	UCPTR-4W
Addressable Sensor Base	UCAB300	UCAB300	UCAB300
Back Box, Flush Mount	WFP	WFP	WFP
Ceiling Mount Horn	HNWC	HNWC	HNWC
Ceiling Mount Horn Strobe	HSWC	HSWC	HSWC
Ceiling Mount Outdoor Synchronised Strobe	RSSWP-2475C-FW	RSSWP-2475C-FW	RSSWP-2475C-FW
Ceiling Mounted Synchronised Strobe	STWC	STWC	STWC
Concealed Conduit Surface Mount	WPSBB + WPKIT	WPSBB + WPKIT	WPSBB + WPKIT
Double Action Pull Station	UMPS-200	UMPS-200	UMPS-200
Single Action Pull Station	UMPS-100	UMPS-100	UMPS-100
Weatherproof Single Action Pull Station	UMPS-100WP	UMPS-100WP	UMPS-100WP
Conventional Single Action Pull Station	UCMPS-100	UCMPS-100	UCMPS-100
Exposed Conduit, Surface Mount	WPSBB	WPSBB	WPSBB
Heat Sensor	UCAH330	UCAH330	UCAH330
Micro Single Channel Input Unit (recognised as callpoint)	ULMCIM-C	ULMCIM-C	ULMCIM-C
Micro Single Channel Input Unit (recognised as input unit)	ULMCIM	ULMCIM	ULMCIM
Micro Single Channel Output Unit (recognised as output unit)	ULMCOM	ULMCOM	ULMCOM
Micro Single Channel Output Unit (recognised as sounder)	ULMCOM-S	ULMCOM-S	ULMCOM-S
Micro Zone Monitor Unit	ULMIU872	ULMIU872	ULMIU872
Mini Module Box Unit (Empty box)	ULBU	ULBU	ULBU
Optical Smoke Sensor	ULCAP320	ULMAP820	ULFX723
Photo-Thermal Sensor	ULCAPT340	ULMAOH850	ULFX722
Heat Sensor	ULCAH330	ULMAH830	ULFX725
Rack Mounted 2 Loop Panel	ULR3000L2	ULR3000L2	ULR3000L2
Rack Mounted 2 Loop Panel c/w Network Card	ULR3000L2NC	ULR3000L2NC	ULR3000L2NC
Rack Mounted 4 Loop Panel	ULR3000L4	ULR3000L4	ULR3000L4
Rack Mounted 4 Loop Panel c/w Network Card	ULR3000L4NC	ULR3000L4NC	ULR3000L4NC
Shop Monitor Unit	ULCSUM355	ULCSUM355	ULCSUM355
Single Action Pull Station	UMPS-100	UMPS-100	UMPS-100
Spur Isolator Unit	ULCSI350	ULCSI350	ULCSI350
Standard Detector Base	CB2E	CB2E	CB2E
Wall Mount Horn	HNR	HNR	HNR
Wall Mount Horn Strobe	HSR	HSR	HSR
Wall Mount Outdoor Synchronised Strobe	RSSWP-2475W-FR	RSSWP-2475W-FR	RSSWP-2475W-FR
Wall Mount Synchronised Strobe	STR	STR	STR
Weatherproof Single Action Pull Station	UMPS-100WP	UMPS-100WP	UMPS-100WP
Zone Monitor Unit	ULCZMU352	ULCZMU352	ULCZMU352
<b>EVCS &amp; EAA</b>			
VoCALL 10 Line Network Ready Exchange Unit, Flush Mount, Graphite	EFVCNX10	EFVCNX10	EFVCNX10
VoCALL 10 Line Network Ready Exchange Unit, Graphite	EVCNX10	EVCNX10	EVCNX10
VoCALL 10 Line Networkable Master System, Flush Mount, Stainless Steel	EFVCWFMX10SS	EFVCWFMX10SS	EFVCWFMX10SS

## Product code cross reference

Description	Cooper Code	Menvier Code	JSB Code
VoCALL 10 Line Networkable Master System, Surface Mount, Stainless Steel	EFVCWSMX10SS	EFVCWSMX10SS	EFVCWSMX10SS
VoCALL 10 Line Networkable Master System, Wall Flush Mount, Graphite	EFVCWFMX10	EFVCWFMX10	EFVCWFMX10
VoCALL 10 Line Networkable Master System, Desk Mount, Graphite	EFVCMX10	EFVCMX10	EFVCMX10
VoCALL 10 Line Networkable Master System, Wall Surface Mount, Graphite	EFVCWSMX10	EFVCWSMX10	EFVCWSMX10
VoCALL 10 Line Non-Network, Master Exchange Unit, Wall Surface Mount, Graphite	EFVCWSM10	EFVCWSM10	EFVCWSM10
VoCALL 10 Line Non-Network, Master Exchange Unit, Wall Flush Mount, Graphite	EFVCWFM10	EFVCWFM10	EFVCWFM10
VoCALL 10 Line Non-Network, Master Exchange Unit, Wall Flush Mount, Stainless Steel	EFVCWFM10SS	EFVCWFM10SS	EFVCWFM10SS
VoCALL 10 Line Non-Network, Master Exchange Unit, Wall Surface Mount, Stainless Steel	EFVCWSM10SS	EFVCWSM10SS	EFVCWSM10SS
VoCALL 10 Line, Master Exchange Unit, Non-Network, Desk Mount, Graphite	EFVCM10	EFVCM10	EFVCM10
VoCALL Combined Type A and Type B flush mount outstation	CFVCDUO	CFVCDUO	CFVCDUO
VoCALL Compact 5 Line Master Exchange Unit, Non-Network, Surface Mount, Stainless Steel	ESVCC5SS	ESVCC5SS	ESVCC5SS
VoCALL Compact 5 Line Master Exchange Unit, Non-Network, Flush Mount, Graphite	EFVCC5	EFVCC5	EFVCC5
VoCALL Compact 5 Line Master Exchange Unit, Non-Network, Flush Mount, Stainless Steel	EFVCC5SS	EFVCC5SS	EFVCC5SS
VoCALL Compact 5 Line Master Exchange Unit, Non-Network, Surface Mount, Graphite	ESVCC5	ESVCC5	ESVCC5
VoCALL Flush Mounting Bezel for use with any Type B Outstation, Stainless Steel	CFVCFHB	CFVCFHB	CFVCFHB
VoCALL Jack Plate	CFVCRJP	CFVCRJP	CFVCRJP
VoCALL Roaming Handset	CFVCRHS	CFVCRHS	CFVCRHS
VoCALL Type A outstation, surface mount, red	CFVCSHP	CFVCSHP	CFVCSHP
VoCALL Type A outstation, surface mount, stainless steel	CFVCSHPSS	CFVCSHPSS	CFVCSHPSS
VoCALL Type A outstation, flush mount, red	CFVCFHP	CFVCFHP	CFVCFHP
VoCALL Type A outstation, flush mount stainless	CFVCFHPSS	CFVCFHPSS	CFVCFHPSS
VoCALL Type A uncased red handset	CFVCHFS	CFVCHFS	CFVCHFS
VoCALL Type A outstation, IP65 lockable, surface mount, red	CFVCIPA	CFVCIPA	CFVCIPA
VoCALL Type B Outstation, Surface Mount, Green	CFVCSHFG	CFVCSHFG	CFVCSHFG
VoCALL Type B Outstation, Surface Mount, Red	CFVCSHF	CFVCSHF	CFVCSHF
VoCALL Type B Outstation, Surface Mount, Stainless Steel	CFVCSHFSS	CFVCSHFSS	CFVCSHFSS
VoCALL Type A Outstation, IP65 Lockable, Surface Mount, Red	CFVCIPA	CFVCIPA	CFVCIPA
<b>Voice</b>			
2 x 50W Dual Addressable DAU	CFVADAU100	CFVADAU100	CFVADAU100
50W Single Channel Addressable DAU	CFVADAU50	CFVADAU50	CFVADAU50
Ceiling Loudspeaker 4 Watt	MC4-EN	MC4-EN	MC4-EN
Ceiling Loudspeaker 5 Watt	MC5-EN	MC5-EN	MC5-EN
Ceiling Loudspeaker 6 Watt	MC6-EN	MC6-EN	MC6-EN
Column Speaker	CM20-EN	CM20-EN	CM20-EN
Emergency Microphone All Call	CFVAEMA	CFVAEMA	CFVAEMA
Sound Projector Speaker Slide Bracket	RAC15-EN	RAC15-EN	RAC15-EN
Sound Projector Speaker U Bracket	PAC15-EN	PAC15-EN	PAC15-EN
Vandal Resistant Speaker	SAFEV6-EN	SAFEV6-EN	SAFEV6-EN



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