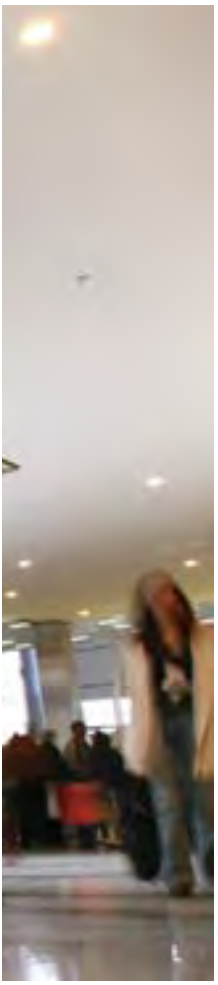
Cooper Fire Systems

COOPER Safety
Fire Systems

ONE COOPER

Every day, thousands of people all over the world use products made by Cooper Industries. As a premier global manufacturing company, we believe that great brands are built on high quality and excellent service. Which is why our brands have earned leading positions in the markets we serve. Cooper Safety specialises in products designed to save lives and protect property in commercial, industrial and residential buildings. It's just one of the seven divisions that continue to uphold our reputation through unparalleled sales support and customer service.



About us

Cooper Safety Fire Systems

Cooper Fire offers a comprehensive range of fire detection products suitable for a wide range of projects, from a small simple installation to a large complex multi building site.

Cooper Fire manufacture a wide range of products and offers complete fire solutions, not just individual components. A complete system can be specified from a single source, confident in the knowledge that all the components have been specifically designed and tested to ensure they are all fully compatible with each other and will function as a truly integrated fire detection and alarm system. It is absolutely vital that all the elements of a fire detection system are fully compatible with each other. To support this philosophy, a large multi-disciplined research and development team is based in the UK at the Cooper Doncaster facility, responsible for the integration of the very latest technology into the design of our comprehensive range of fire products.

Intelligent Addressable Contents

Intelligent Addressable System Architecture

Standard conventional systems utilise simple two state detectors, which simply provide a switch type signal to the conventional control panel.

To enable the source of the alarm to be identified, each zone must be wired using a separate circuit, furthermore in the event of a fire alarm being triggered, the panel can only identify which zone contains the triggered device, it is then necessary to manually search the affected zone to discover the actual cause of the alarm.

Intelligent addressable systems overcome these limitations, each fire detecting sensor or callpoint is electronically coded with a unique identification or 'address' which is programmed into the device during installation.

The control panel is then able to conduct two way communication with any of the addressable devices connected to the system by using the unique address number to define which device it wishes to communicate with. This operates in a similar manner to that of a telephone number enabling communication between specific telephones.

Under normal conditions the control panel continuously interrogates each device in sequence using a low power digitally pulsed signal, and analyses the reply to determine the status of the sensor or callpoint.

In this manner, the panel can ascertain whether each device is functioning correctly and also discover the amount of smoke or heat that the device is currently sensing.

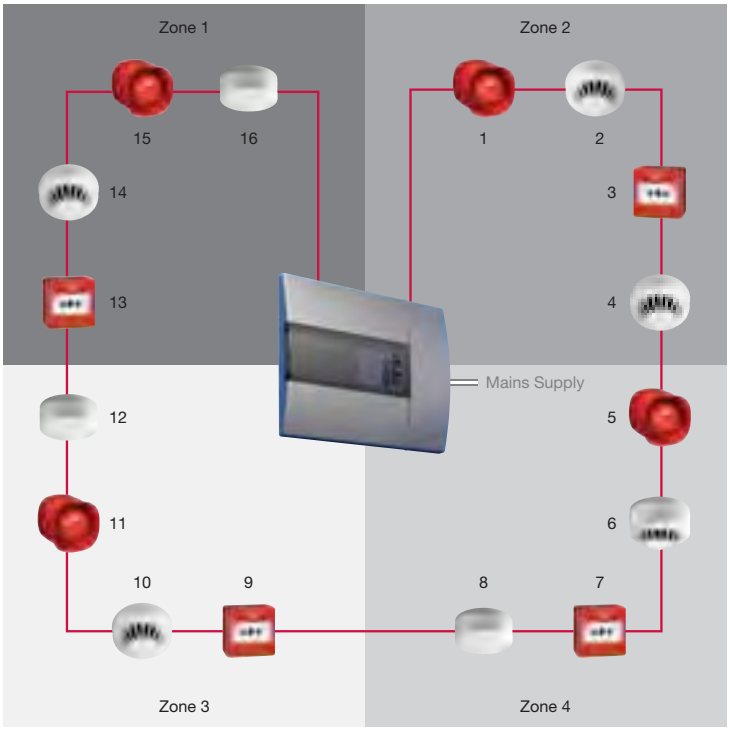
This technology allows the panel to make intelligent decisions as to the appropriate action to take based on the information it receives from the individual sensors.

This has many advantages, for example very slow build up of apparent smoke density seen by a sensor can cause a warning or pre-alarm condition to be triggered by the alarm panel prior to the situation becoming serious enough to warrant a full alarm.

A typical practical benefit of this technology is the situation whereby airborne dust particles enter smoke detectors and mimic the appearance of smoke, over time the concentration of dust can increase to a point where it can cause the detector to falsely trigger an alarm condition. With an intelligent addressable system, a pre-alarm condition will normally be triggered rather than a full alarm giving the building operator the opportunity to clean or replace the sensor rather than suffer the disruption of an unwanted false alarm.
If whilst continually interrogating the smoke and heat sensors, the panel determines that the data gathered from a specific device is appropriate to instigate either a fire, fault or pre-alarm condition, it uses the unique identifying number or address to determine which device is involved. Consequently the panel can pinpoint and identify precisely which device has triggered the fire, fault or pre-alarm condition.

This level of sophistication removes the need for each zone of the building to be wired as a separate circuit. For this reason intelligent addressable system components are typically connected to the panel using a small number of large loops thus greatly simplifying the installation of the system and reducing the installation cost.

Detectors, instead of being simple two state devices now function as sensors, continually communicating with the control panel and providing information regarding the temperature or concentration of smoke in their local



COOPER Safety
Fire Systems

CF3000 Range

Approved to the latest: EN54 Pt2, Pt4 & Pt13

CF3000 - Control Panel

Overview

The Cooper CF3000 is a high specification intelligent addressable control panel which is available in various loop configurations. These panels combine sophisticated functionality with simple operation and an aesthetically pleasing design.

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 from sheltered housing to large office developments.

The CF3000 uses soft addressing to minimise installation time and remove the potential for error associated with manual addressing. It can operate as a stand alone panel or as part of a networked system. They have powerful programming options that allow configurable control over whether messages from specific panels are transmitted around the network or remain local.

An extensive range of compatible intelligent addressable systems ancillaries are available to work with the CF3000 all of which incorporate an integral short circuit isolator to provide maximum protection against short circuits on the external loop.

Features

- Available in 1, 2 and 4 loop versions
- Up to 200 addresses per loop
- Full network capability up to 126 panels
- Soft addressing
- Large versatile touch screen user interface
- Multi-language selection capability
- Integral printer (optional)
- Integral battery and power supply
- Flexible cause and effect programming

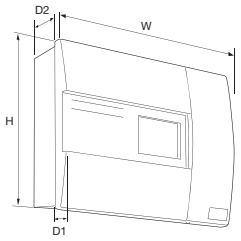
Benefits

- Simple to operate end user touch-screen interface
- Flexible distributed network capability
- Full range of compatible accessories
- Easy to design system cause and effect using site installer software
- Full system integrity with Cooper managed protocol

Technical Specification

Code	CF30001G	CF30002G	CF30004G
Description	1 Loop Control Panel	2 Loop Control Panel	4 Loop Control Panel
Standards	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997, A1:2002, A2:2006 EN54 Pt13: 2005	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997, A1:2002, A2:2006 EN54 Pt13: 2005	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997, A1:2002, A2:2006 EN54 Pt13: 2005
Specification			
Number of Loops	1	2	4
Addresses per Loop	200	200	200
Number of Conventional Sounder Circuits	4 monitored for open and short circuit	4 monitored for open and short circuit	4 monitored for open and short circuit
Auxiliary Fire Routing Equipment Output (Monitored)	24V 30mA (max)	24V 30mA (max)	24V 30mA (max)
Auxiliary Fire Protection Equipment Output (Monitored)	24V 30mA (max)	24V 30mA (max)	24V 30mA (max)
Auxiliary Fault Routing Equipment Output (Monitored)	12V 30mA (max)	12V 30mA (max)	12V 30mA (max)
System Operating Voltage	24V dc (nom)	24V dc (nom)	24V dc (nom)
Mains Input Supply	230V ac +10% / -15%	230V ac +10% / -15%	230V ac +10% / -15%
Class Change Facility	Terminals for connection of external contacts, can also be instigated via input interface	Terminals for connection of external contacts, can also be instigated via input interface	Terminals for connection of external contacts, can also be instigated via input interface
Auxiliary Relay	1 set of changeover contacts operate in event of fire condition	1 set of changeover contacts operate in event of fire condition	1 set of changeover contacts operate in event of fire condition
Output Ports	RS485, RS232 for connection of repeaters etc	RS485, RS232 for connection of repeaters etc	RS485, RS232 for connection of repeaters etc
Standby Duration	Dependant on loop loading and battery configuration	Dependant on loop loading and battery configuration	Dependant on loop loading and battery configuration
Battery	2 x 12Ah (standard versions)	2 x 12Ah (standard versions) 4 x 12Ah (EB versions)	2 x 12Ah (standard versions) 4 x 12Ah (EB versions)
Environmental			
Operating Temperature	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH	0 to 75% RH	0 to 75% RH
Physical			
Construction	Back Box - Mild Steel, Front Door - PC/ABS	Back Box - Mild Steel, Front Door - PC/ABS	Back Box - Mild Steel, Front Door - PC/ABS
Dimensions (H x W x D)	Standard Versions: 397mm x 497mm x 180mm	Standard Versions: 397mm x 497mm x 180mm EB Versions: 397mm x 497mm x 280mm	Standard Versions: 397mm x 497mm x 180mm EB Versions: 397mm x 497mm x 280mm
Weight	18kg	18kg	18kg
Ingress Protection	IP30	IP30	IP30
Cable entries	Top: 31 cable knockouts (20mm) Back: 12 cable knockouts (20mm)	Top: 31 cable knockouts (20mm) Back: 12 cable knockouts (20mm)	Top: 31 cable knockouts (20mm) Back: 12 cable knockouts (20mm)
System Networking	Fully networkable up to 126 panels (requires additional network card - 1 per panel)	Fully networkable up to 126 panels (requires additional network card - 1 per panel)	Fully networkable up to 126 panels (requires additional network card - 1 per panel)

Dimensions



Description	H (mm)	W (mm)	D1 (mm)	D2 (mm)
Standard	397	497	55	125
EB	397	497	55	225

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

Product Codes

Code	Description
CF30001G	1 Loop Control Panel
CF30002G	2 Loop Control Panel
CF30004G	4 Loop Control Panel
CF30001GP	1 Loop Control Panel, Integral Printer
CF30002GP	2 Loop Control Panel, Integral Printer
CF30004GP	4 Loop Control Panel, Integral Printer
CF30002GEB	2 Loop Control Panel, Extended Battery
CF30004GEB	4 Loop Control Panel, Extended Battery
CF30002GPEB	2 Loop Control Panel, Integral Printer, Extended Battery
CF30004GPEB	4 Loop Control Panel, Integral Printer, Extended Battery
NC	Add to end of product code if network card required
DF6000NETKIT	Network Kit (for retro fit)
CF3000COV	Hinged Protective Cover Kit
CF3000PRG	Passive Repeater Panel
CTPR3000	Touch-Screen Repeater Panel
MFALOG	Fire Alarm System Log Book

Installation

1. Standard panel is designed for surface or recessed mounting (without the need for an additional bezel).
2. Cable entry is by means of top entry knockouts in the metal back box, along with a substantial rear entry cutout.
3. Panels are wall mounted via keyhole/slot mounting holes on back of housing.
4. Front cover retained by screws, accessed after opening the printer bay door.
5. Flush mounting requires suitable aperture and fixings.
6. Mains input protection is provided by a polyswitch.
7. All external wiring should be in accordance with relevant section of latest edition of BS5839 Pt1.
8. Comprehensive installation and operation manual provided with each system.
9. Maximum length of network cable loop is 1500 metres, beyond this distance or where cables pass between buildings, boosters will be required.

System Functionality

1. Panel has 3 modes of operation, normal mode, user mode and engineer mode.
2. User and engineer modes can only be accessed by entering relevant pass codes.
3. User mode allows access to system test functions, enable and disable menus, view analogue level menus and functions such as evacuate, silence alarms and reset.
4. Engineer mode allows alteration of system configuration and programming of site specific data such as device text and sounder programming.
5. Engineer mode also allows adding and removal of devices and alteration of existing text.
6. CF3000 is designed to ensure simplicity of future expansion. If an additional device is added after the system has been programmed, the CF3000 will allocate the next available address, it will not alter any of the existing address number allocation thus enabling simple updating of "as fitted" drawings etc. Similarly if a device is removed, the relevant address is saved as a spare address for future use, the addresses of the remaining devices are not affected.
7. All devices are soft addressed during commissioning however once allocated, addresses are locked until manually altered thus enabling simple system additions and deletions without affecting other addresses.
8. In event of an external short circuit occurring, short circuit isolators on output of devices nearest to each side of the short circuit open thus isolating the short circuit. The panel then drives communication from both ends of the loop thus maintaining full communication with all devices.

User Interface

1. The main element of the user interface with CF3000 is a large (120mm x 90mm visible area) touch-screen display, which provides comprehensive user information and also acts as a multifunctional keypad. With other more basic systems, the user is limited to a small number of dedicated pushbuttons and consequently system interaction is restricted and complicated.
2. Comprehensive context sensitive help information is provided throughout the menus to assist unfamiliar users with system operation.
3. The CF3000 touch-screen display automatically reconfigures to suit the selected function, for example, if the change device text menu option is selected, the touch-screen is automatically formatted as a full QWERTY keyboard to enable fast and simple text entry.
4. As well as a large format LCD display providing full system status information, the panel incorporates 96 traditional zone indication LED's to provide clear information about the status and spread of a fire even to a user who is completely unfamiliar with the operation of the system. In addition there are a number of system status LED's designed to give clear status information to non technical users.
5. Access to printer (when fitted) is via separate locked access door. Paper can be changed by non-skilled personnel without exposure to any live components.
6. The printer can either be set to print on demand or to automatically print all system events as they occur.
7. The hinged front door provides simple access to all internal components and wiring.
8. The panel door cannot be opened without the use of a special key (supplied with panel).
9. For applications requiring a high level of resilience, a clear hinged lockable front cover is available that still allows full system visibility but prevents unauthorized access to the touch-screen.

Detection Capacity

1. Up to 200 addresses per loop which can be a mixture of callpoints, detectors, interfaces loop sounders or repeaters.
2. To comply with EN54 requirements no more than 512 addresses should be connected to a single panel.
3. Panels are available with up to 4 detection loops, up to 126 panels can be networked together giving a total system capacity of over 64,000 devices.

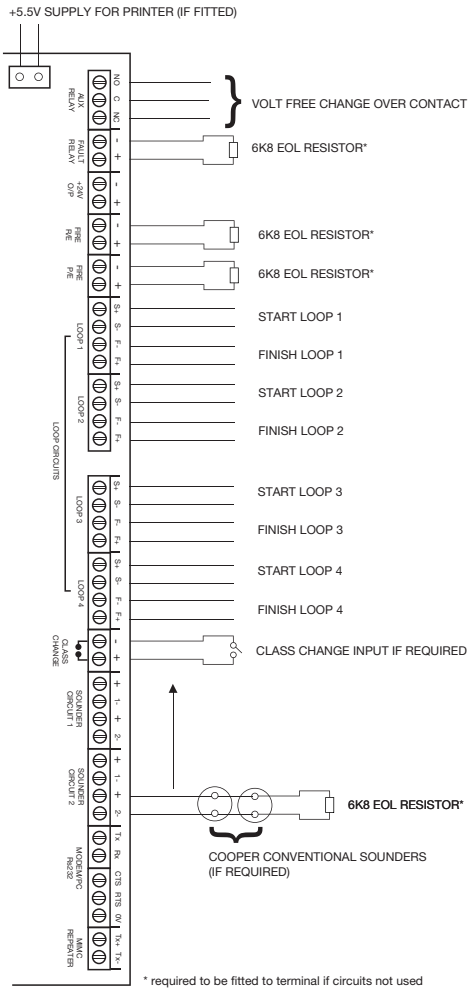
Alarm Capacity

1. Up to 80 loop powered outputs per loop (60 sounders/beacons and 20 I/O units).
2. 3 stages of cause and effect programming per output device.
3. Depending on loop load up to 3A of panel connected conventional sounders.
4. Additional conventional sounders can be connected via loop connected CSC354 units.

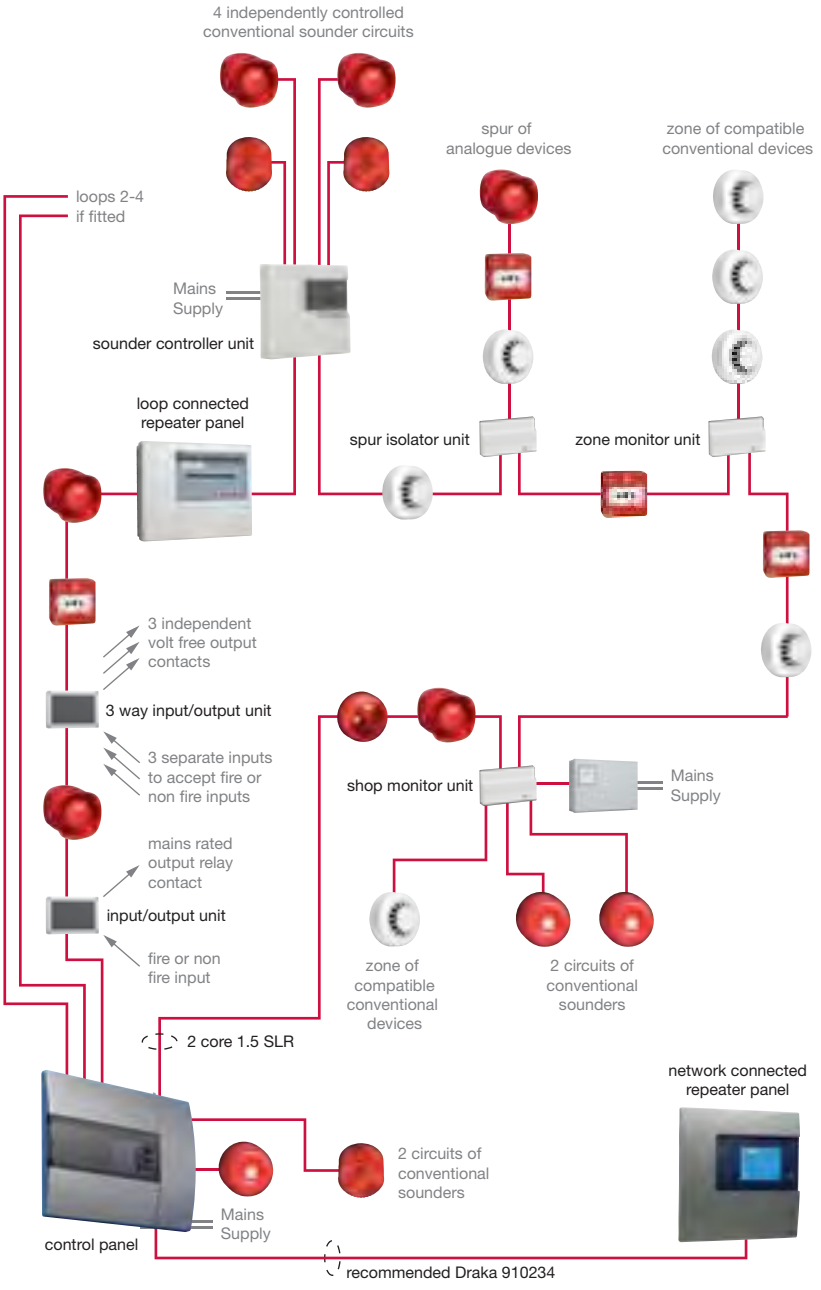
Interface Options

- Monitored output to fire routing equipment.
- Monitored output to fire protection equipment.
- Monitored output to fault monitoring equipment.
- Multiple Programmable remote inputs can be set:
  - Override of day night mode setting
    - Photo-thermal detectors go to thermal only.
    - Rate of rise detectors go to fixed high temperature mode.
    - High temperature heat detectors go to rate of rise mode.
- Disablement of pre assigned group of addresses.
- Class change.
- Non latching zone input.
- Evacuate.
- 4 Conventional sounder circuits provided.
- Zone monitor units can be used to connect zones of suitable conventional detectors and callpoints.
- Sounder circuit controllers can be used to provide additional conventional sounder circuits without wiring back to main panel.
- Mains rated input/output unit available.
- 3 way 24V rated input/output unit available.
- Spur isolator available to allow spurs of intelligent addressable devices.
- Compact input and output modules available
- Shop unit interface allows the connection of a conventional detection zone along with a power supply and 2 conventional sounder circuits, ideal for linking small self contained units onto a main addressable panel.

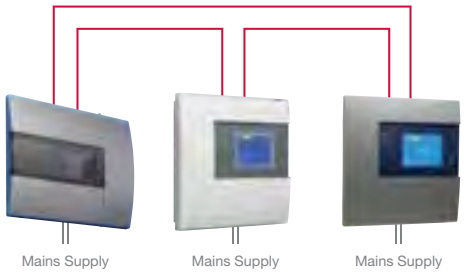
Standard Panel Connections



Typical System Architecture



System Networking - CF3000, CF1100 & CTPR3000



CF3000 and CF1000VDS systems can both be networked together. Up to 126 CF3000 panels, CF1000VDS range of panels and low cost repeaters can be networked together to operate as a single networked system.

To achieve this each panel must be fitted with a network card (optional extra). When operating as a networked system all fire and fault event information can be displayed at every panel.

Panels can be configured by service engineers to control whether fire and fault information from each panel is transmitted around the network or not. Silencing and resetting of alarms can also be carried out from any panel on a networked system. Networked panels are connected using a loop topology as illustrated.

R6000 Range and Floor Rack Unit

R6000 - Rack Mounted Control Panel

Overview

The R6000 range of 19" rack mounted, fully modular control panels, consists of a number of different plug in modules, each of which is dedicated to a particular function within the complete control panel.

These modules facilitate the requirements of fire detection, alarm signalling, PA/VA, plant control etc.

The R6000 range of rack mounted control panels have the capability to be networked to other Cooper intelligent addressable panels, repeaters and mimic panels as well as an alarm manager graphic system, providing the perfect solution for all medium and large fire detection systems.

This flexible system allows for modules to be added or removed without major modification even after manufacture and commissioning has taken place.

The floor rack unit (39UECRACK) is constructed from mild steel and is used to the house the R6000 rack mounted control panels.

Features

- Capacity for up to:
  - 126, 19" rack modules
  - 504 loops
  - 64,512 addressable points
- Soft addressing
- Large versatile touch-screen user interface
- Multi-language selection capability
- Flexible cause and effect programming
- Integral battery and power supply

Benefits

- Simple to operate end user touch-screen interface
- Easy system integration
- Ease of system modification
- System can grow as the site expands
- Single point access or distributed networking possible
- Full range of compatible accessories

Floor Rack Unit (39UECRACK)

Code	39UECRACK		
Description	Floor Rack Unit		
Standards	EMC: EN55103-1 & EN55103-2 LVD: EN60065 Product Family: EN54 Pt16 & Pt4		
Physical			
Construction	Mild Steel		
Colour	Light Grey		
Dimensions (H x W x D)	H	W	D
	18u 990mm	600mm	800mm
	27u 1360mm	600mm	800mm
	39u 1930mm	600mm	800mm
	42u 2070mm	600mm	800mm
	45u 2205mm	600mm	800mm
Weight			
	18u 55kg		
	27u 85kg		
	39u 115kg		
	42u 145kg		
	45u 150kg		

Technical Specification

Code	R6000L2	R6000L4
Description	2 Loop Control Panel	4 Loop Control Panel
Standards	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997, A1:2002, A2:2006	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997, EN54 Pt4,1997, A1:2002, A2:2006
Specification		
Number of Loops	2	4
Addresses per Loop	200	200
Number of Conventional Sounder Circuits	4 monitored for open and short circuit	4 monitored for open and short circuit
Auxiliary Fire Routing Equipment Output (Monitored)	24V 30mA (max)	24V 30mA (max)
Auxiliary Fire Protection Equipment Output (Monitored)	24V 30mA (max)	24V 30mA (max)
Auxiliary Fault Routing Equipment Output (Monitored)	12V 30mA (max)	12V 30mA (max)
System Operating Voltage	24V dc (nom)	24V dc (nom)
Mains Input Supply	230V ac +10% / -15%	230V ac +10% / -15%
Class Change Facility	Terminals for connection of external contacts, can also be instigated via input interface	Terminals for connection of external contacts, can also be instigated via input interface
Auxiliary Relay	1 set of changeover contacts operate in event of fire condition	1 set of changeover contacts operate in event of fire condition
Output Ports	RS485, RS232 for connection of repeaters etc	RS485, RS232 for connection of repeaters etc
Standby Duration	Dependant on loop loading and battery configuration	Dependant on loop loading and battery configuration
Battery	2 x 12Ah (standard versions) 4 x 12Ah (EB versions)	2 x 12Ah (standard versions) 4 x 12Ah (EB versions)
Environmental		
Operating Temperature	-5°C to +40°C	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH	0 to 75% RH
Physical		
System Networking	Fully networkable up to 126 panels (requires additional network card - 1 per panel)	Fully networkable up to 126 panels (requires additional network card - 1 per panel)

Product Codes

Code	Description
R6000L2	2 Loop Control Panel (rack mount)
R6000L4	4 Loop Control Panel (rack mount)
NC	Add to end of product code if network card required
39UECRACK	19 Inch Floor Rack Unit
1UPLATE	1 Unit Blanking Plate
2UPLATE	2 Unit Blanking Plate
3UPLATE	3 Unit Blanking Plate
6UPLATE	6 Unit Blanking Plate
ECRACKPACK43	Pack of 4 Fixings (1 required per blanking plate)

COOPER Safety
Fire Systems

VdS CPD APPROVED PRODUCT

CF1000VDS Range

Approved to the latest: EN54 Pt2, Pt4 & Pt13

CF1100VDS - Control Panel

Overview

The Cooper CF1000VDS range is available as a high specification 1 or 2 loop intelligent addressable control panel, offering sophisticated functionality with simple end user operation.

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.

CF1000VDS uses soft addressing to minimise installation time and remove the potential for error associated with manual addressing.

These panels can operate as a stand alone panel or as part of a network with the Cooper range of CF3000 panels or other CF1000VDS panels (additional network card required).

The CF1000VDS range of panels have an integral power supply and are supplied with batteries as standard.

An extensive range of compatible intelligent addressable system ancillaries are available to work with the CF1000VDS range all of which incorporate an integral short circuit isolator to provide maximum protection against short circuit faults on the loop.

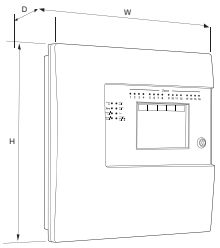
Features

- Available in 1 and 2 loop versions
- Up to 200 addresses per loop
- Full network capability up to 126 panels
- Soft addressing
- Large versatile touch-screen user interface
- Multi-language selection capability
- Integral battery and power supply
- Flexible cause and effect programming

Benefits

- Simple to operate end user touch-screen interface
- Flexible distributed network capability
- Full range of compatible accessories
- Easy to design system cause and effect using site installer software
- Full system integrity with Cooper developed protocol

Dimensions



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

Technical Specification

Code	CF1100VDS	CF1200VDS
Description	1 Loop Control Panel	2 Loop Control Panel
Standards	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997 A1:2002, A2:2006, EN54 Pt13: 2005	EN54 Pt2,1997, A1:2006, EN54 Pt4,1997 A1:2002, A2:2006, EN54 Pt13: 2005
Specification		
Number of Loops	1	2
Addresses per Loop	200	200
Number of Conventional Sounder Circuits	2 monitored for open and short circuit (max 1.5A combined)	2 monitored for open and short circuit (max 1.5A combined)
Auxiliary Fire Routing Equipment Output (Monitored)	24V dc 30mA (max)	24V dc 30mA (max)
Auxiliary Fire Protection Equipment Output (Monitored)	24V dc 30mA (max)	24V dc 30mA (max)
Auxiliary Fault Routing Equipment Output (Monitored)	12V dc 30mA (max)	12V dc 30mA (max)
System Operating Voltage	24V dc (nom)	24V dc (nom)
Mains Input Supply	230V ac +10% / -15%	230V ac +10% / -15%
Class Change Facility	Terminals for connection of external contacts, can also be instigated via input interface	Terminals for connection of external contacts, can also be instigated via input interface
Auxiliary Relay	1 set of changeover contacts operate in event of fire condition	1 set of changeover contacts operate in event of fire condition
Output Ports	RS485, RS232 for connection of repeaters etc	RS485, RS232 for connection of repeaters etc
Standby Duration	Dependant on loop loading and battery configuration	Dependant on loop loading and battery configuration
Battery	2 x 7Ah	2 x 7Ah
Environmental		
Operating Temperature	-5°C to +40°C	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH	0 to 75% RH
Physical		
Construction	Back Box - Steel	Back Box - Steel
Dimensions (H x W x D)	375mm x 357mm x 95mm	375mm x 357mm x 95mm
Weight	8kg	8kg
Ingress Protection	IP30	IP30
Cable entries	Top: cable knockouts (20mm) Back: cable aperture	Top: cable knockouts (20mm) Back: cable aperture
System Networking	Fully Networkable up to 126 panels (requires additional network card, per panel)	Fully Networkable up to 126 panels (requires additional network card, per panel)

Product Codes

Code	Description
CF1100	Intelligent Addressable 1 Loop Control Panel
CF1200	Intelligent Addressable 2 Loop Control Panel
CF1100VDS	Intelligent Addressable 1 Loop Control Panel (VDS Approved)
CF1200VDS	Intelligent Addressable 2 Loop Control Panel (VDS Approved)
NC	Add to end of product code if network card required
DF61NETKIT	Network Kit (retro fit)
CF3000PRG	Passive Repeater Panel
CTPR3000	Touch-Screen Repeater Panel
MFALOG	Fire Alarm System Log Book

Installation

1. Panel is designed for surface or recessed mounting (without the need for an additional bezel).
2. Cable entry is by means of top entry knockouts in the metal back box, along with a substantial rear entry cutout.
3. Panels are wall mounted via keyhole/slot mounting holes on back of housing.
4. Key operated hinged lockable door provides access to all internal wiring.
5. Cable entry can either be top or rear.
6. Mains input protection is provided by integral fuse.
7. All external wiring should be in accordance with relevant section of latest edition of BS5839 Pt1.
8. Comprehensive installation and operation manual provided with each system.

System Functionality

1. Panel has 3 modes of operation, normal mode, user mode and engineer mode.
2. User maintenance and engineer modes can only be accessed by entering relevant pass codes.
3. User mode allows access to system test functions, enable and disable menus, view analogue level menus and functions such as evacuate, silence alarms and reset.
4. Engineer mode allows alteration of system configuration and programming of site specific data such as device text and sounder programming.
5. Engineer mode also allows adding and removal of devices and alteration of existing text.
6. CF1000VDS range is designed to ensure simplicity of future expansion. If an additional device is added after the system has been programmed, the panel will allocate the next available address, it will not alter any of the existing address number allocation thus enabling simple updating of "as fitted" drawings etc. Similarly if a device is removed, the relevant address is saved as a spare address for future use, the addresses of the remaining devices are not affected.
7. All devices are soft addressed during commissioning however once allocated, addresses are locked until manually altered thus enabling simple system additions and deletions without affecting other addresses.
8. In event of an external short circuit occurring, short circuit isolators on output of the devices nearest to each side of the short circuit open thus isolating the short circuit. The panel then drives communication from both ends of the loop thus maintaining full communication with all devices.

User Interface

1. The main element of the user interface with CF1000VDS range is a large (120mm x 90mm visible area) touch-screen display, which provides comprehensive user information and also acts as a multi-functional keypad. With other more basic systems, the user is limited to a small number of dedicated push buttons and consequently system interaction is restricted and complicated.
2. Comprehensive context sensitive help information is provided throughout the menus to assist unfamiliar users with system operation.
3. The CF1000VDS range touch-screen display automatically reconfigures to suit the selected function, for example, if the change device text menu option is selected, the touch-screen is automatically formatted as a full QWERTY keyboard to enable fast and simple text entry.
4. As well as a large format LCD display providing full system status information, the panel incorporates 16 traditional zone indication LED's to provide clear information about the status and spread of a fire even to a user who is completely unfamiliar with the operation of the system. In addition there are a number of system status LED's designed to give clear status information to non technical users.
5. Audible buzzer with mute facility.
6. Hinged lockable door provides access to all internal wiring and components.

Detection Capacity

1. Up to 200 addresses per loop which can be a mixture of callpoints, detectors, interfaces or loop sounders.
2. CF1000VDS range of panels can be networked with all Cooper intelligent addressable and wireless panels.

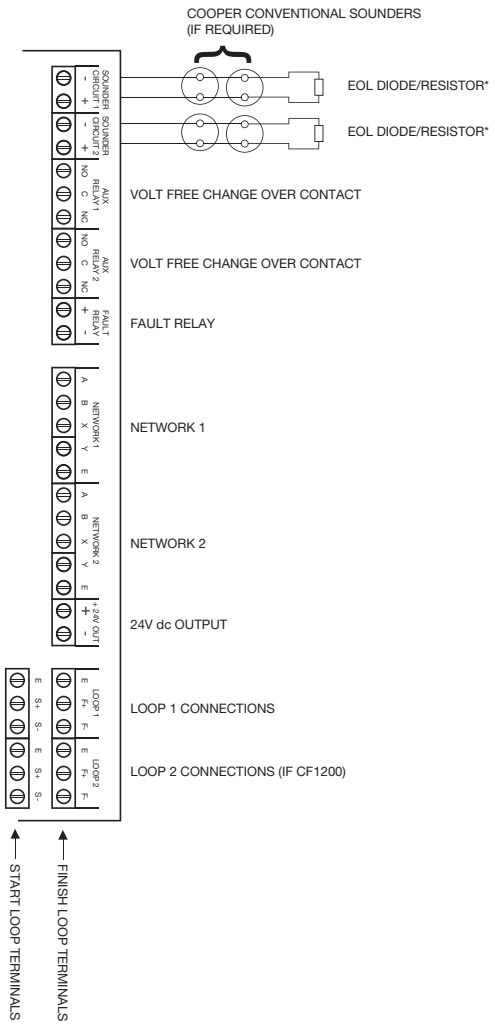
Alarm Capacity

1. Up to 80 loop powered outputs per loop (60 sounders/beacons and 20 I/O units).
2. 3 stages of cause and effect programming per output device.
3. 0.8A of panel connected conventional sounders.
4. Additional conventional sounders can be connected via loop mounted CSC354 units.

Interface Options

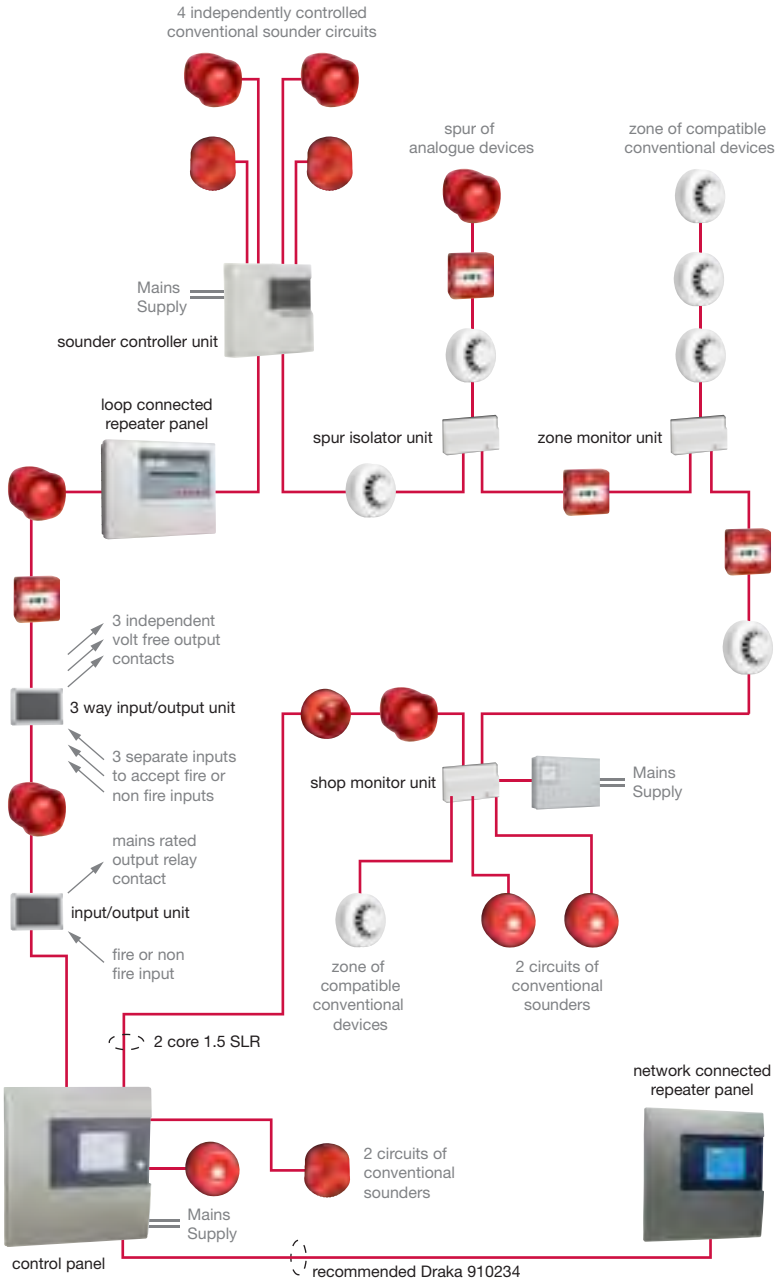
- Day night mode override via external switched signal (can be a timer).
- Multiple Programmable remote inputs can be set:
  - Override of day night mode setting
    - Photo-thermal detectors go to thermal only.
    - Rate of rise detectors go to fixed high temperature mode.
    - High temperature heat detectors go to rate of rise mode.
- T1 and T2 timer.
- HMO facility.
- Comprehensive cause and effect programming.
- Test per zone or address.
- Alarm verification per zone.
- Coincidence detection.
- Disablement of pre assigned group of addresses.
- Class change.
- Non latching zone input.
- Evacuate.
- 2 Conventional sounder circuits provided.
- Zone monitor units can be used to connect zones of suitable conventional detectors or loop powered beam detectors.
- Sounder circuit controllers can be used to provide additional conventional sounder circuits without wiring back to main panel.
- Mains rated input/output unit available.
- 3 way 24V dc rated input/output unit available.
- Spur isolator available to allow spurs of intelligent addressable devices.
- Compact input and output modules available.
- Shop unit interface allows the connection of a conventional detection zone along with a power supply and 2 conventional sounder circuits, ideal for linking small self contained units onto a main intelligent addressable control panel.

Standard Panel Connections



* required to be fitted to terminal if circuits not used

Typical System Architecture



System Networking - CF3000, CF1100 & CTPR3000

CF3000 and CF1000VDS systems can both be networked together. Up to 126 CF3000 panels, CF1000VDS range of panels and low cost repeaters can be networked together to operate as a single networked system.

To achieve this each panel must be fitted with a network card (optional extra). When operating as a networked system all fire and fault event information can be displayed at every panel.

Panels can be configured by service engineers to control whether fire and fault information from each panel is transmitted around the network or not. Silencing and resetting of alarms can also be carried out from any panel on a networked system. Networked panels are connected using a loop topology as illustrated.

COOPER Safety
Fire Systems

CF2000GCPD

Approved to the latest: EN54 Pt2 & Pt4

CF2000GCPD - Control Panel

Overview

The Cooper CF2000GCPD is an entry level intelligent addressable control panel which can be configured for either 1 or 2 loop operation.

This intelligent addressable control panel has a graphic display which provides a simple yet comprehensive, menu-driven, end user interface.

With the CF2000GCPD's ability to support Cooper cause and effect programming and a wide range of user controllable functions it makes the panel suitable for a varied range of projects from small warehouses to small/medium office developments as well as many small industrial applications.

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

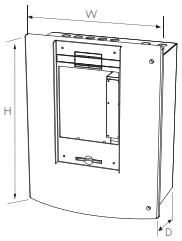
Features

- Configurable as a 1 or 2 loop panel
- Up to 200 addresses per loop
- Full network capability up to 126 panels
- Network compatible with CF1000VDS and CF3000 ranges
- Soft addressing
- Menu-driven graphic screen
- Multi-language selection capability
- Integral battery and power supply
- Flexible cause and effect programming

Benefits

- Easy to operate end user controls
- Flexible distributed network capability
- Full range of compatible accessories
- Easy to design system cause and effect using site installer software
- Full system integrity with Cooper developed protocol

Dimensions



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

Installation

The CF2000GCPD has been designed with ease of installation as a major objective.

The panel back box can be either surface or semi flush mounted with cable entry points to both the top and rear. The mother board and integrated power supply are mounted on a sub chassis which is easily removed to aid panel fitting.

Back box mounting is further assisted with the provision of a drill template allowing the mounting screw holes to be pre-drilled and the top two mounting screws fitted prior to final positioning of the back box.

Ample room is provided within the back box for the termination of external cables and bonding of cable screen wires.

System configuration

The CF2000GCPD can be configured to operate as a 1 or 2 loop panel, or as a network configured panel to integrate up to 126 Cooper control panels.

Using Cooper system protocol the panel "auto learns" the equipment mounted on the loop/s and "soft addresses" each item, ensuring a simple setup procedure and reducing the time required for system setup.

All loop mounted equipment has integral short circuit isolators, ensuring loop integrity is maintained should a short circuit fault occur on the loop.

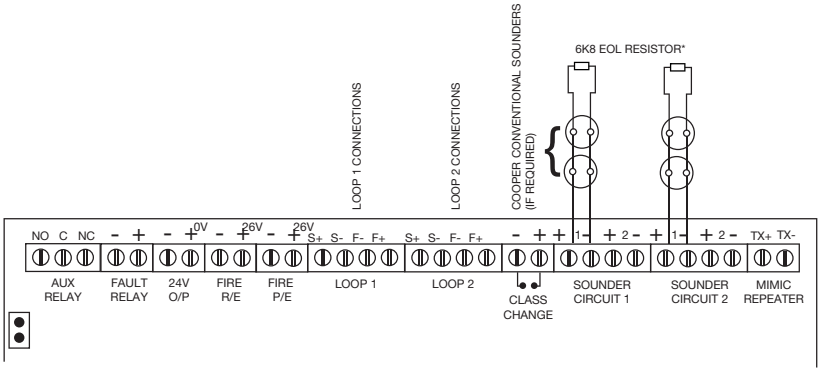
A comprehensive range of interface units are available with the CF2000GCPD including the CSI350 spur isolator which permits Cooper intelligent addressable sensors to be connected to the loop as a spur.

Connection to external equipment or mimic panel is achieved via the RS485 serial output.

Technical Specification

Code	CF2000GCPD
Description	2 Loop Control Panel
Standards	EN54 Pt2 1997, A1: 2006 EN54-4 1997, A1: 2002 & A2: 2006
Specification	
Number of Loops	2
Addresses per Loop	200
Panel Sounder Circuits	4 outputs, 1A total (programmed in pairs - outputs 1 & 2, 3 & 4)
Class Change Facility	Operated by external, normally open, volt free contacts
Auxiliary Relay	One set of change over contacts, operated in the event of fire activation
Auxiliary Fire Routing Equipment Output	Monitored 24V dc, 30mA (max)
Auxiliary Fire Protection Equipment Output	Monitored 24V dc, 30mA (max)
Auxiliary Fault Routing Equipment Output	Monitored 12V dc, 30mA (max)
Output Ports	RS485 and RS232 (for connection of repeaters etc)
Mains Input Voltage	230V ac +10% / -15%
Operating Voltage	24V dc
Batteries	2 x 12V 7Ah
Standby Duration	24 hours (dependant on loop loading)
Environmental	
Operating Temperature	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH
Physical	
Construction	Back Box - Mild Steel, Door - PC/ABS
Colour	Graphite
Dimensions (H x W x D)	400mm x 320mm x 170mm
Weight	15kg
Ingress Protection	IP30
Cable Entry	Top: 20 entry cable knockouts (20mm) Rear: 7 entry cable knockouts (20mm)

Standard Panel Connections



* required to be fitted to terminal if circuits not used

Product Codes

Code	Description
CF2000GCPD	Intelligent Addressable 2 Loop Control Panel
NC	Add to end of product code if network card required
MFALOG	Fire Alarm System Log Book

Touch-Screen Repeater Panel

CTPR3000 - Touch-Screen Repeater Panel

Overview

The CTPR3000 touch-screen repeater panel provides sophisticated "touch-screen" functionality yet achieves a simple end-user interface operation within a compact panel design.

The CTPR3000 is designed to work with all Cooper intelligent addressable control panels as well as other network repeaters.

The Cooper touch-screen repeater panel is easy to install and commission. All text is transmitted via the network and is automatically updated.

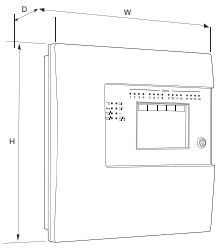
Features

- Large versatile touch-screen user interface
- Multi-language selection capability
- Full network capability up to 126 panels
- Programmable as an active or passive repeater
- Plug and play (all system information is uploaded through the network)
- Integral battery and power supply

Benefits

- Aesthetical, compact panel
- Simple to operate end user touch-screen interface
- Requires no programming (plug and play)
- Full system visibility and control

Dimensions

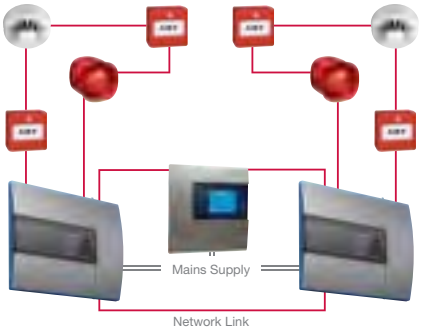


	H (mm)	W (mm)	D (mm)
Panel	375	357	95
Cutout	345	325	50

Technical Specification

Code	CTPR3000
Description	Touch-Screen Repeater Panel
Standards	EN54 Pt4
Specification	
Mains Input Voltage	230V ac +10% / -15%
Operating Voltage	24V dc
System Indicators	Power on, fire, fault, test, disable and scroll
System Controls	Silence alarms, evacuate and reset (full system control if set as active)
Input Ports	RS232 (for connection of programmer)
Battery	2 x 12V 3.2Ah
Standby Duration	24 hours
Environmental	
Operating Temperature	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH
Physical	
Construction	PC/ABS
Colour	Graphite
Dimensions (H x W x D)	375mm x 357mm x 95mm
Weight	8kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Network Connected



Installation

- Wall mounted by means of 4 fixing screws.
- Cable entry at top or back.
- 11 top entry gland holes.
- Separate rear access cable entry facility.
- Local mains supply required.
- Must be network connected.

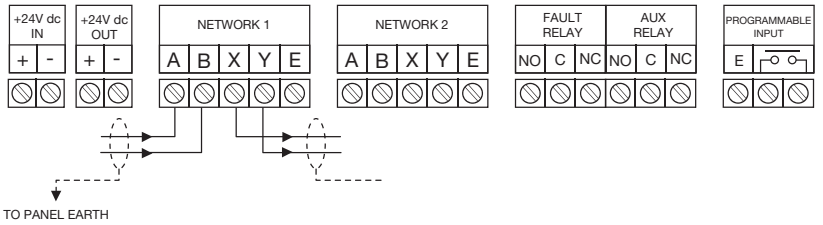
System Functionality

- Panel operates in either normal, supervisor or engineer mode.
- Supervisor and engineer modes are accessed via 4 digit pass codes.
- Supervisor mode allows full system operation.
- Engineer mode enables password to be changed if required and allows access to text download menu.
- When connected to network, all text is transmitted via network, changes to other network panels update automatically.

Device Overview

- Panel is connected to the network as part of a networked system.
- Supplied with integral power supply and standby battery.
- Touch-screen end user interface.

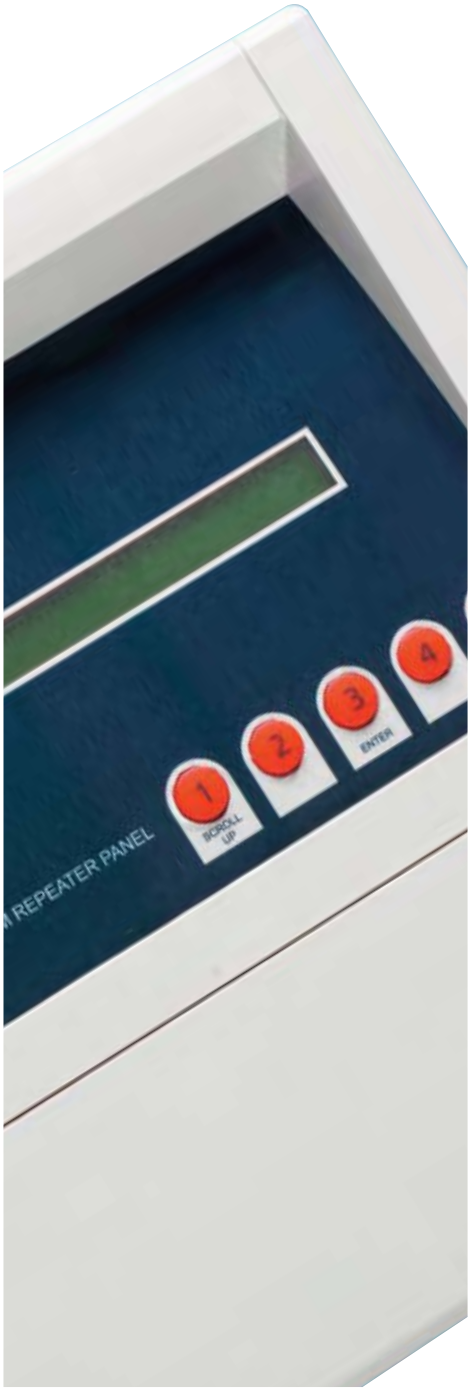
Standard Connection



Product Codes

Code	Description
CTPR3000	Intelligent Addressable Touch-Screen Repeater Panel

Passive Repeater Panel



CF3000PRG - Passive Repeater Panel

Overview

The CF3000PRG is a cost effective passive repeater panel which can be programmed via its informative display to be either fully passive (display only) or semi passive (restricted system control).

When loop connected the repeater panel will display the system information text of the connected control panel and will provide a fire indication, with panel number, of any connected network control panel that has fire activation.

The CF3000PRG repeater panel only requires programming with local text information.

In addition to the repeater panels main menu driven 2 x 40 backlit LCD display, which provides system status information, it also has 6 supervisory LED's (power on, alarm, fault, supervisory, test in progress, and scroll).

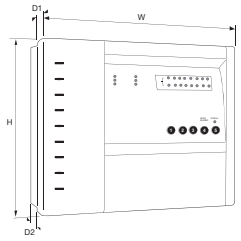
Features

- 2 x 40 Backlit LCD display
- 6 Supervisory LED's
- Loop and network connected versions available
- Maximum of 20 repeaters can be connected to a loop
- Integral battery and power supply
- Can be surface or semi-recessed mounted
- Limited system control in supervisor mode:
  - Silence
  - Evacuate
  - Reset

Benefits

- Compact economy panel
- Menu driven LCD display
- Requires no programming (network version only)
- Reduced wiring and installation costs
- Numeric access code (no lost keys)

Dimensions

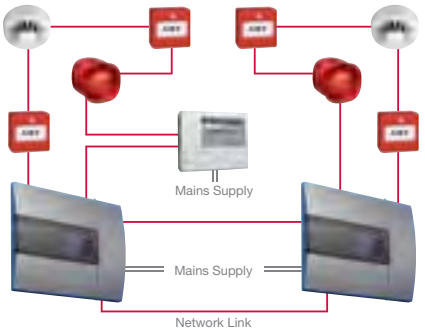


H (mm)	W (mm)	D1 (mm)	D2 (mm)
270	332	45	47

Technical Specification

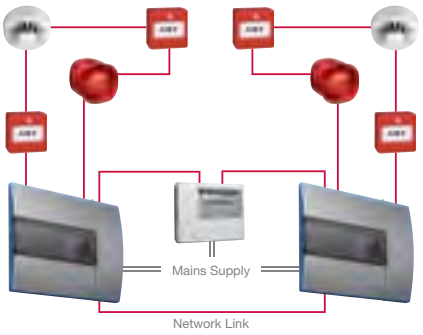
Code	CF3000PRG
Description	Passive Repeater Panel
Standards	EN54 Pt4
Specification	
Mains Input Voltage	230V ac +10% / -15%
Operating Voltage	24V dc
System Indicators	Power on, fire, fault, test, disable and scroll
System Controls	Silence alarms, evacuate and reset
Input Ports	RS232 (for connection of programmer)
Battery	1 x 12V 3.2Ah
Standby Duration	24 hours
Environmental	
Operating Temperature	0°C to +25°C
Humidity (Non Condensing)	0 to 75% RH
Physical	
Construction	PC/ABS
Colour	Light Grey
Dimensions (H x W x D)	332mm x 270mm x 92mm
Weight	3.6kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Loop Connected



Note:
In this configuration the repeater would give "text" information for the panel that is on the loop, but only address number for the other panel on the network.

Network Connected



Installation

1. Wall mounted by means of 4 fixing screws.
2. Cable entry at top or back.
3. 12 top entry gland holes with push out blanking plugs.
4. 4 separate rear access cable entry facilities.
5. Local mains supply required.

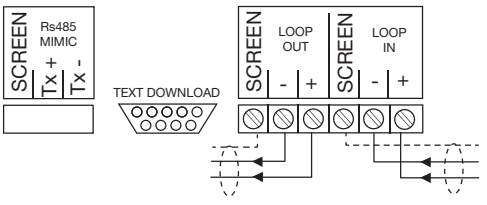
System Functionality

1. Panel operates in either normal, supervisor or engineer mode.
2. Supervisor and engineer modes are accessed via 4 digit pass codes.
3. Supervisor mode allows silence, evacuate and reset commands to be sent to host panel (loop connected) or to network (network connected).
4. Engineer mode enables password to be changed if required and allows access to text download menu.
5. When connected to network, all text is transmitted via network, changes to other network panels update automatically.
6. When connected to a detector loop, text for host is downloaded to repeater.
7. Zonal fire and fault indication is by means of 2 x 40 character LCD display.

Device Overview

1. Panel can be connected to either the detection loop of a single panel or to a network as part of a networked system.
2. Supplied with integral power supply and standby battery.

Standard Connection



Product Codes

Code	Description
CF3000PRG	Intelligent Addressable Passive Repeater Panel (loop connected)
CF3000PRGNC	Intelligent Addressable Passive Repeater Panel (network connected)

Sensors

CAP320 - Optical Sensor

CAP320 - Optical Sensor / CAPT340 - Photo-Thermal / CAH330 - Heat Sensor

CAPT340 - Photo-Thermal Sensor

CAH330 - Heat Sensor

Overview

This range of intelligent addressable sensors have been specifically designed to operate with Cooper intelligent addressable fire systems.

All sensors are third party approved to the relevant section of EN54 (part 7 for smoke detectors & part 5 for heat detectors).

The optical sensor (CAP320) is suitable for most applications giving the fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.

The photo-thermal sensor (CAPT340) will respond quickly to fast clean burning fires yet maintain the advantage of optical sensors when detecting smouldering fires. The thermal enhancement of this sensor allows a higher alarm threshold which provides a greater rejection of false alarms. The sensor will also raise an alarm at temperatures exceeding 60°C.

The heat sensor (CAH330) can be set to one of 3 modes 77°C / 92°C and rate of rise. These sensors are designed to be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.

Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Wide range of sensor types
- 360° visibility LED using lightpipe technology
- Drift compensation
- Removable detector chamber
- Aesthetically pleasing

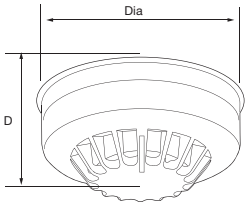
Benefits

- Quick and simple to install
- Single "multi-mode" heat sensor
- Wide viewing angle for increased LED visibility
- Common mounting base
- Positive "lock" indication
- Discreet design for incorporation into any decor
- Easy to maintain/service

Technical Specification

Code	CAP320	CAPT340	CAH330
Description	Optical Smoke Sensor	Photo-Thermal Sensor	Multi-Mode Heat Sensor
Standards	EN54 Pt7 2000 + A1:2002, EN54 Pt17	EN54 P5 & P7 2000 + A1:2002, EN54 Pt17	EN54 Pt5 2000 + A1:2002, EN54 Pt17
Operating voltage	18V dc to 30V dc	18V dc to 30V dc	18V dc to 30V dc
Standby Current	220µA (max)	220µA (max)	220µA (max)
Alarm Current	5mA (max)	5mA (max)	5mA (max)
Addressing Mode	Auto address	Auto address	Auto address
Specification			
Mounting Position	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas
Mounting Options	Surface mount with CAB300 base	Surface mount with CAB300 base	Surface mount with CAB300 base
Area Coverage	100m² (subject to local standard)	100m² (subject to local standard)	50m² (subject to local standard)
System Wiring	Min. 1.5mm, 2 core loop or spur	Min. 1.5mm, 2 core loop or spur	Min. 1.5mm, 2 core loop or spur
Heat Class			
Rate of Rise	N/A	A1S	A1R
Fixed Heat 77°C	N/A	N/A	BS
Fixed Heat 90°C	N/A	N/A	CS
Alarm Temperature (static)			
AIR	N/A	60°C	60°C
BS	N/A	N/A	77°C
CS	N/A	N/A	90°C
Indication	360° visibility light pipe	360° visibility light pipe	360° visibility light pipe
Environmental			
Operating Temperature	-20°C to +60°C	-20°C to +50°C	-20°C to +60°C
Humidity (non condensing)	0 to 95% RH	0 to 95% RH	0 to 95% RH
Physical			
Construction	PC/ABS	PC/ABS	PC/ABS
Colour	White	White	White
Dimensions Excl Base (Dia x D)	101mm x 33mm	101mm x 43mm	101mm x 43mm
Dimensions Incl Base (Dia x D)	104mm x 45mm	104mm x 55mm	104mm x 55mm
Weight (without base)	76g	76g	76g
Compatibility			
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Dimensions



Description	Dia (mm)	D (mm) (excl base)	D (mm) (incl base)
Optical	101	33	45
Photo-Thermal	101	43	55
Multi-Mode Heat	101	43	55

Installation

1. Sensors are fixed and wired via common mounting base.
2. Cable entry into base can be rear or side.
3. A locking facility is provided which can be activated if required to prevent unauthorised sensor removal without the use of a special tool.

Note: For wiring information please see CAB300 base.

User Interface

1. LED indicates detector status, can be set to flash to confirm communication with control panel, illuminates continuously under fire conditions.
2. All wiring connections are via a common mounting base (ordered separately).

Product Codes

Code	Description
CAP320	Intelligent Addressable Optical Smoke Sensor
CAPT340	Intelligent Addressable Photo/Thermal Sensor
CAH330	Intelligent Addressable Multi-Mode Heat Sensor
CAB300	Intelligent Addressable Standard Base
CIR301	Conventional Remote Indicator
MDP201	Duct Probe (requires detector and base)

Standard Base

CAP320 - Optical Sensor

CAPT340 - Photo-Thermal Sensor

CAH330 - Heat Sensor

CAB300 - Standard Base

Overview

The intelligent addressable sensor standard base (CAB300) has been designed for flexibility, simplicity and speed of installation.

The (CAB300) is compatible with the Cooper range of intelligent addressable sensors and fire systems.

This intelligent addressable standard base incorporates a purpose designed shorting link to ensure wiring continuity if a sensor is removed.

This device also has a retaining clip to provide positive feedback when the sensor is correctly fitted and a retaining clip that can be replaced with locking device (supplied with base) to prevent unauthorised sensor removal.

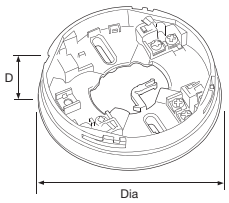
Features

- Integral sensor shorting link
- Separate loop in and loop out terminals
- Stand off fixing feature
- Accepts side entry cables
- Selectable sensor locking feature

Benefits

- Quick and simple to install
- Common mounting base for Cooper intelligent addressable sensors
- Positive "lock" indication
- multiple cable entry points
- Easy to maintain/service

Dimensions



Dia (mm)	D (mm)
104	22

Technical Specification

Code	CAB300
Description	Standard Base
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	104mm x 22mm
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Sensors

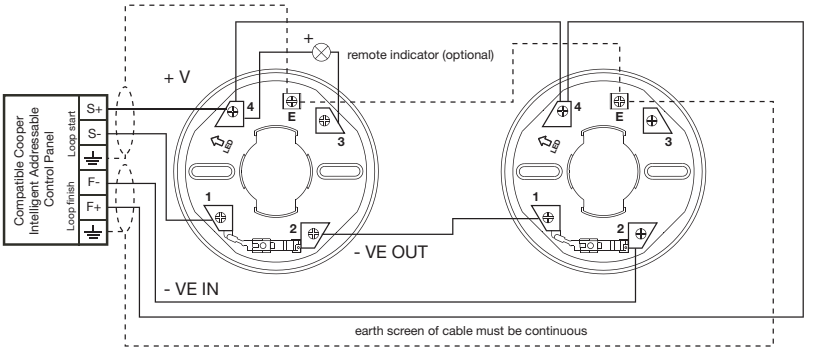
Installation

1. Separate terminals are provided for loop in and loop out connections.
2. Each terminal can accept up to 2 x 2.5mm cables.
3. Base incorporates a substantial cable entry aperture in the rear of the base.
4. Breakouts are provided to enable the sensor base to sit neatly over surface cables and then enter via the rear entry aperture.
5. Base mounting incorporates a stand off feature to help prevent distortion when mounted on an uneven surface.
6. Fixings are suitable for standard BESA box or direct fixing to suitable surface.

User Interface

1. Heavy duty terminals are provided for each connection, each terminal can accept 2 x 2.5mm cables.
2. Separate loop in and loop out terminals are provided for each connection.

Standard Connection



WARNING:
If using the outer connection on terminal 2, ensure the operation of the switch is not impeded and that there are no shorts between terminal 2 and the switch contact.

Product Codes

Code	Description
CAB300	Intelligent Addressable Standard Base

Sounder Base

CAS380 with sensor fitted

CAS380 with cover fitted (CASC)

CAS380 - Sounder Base

CAS380 - Sounder Base

Overview

The intelligent addressable sounder base (CAS380) can be used both with a sensor or as a stand alone device.

The (CAS380) is compatible with the Cooper range of intelligent addressable sensors and fire systems.

This device incorporates a sensor mounting base, a sensor can be fitted to the sounder base or alternatively an optional cover plate (CASC) can be used to enable the sounder to operate as a dedicated discreet stand alone sounder.

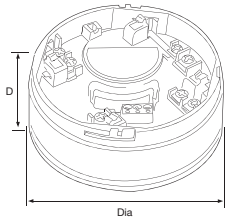
Features

- Integral short circuit isolator
- Integral sensor mounting base
- Can be used with a sensor as a sounder base or stand alone as a sounder
- Cover plate (optional)

Benefits

- Quick and simple to install
- First fix base
- Selectable tones controlled by the panel
- Adjustable volume controlled by the panel
- Single point connection for sensor and sounder (saving on both time and installation costs)
- Can be used with a sensor or stand alone
- Easy to maintain/service

Dimensions



Dia (mm)	D (mm)
102	40

Technical Specification

Code	CAS380
Description	Sounder Base
Standards	EN54 Pt3
Specification	
Operating Voltage	17V dc to 32V dc
Standby Current	< 320µA
Tones (set by panel)	Continuous: 910Hz Pulsed: 910Hz / 0Hz pulse 1Hz Two tone: 610 / 910Hz at 1Hz cycle Slow whoop
Sound Output at +/-3dB (set by panel)	Low volume : 84dB at < 4mA Medium volume : 92dB at < 8mA High volume : 95dB at < 12mA
Environmental	
Operating Temperature	-10 to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	120mm x 40mm
Weight	0.2kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

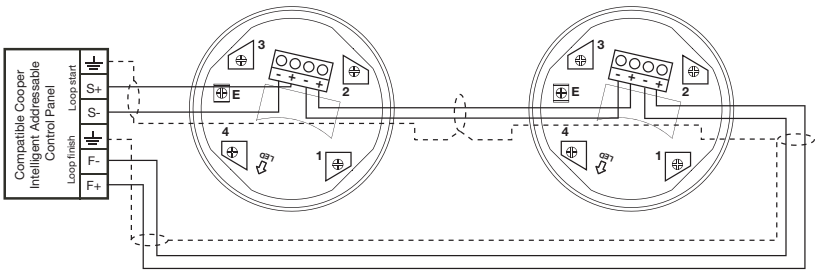
Installation

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface via 2 fixings holes.
3. Cables enter through aperture in base (rear entry only)
4. Main body is then clipped into place on base, main body locks into place when pressed into position.
5. Cables pass through aperture in sounder body and terminate at the front.
6. Connections are to connector block on front of main sounder body.
7. Sensor or cover plate is then fixed to sounder.
8. Sensor or cover plate can be locked in place if required.

System Functionality

1. Volume and tone are set by control panel, no need to access sounder to alter setting.
2. Soft addressed.

Standard Connection



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.
Earth screen must be continuous along entire length of loop.

NOTE:
Base terminal 1, 2, 3 and 4 not used. All wiring terminates as shown above.

Product Codes

Code	Description
CAS380	Intelligent Addressable Sounder Base
CASC	Sounder Cover Plates (pack of 5)

Sounder Beacon Base

CASBB384 with sensor fitted

CASBB384 - Sounder Beacon Base

CASC - Cover Plate

CASBB384 - Sounder Beacon Base

Overview

The intelligent addressable sounder beacon base (CASBB384) can be used both with a sensor or as a stand alone device.

The (CASBB384) is compatible with the Cooper range of intelligent addressable sensors and fire systems.

This device includes all the features of the intelligent addressable sounder base (CAS380) whilst also incorporating a powerful LED beacon.

The intelligent addressable beacon base incorporates a sensor mounting base, a sensor can be fitted directly to the base, or alternatively an optional cover plate (CASC) can be used to provide a dedicated discreet stand alone device.

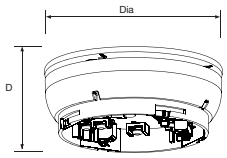
Features

- Integral short circuit isolator
- Integral sensor mounting base
- Can be used with a sensor as a sounder beacon base or stand alone as a sounder beacon
- Cover plate (optional)

Benefits

- Quick and simple to install
- First fix base
- Selectable tones controlled by the panel
- Adjustable volume controlled by the panel
- Single point connection for sensor, sounder and LED beacon (saving on both time and installation costs)
- Can be used with a sensor or stand alone
- Easy to maintain/service

Dimensions



Dia (mm)	D (mm)
115	44

Technical Specification

Code	CASBB384
Description	Sounder Beacon Base
Standards	EN54 Pt3
Specification	
Operating Voltage	17V dc to 32V dc
Standby Current	< 320µA
Tones (set by panel)	Continuous: 910Hz Pulsed: 910Hz / 0Hz pulse 1Hz Two tone: 610 / 910Hz at 1Hz cycle Slow whoop: 500 – 1200Hz in 3.5 Seconds
Sound Output at +/-3dB (set by panel)	Low volume : 83dB at < 6.6mA Medium volume : 90dB at < 8mA High volume : 93dB at < 9mA
Environmental	
Operating Temperature	-10 to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	115mm x 44mm
Weight	0.2kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

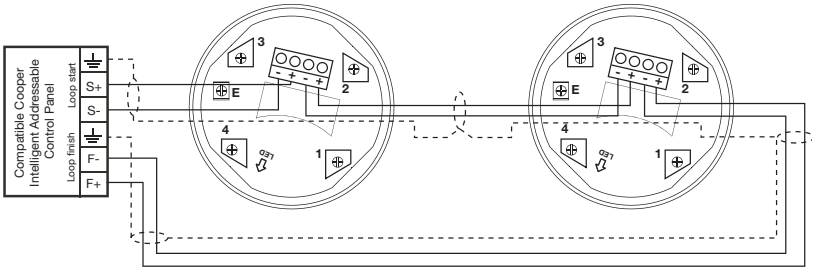
Installation

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface via 2 fixings holes.
3. Cables enter through aperture in base (rear entry only)
4. Main body is then clipped into place on base, main body locks into place when pressed into position.
5. Connections are to connector block on front of main sounder body.
6. Sensor or cover plate is then fixed to sounder, (can be locked in place if required).

System Functionality

1. Volume and tone are set by control panel, no need to access sounder to alter setting.
2. Soft addressed.

Standard Connection



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.
Earth screen must be continuous along entire length of loop.

NOTE:
Base terminal 1, 2, 3 and 4 not used. All wiring terminates as shown above.

Product Codes

Code	Description
CASBB384	Intelligent Addressable Sounder Beacon Base
CASC	Sounder Beacon Cover Plates (pack of 5)

Loop Connected Remote Indicator

MRIAD - Loop Connected Remote Indicator

Overview

The intelligent addressable loop connected remote indicator (MRIAD) is designed to provide discreet remote indication, which is controlled by the intelligent addressable control panel, whilst providing the ability to monitor multiple sensors within an area thereby minimising wiring requirements.

The (MRIAD) is compatible with the Cooper range of intelligent addressable fire systems.

The device is connected directly on to the loop, and is "soft addressed" by the panel on system start up and is fitted with integral short circuit isolators.

When using "site installer" the intelligent addressable loop connected remote indicator should be programmed as an address output (sounder) and can be programmed using the comprehensive cause and effect tables to operate continuous, pulsing, by global, panel, zone, address or on double knock input etc.

The device is supplied complete with back box and is surface mounted.

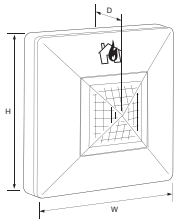
Features

- Loop connected
- Soft addressed
- Integral short circuit isolator
- Single address
- High visibility LED
- Can be programmed to monitor multiple remote sensors
- Fits on to a standard single gang back box
- Aesthetically pleasing

Benefits

- Quick and simple to install
- Wide viewing angle for increased visibility
- Discreet design for incorporation in to any decor
- Can be remote mounted
- Can be activated by cause and effect programming
- Reduced cost
- Minimises cabling
- Easy to maintain/service

Dimensions



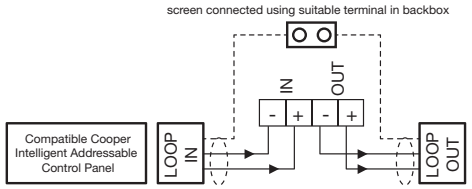
H (mm)	W (mm)	D (mm)
87	87	49

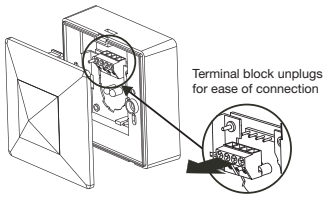
Technical Specification

Code	MRIAD
Description	Loop Connected Remote Indicator
Specification	
Operating Voltage	24V dc
Quiescent Current	220µA
Alarm Current	6mA
Cable Size	0.5 mm² to 2.5 mm²
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	ABS
Colour	White
Lens Colour	Red
Dimensions (H x W x D)	87mm x 87mm x 49mm
Weight	0.28kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Standard Connection

MRIAD





WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Installation

1. Mounting plate fixes to single gang back box or can be direct fixed to wall or ceiling.
2. Cable entry is normally from rear but breakouts are provided in side of base plate
3. Cables connect to terminals on PCB within base plate.
4. Front cover is pushed onto base plate and locks in place.

System Functionality

1. MRIAD is addressable and is programmed to activate when selected detectors are triggered.
2. LED cancels when detector is reset.
3. Low current consumption.

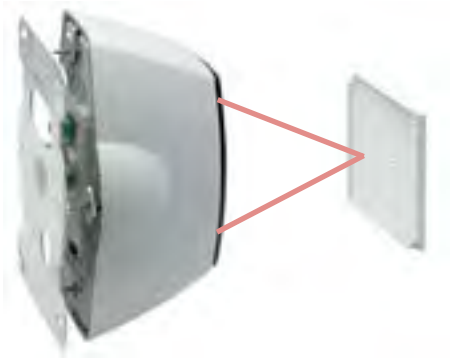
Product Codes

Code	Description
MRIAD	Intelligent Addressable Remote Indicator
CIR301	Conventional Remote Indicator

VdS

Reflective Beam Detectors

Optional Mounting Bracket with cable clamp facilities



Combined transmitter and receiver for ease of installation

MAB50R / MAB100R - Reflective Beam Detector

MAB50R / MAB100R - Reflective Beam Detectors

Overview

Two versions of the intelligent addressable loop powered reflective beam detectors are available in this range, the (MAB50R) with a range of up to 50 metres and the (MAB100R) with a range of 50 to 100 meters.

Both the (MAB50R) and the (MAB100R) are compatible with the Cooper range of intelligent addressable fire systems.

These intelligent addressable loop powered reflective beam detectors are extremely simple to install, they require no separate power supply, operate on a reflective principle and have a simple set up mode to enable easy and quick alignment during installation.

These units are designed to replace individual point detectors in large open areas such as warehouses.

Fire and fault conditions are signalled to the control panel using standard loop wiring so no additional interconnection required.

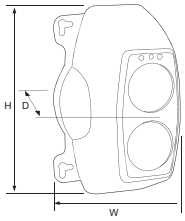
Features

- Loop connected
- Soft addressed
- Integral short circuit isolator
- Single address
- Reflective beam detection
- Two ranges available
  - up to 50m
  - 50m to 100m

Benefits

- Quick and simple to setup
- Saves on both time and installation costs
- No power supply required
- Single device to install instead of numerous point detectors
- Single point of maintenance
- Wall mounted for ease of maintenance, especially in warehouses with racking

Dimensions



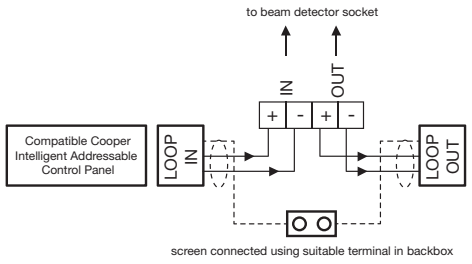
H (mm)	W (mm)	D (mm)
210	130	120

Technical Specification

Code	MAB50R	MAB100R
Description	Reflective Beam Detector	Reflective Beam Detector
Standards	EN54 Pt12 & Pt17 2002	EN54 Pt12 & Pt17 2002
Specification		
Operating Voltage	18V dc to 30V dc	18V dc to 30V dc
Quiescent Current	< 5mA (no LED's illuminated)	< 5mA (no LED's illuminated)
Alarm Current	< 9mA	< 9mA
Alignment Current	< 18mA	< 18mA
Power up Time	10 seconds (approx)	10 seconds (approx)
Operating Range	5 to 50 metres	50 to 100 metres
Tolerance to Beam Misalignment at 35%	Detector ± 0.8°, Prism ± 5.0°	Detector ± 0.8°, Prism ± 5.0°
Fire Alarm Thresholds	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)
Optical Wavelength	880nm	880nm
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	White	White
Dimensions (H x W x D)	210mm 130mm x 120mm	210mm 130mm x 120mm
Weight	0.8kg	0.8kg
Ingress Protection	IP40	IP40
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Standard Connection

MAB50R / MAB100R



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop

Installation

1. Must be fixed to solid structure.
2. Recommended mounting height is 0.3 to 0.6 metres below the ceiling.
3. Cables can be terminated into separate termination box (not supplied) or use purpose designed mounting bracket (MRBFP) ordered separately.
4. Mounting bracket has facilities for glanding of incoming cables plus simple fixing of beam detector.
5. Test filter is supplied with detector to simulate required smoke obscuration level and confirm correct operation.

System Functionality

1. Beam detectors have 3 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**

User Interface

1. Beam detectors status LEDs
   - Red LED constantly illuminated indicates fire condition.
   - Flashing amber LED indicates fault condition.

Product Codes

Code	Description
MAB50R	Intelligent Addressable Reflective Beam Detector (50m range)
MAB100R	Intelligent Addressable Reflective Beam Detector (100m range)
MRBFP	Mounting Bracket

Callpoints

CBG370S - Callpoint

Overview

Two versions of intelligent addressable callpoints are available in this range, the (CBG370S) which can be either surface or flush mounted and the (CBG370WP) which is a weatherproof version.

Both the (CBG370S) and the (CBG370WP) are compatible with the Cooper range of intelligent addressable fire systems.

These intelligent addressable callpoints are attractively designed, simple to install and are supplied as standard with a frangible glass element and a test key for ease of maintenance.

A comprehensive range of accessories are available to maximise the functionality of the callpoint for particular applications.

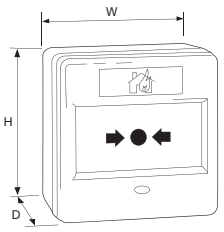
Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Fast fit clip on front cover
- High visibility status LED
- Wide range of accessories
- Heavy duty terminals
- Two models available
  - Internal
  - Weatherproof

Benefits

- Quick and simple to install
- Single tool for test and access
- Robust construction
- IP65 version available
- Easy to maintain/service

Dimensions



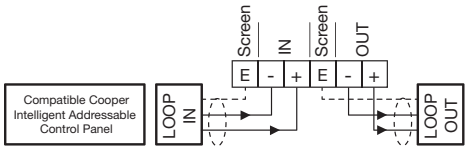
Description	H (mm)	W (mm)	D (mm)
Flush Mounted	87	87	36
Surface Mounted	87	87	57
Weatherproof	87	87	59

Technical Specification

Code	CBG370S	CBG370WP
Description	Surface / Flush Mounting Callpoint	Weatherproof Callpoint
Standards	EN54 Pt11	EN54 Pt11
Specification		
Operating Voltage	17V dc to 32V dc	17V dc to 32V dc
Quiescent Current	< 250µA	< 250µA
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	Red
Dimensions (H x W x D)	87mm x 87mm x 57mm (36mm flush)	87mm x 87mm x 59mm
Weight	0.2kg	0.2kg
Ingress Protection	IP42	IP65
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Standard Connection

CBG370S / CBG370WP



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Installation

1. Surface callpoint has standard rear BESA fixing facilities. In addition, back box can accept top or bottom surface entry cables. Surface callpoint can also be flush mounted.
2. Callpoint has test facility via special test key to prevent unauthorised operation.
3. Insertion of test key for test purposes and for cover removal is at bottom of callpoint to facilitate ease of access when mounted next to door architrave.
4. Test key is dual function, used to test callpoint operation by simulating activation and also to allow removal of clip on cover to gain access to element.
5. Element is held in place by clip on self locking cover which can only be removed by use of a special tool (callpoint test key).
6. Separate loop in and loop out terminals are provided for all connections including screen continuity on intelligent addressable callpoints.
7. Surface/flush callpoints are IP42, weatherproof is IP65.

User Interface

1. To enable quick and simple installation, callpoints use a fast fit self locking clip on front cover which is very simple to fit, but once in place, can only be removed by use of a special key (supplied).
2. Callpoint is triggered by pressing against the element.

Accessories

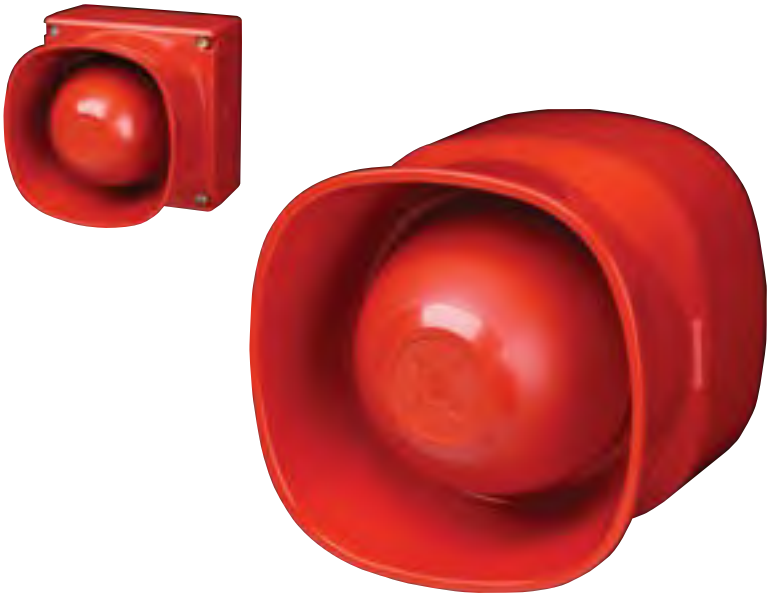
- Semi recess bezel
- Spacer plates
- Hinged clear cover
- Resettable plastic element
- Replacement test key
- Replacement glass elements
- Earth continuity links

Product Codes

Code	Description
CBG370S	Intelligent Addressable Surface/Flush Callpoint
CBG370WP	Intelligent Addressable Weatherproof Callpoint
CXPC	Protective Hinged Cover
MBGSP	Spacer Plates (pack of 10)
MBGBEZ	Recessing Bezels (pack of 10)
MBGREKIT	Resettable Element Kit (pack of 10)
UBSG	Spare Break Glasses (pack of 5)
MBG119	Earth Continuity Links (pack of 5)
MFBGKEY3	Callpoint Keys (pack of 10)

COOPER Safety
Fire Systems

Wall Sounders



CAS381 / CAS381WP - Wall Sounders

Overview

Two versions of the intelligent addressable wall sounder are available in this range the internal (CAS381) and the weatherproof (CAS381WP).

Both the (CAS381) and the (CAS381WP) are compatible with the Cooper range of intelligent addressable fire systems.

The high efficiency design of these intelligent addressable wall sounders offer excellent sound output levels despite the low current consumption.

CAS381
This device is designed for wall mounting, has a choice of different tones and volume levels, a built in short circuit isolator and is soft addressed for ease of installation.

CAS381WP
This device is IP66 rated and therefore suitable for external and wash down areas, it is designed for wall mounting, has a choice of different tones and volume levels, a built in short circuit isolator and is soft addressed for ease of installation.

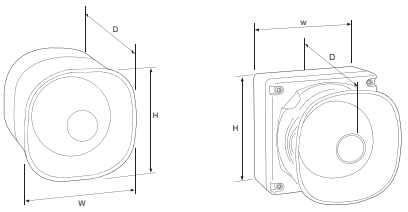
Features

- Loop powered
- Soft addressed
- Integral short circuit isolator
- High efficiency design
- Simple clip fixing assembly
- Two models available
  - Internal
  - Weatherproof

Benefits

- Quick and simple to install
- Low current consumption
- Selectable tones controlled by the panel
- Adjustable volume controlled by the panel
- First fix back box
- IP65 version available
- Easy to maintain/service

Dimensions



Internal Weatherproof

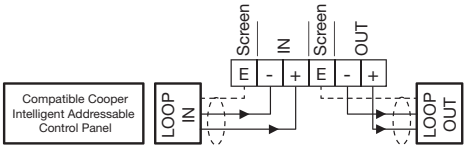
Description	H (mm)	W (mm)	D (mm)
Internal	105	105	95
Weatherproof	108	108	103

Technical Specification

Code	CAS381	CAS381WP
Description	Internal Wall Sounder	Weatherproof Wall Sounder
Standards	EN54 Pt3	EN54 Pt3
Specification		
Operating Voltage	17V dc to 32V dc	17V dc to 32V dc
Standby Current	< 320µA	< 320µA
Tones (set by panel)	Continuous: 984Hz Pulsed: 984Hz / 0Hz pulse 1Hz Two tone: 644 / 984Hz at 1Hz cycle Slow whoop: 500-1200Hz in 3.5 seconds/0.5secs gap	Continuous: 984Hz Pulsed: 984Hz / 0Hz pulse 1Hz Two tone: 644 / 984Hz at 1Hz cycle Slow whoop: 500-1200Hz in 3.5 seconds/0.5secs gap
Sound Output at +/-3dB (set by panel)	Low volume : 87dB at < 2mA Medium volume : 93dB at < 3mA High volume: 100dB at < 6mA	Low volume : 87dB at < 2mA Medium volume : 93dB at < 3mA High volume: 100dB at < 6mA
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH	0 to 95% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	Red
Dimensions (H x W x D)	105mm x 105mm x 95mm	108mm x 108mm x 103mm
Weight	0.25kg	0.57kg
Ingress Protection	IP42	IP66
Cable Entry	Rear/side	Rear/side
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Standard Connection

CAS381 / CAS381WP



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Installation

CAS381

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface using 2 fixing holes.
3. Cable entry can be rear or side.
4. Connections are to connector block on main sounder body.
5. Main body is then clipped into position on mounting base, body locks into position when pressed home.

CAS381WP

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface using 2 fixing holes.
3. Cable entry can be rear or side.
4. Connections are to connector block on main sounder body.
5. Main body is then fastened onto base, using 4 allen head screws (supplied).

System Functionality

CAS381 / CAS381WP

1. Volume is set by fire control panel, no need to access sounder to alter setting.
2. Tone is set by fire control panel, no need to access sounder to alter setting.

Product Codes

Code	Description
CAS381	Intelligent Addressable Internal Wall Sounder
CAS381WP	Intelligent Addressable Weatherproof Wall Sounder

Wall Sounder Beacons

CASB383 / CASB383WP - Wall Sounder Beacons

Overview

Two versions of the intelligent addressable wall sounder beacon are available in this range the internal (CASB383) and the weatherproof (CASB383WP).

Both the (CASB383) and the (CASB383WP) are compatible with the Cooper range of intelligent addressable fire systems.

The high efficiency design of these intelligent addressable wall sounder beacons offer excellent sound output levels despite the low current consumption. Whilst also including a high powered LED beacon to provide both audible and visual alarm signals.

CASB383
This device is designed for wall mounting, has a choice of different tones and volume levels, a built in short circuit isolator and is soft addressed for ease of installation.

CASB383WP
This device is IP66 rated so suitable for external and wash down areas, it designed for wall mounting, has a choice of different tones and volume levels, a built in short circuit isolator and is soft addressed for ease of installation.

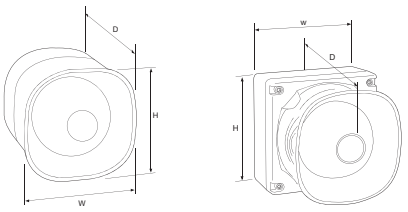
Features

- Loop powered
- Soft addressed
- Integral short circuit isolator
- High efficiency design
- High output LED beacon
- Simple clip fixing assembly
- Two models available
  - Internal
  - Weatherproof

Benefits

- Quick and simple to install
- High efficency audio/visual unit
- Low current consumption
- Selectable tones controlled by the panel
- Adjustable volume controlled by the panel
- First fix back box
- IP65 version available
- Easy to maintain/service

Dimensions



Internal Weatherproof

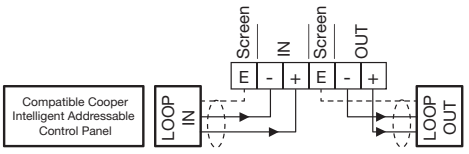
Description	H (mm)	W (mm)	D (mm)
Internal	105	105	95
Weatherproof	108	108	103

Technical Specification

Code	CASB383	CASB383WP
Description	Internal Wall Sounder Beacon	Weatherproof Wall Sounder Beacon
Standards	EN54 Pt3	EN54 Pt3
Specification		
Operating Voltage	17V dc to 32V dc	17V dc to 32V dc
Standby Current	< 320µA	< 320µA
Tones (set by panel)	Continuous: 984Hz Pulsed: 984Hz / 0Hz pulse 1Hz Two tone: 644 / 984Hz at 1Hz cycle Slow whoop: 500-1200Hz in 3.5 seconds/0.5secs gap	Continuous: 984Hz Pulsed: 984Hz / 0Hz pulse 1Hz Two tone: 644 / 984Hz at 1Hz cycle Slow whoop: 500-1200Hz in 3.5 seconds/0.5secs gap
Sound Output at +/-3dB (set by panel)	Low volume: 92dB at < 6.5mA Medium volume: 97dB at < 7.5mA High volume: 100dB at < 8.5mA	Low volume: 92dB at < 6.5mA Medium volume: 97dB at < 7.5mA High volume: 100dB at < 8.5mA
Flash Energy	1Hz	1Hz
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH	0 to 95% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	Red
Lens Colour	Red	Red
Dimensions (H x W x D)	105mm x 105mm x 95mm	108mm x 108mm x 103mm
Weight	0.21kg	0.32kg
Ingress Protection	IP42	IP66
Cable Entry	Rear/side	Rear/side
Cable Size / Type	0.5mm to 2.5mm/ FIRETUF, FP200 or MICC	0.5mm to 2.5mm/ FIRETUF, FP200 or MICC
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Standard Connection

CASB383 / CASB383WP



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Installation

CASB383

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface using 2 fixing holes.
3. Cable entry can be rear or side.
4. Connections are to connector block on main sounder body.
5. Main body is then clipped into position on mounting base, body locks into position when pressed home.

CASB383WP

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface using 2 fixing holes.
3. Cable entry can be rear or side.
4. Connections are to connector block on main sounder body.
5. Main body is then fastened onto base, using 4 allen head screws (supplied).

System Functionality

CASB383 / CASB383WP

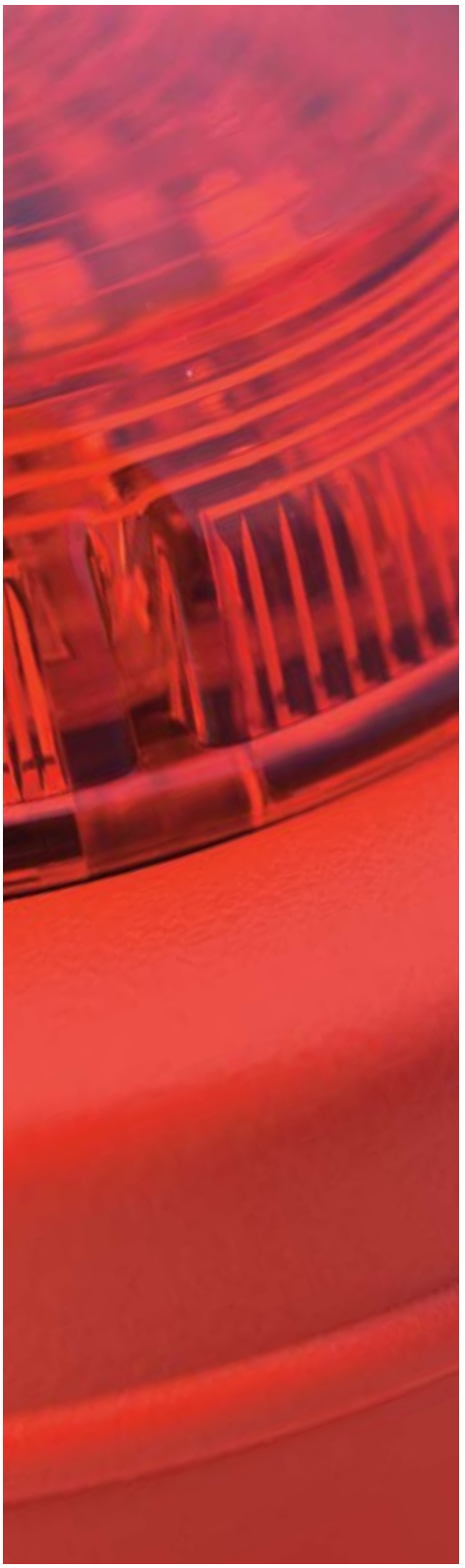
1. Volume is set by fire control panel, no need to access sounder to alter setting.
2. Tone is set by fire control panel, no need to access sounder to alter setting.

Product Codes

Code	Description
CASB383	Intelligent Addressable Internal Wall Sounder Beacon
CASB383WP	Intelligent Addressable Weatherproof Wall Sounder Beacon

COOPER Safety
Fire Systems

Loop Connected LED Beacon



CAB382 - Loop Connected LED Beacon

Overview

The intelligent addressable loop connected LED beacon (CAB382) is available to complement audible alarms for use in areas either where people may be present who have impaired hearing or areas with high ambient noise levels.

The (CAB382) is compatible with the Cooper range of intelligent addressable fire systems.

This device is designed for both wall and ceiling mounting, has a built in short circuit isolator and is soft addressed for ease of installation.

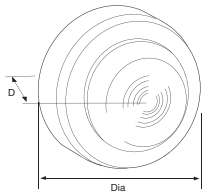
Features

- Loop powered
- Soft addressed
- Integral short circuit isolator
- High efficiency design
- High output LED beacon
- Low profile design

Benefits

- Quick and simple to install
- High efficency visual unit
- Low current consumption
- First fix back box
- Easy to maintain/service

Dimensions



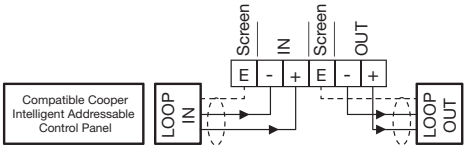
Dia (mm)	D (mm)
95	53

Technical Specification

Code	CAB382
Description	Loop Connected LED Beacon
Specification	
Operating Voltage	17V dc to 32V dc
Standby Current	< 250µA
Alarm Current	< 4.1mA
Flash Frequency	1/2Hz
Light Output	0.5cd
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	Red
Lens Colour	Red
Dimensions (Dia x D)	95mm x 53mm
Weight	0.15kg
Ingress Protection	IP54
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

CAB382

Standard Connection



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Installation

1. Installation is simple using first fix base.
2. First fix base is fixed to mounting surface via 2 fixings holes.
3. Cable entry is from the rear.
4. Connections are to connector block on beacon body.
5. Beacon body is pressed into first fix base then twisted to lock into position.

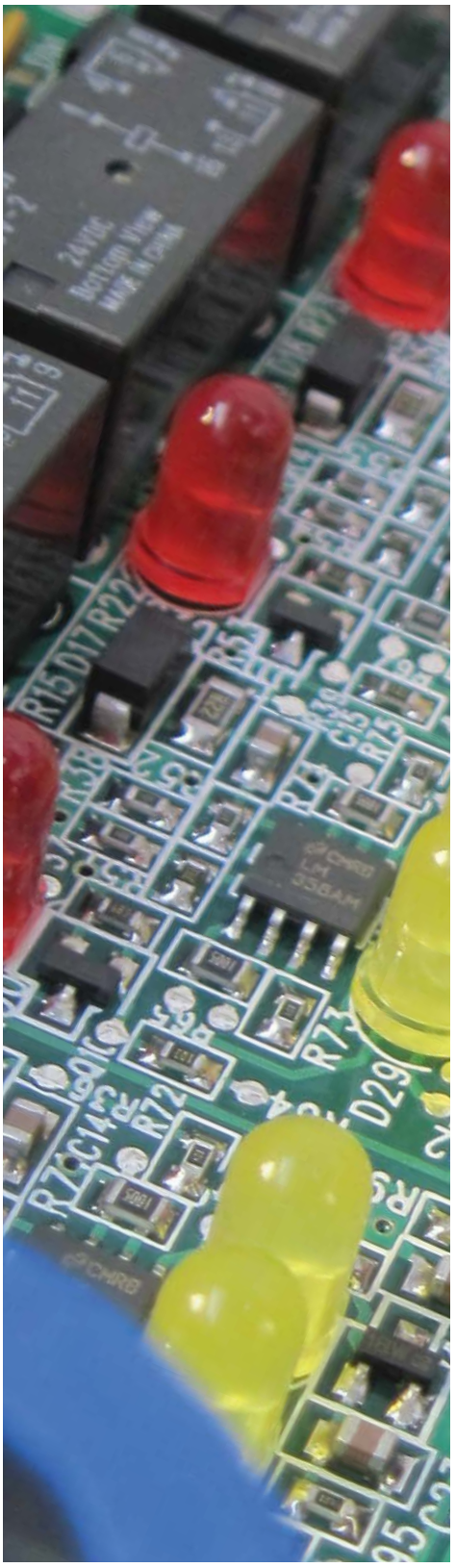
System Functionality

1. Utilises multiple LED's combined with careful optical design to provide high intensity flash with low current consumption.
2. Low profile design for discreet installation.

Product Codes

Code	Description
CAB382	Intelligent Addressable Loop Connected LED Beacon

4 Way Sounder Controller Unit



CSC354 - 4 Way Sounder Controller Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The 4 way sounder controller unit (CSC354) is a loop connected interface, which provides the facility to power and control 4 independent conventional sounder circuits. This greatly simplifies installation in applications where specialist sounders or beacons are required by avoiding the need to connect them directly to the intelligent addressable control panel.

This unit only uses a single address yet each circuit can be independently controlled according to the required cause and effect programming.

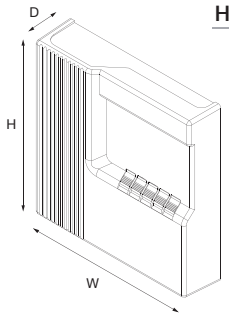
Features

- Soft addressed
- Integral short circuit isolator
- Single address
- 4 Separate sounder circuit outputs (total 1.6A max)
- Avoids the need to wire conventional sounders back to the control panel
- Outputs are independently programmable
- Integral battery and power supply

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Increased system integrity
- Beacons and strobes can be wired direct to the interface (saving on both time and installation)

Dimensions



H (mm)	W (mm)	D (mm)
300	300	74

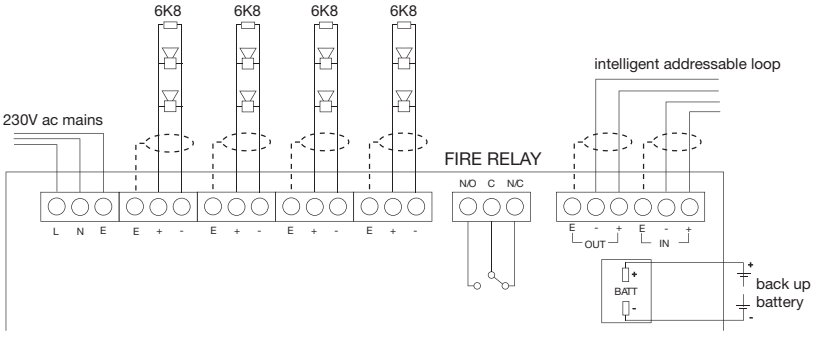
Technical Specification

Code	CSC354
Description	4 Way Sounder Controller Unit
Standards	EN54 Pt4 & Pt17 2005
Specification	
Operating Voltage	24V dc
Quiescent Current	250µA
Mains Supply Voltage	230V ac
Mains Current Consumption	0.4A
Battery	2 x 12 V, 4Ah, SLA
Standby Period	24 hours + 30 minutes ringing
Sounder Circuit Output	0.4A (max)
Sounder Load	1.6A (max)
Fire Relay Switching Voltage	30V dc
Switching Current	1A (resistive), 0.5A (inductive) (max)
Environmental	
Operating Temperature	-10°C to +45°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	ABS/Steel
Dimensions (H x W x D)	300mm x 300mm x 74mm
Weight	5.4kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. The sounder controller interface requires a local unswitched 230V supply and incorporates a back up battery to maintain functionality under mains failure conditions.
2. Cable entry can be top or rear.
3. Top entry is via 20mm conduit entries (pre-fitted with blanking plugs for unused entries).
4. Rear entry via substantial cable slot in metal back plate
5. Top cover secured with tamper resistant screws

Standard Connections



NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if input is not used.
3. Sounder circuits are monitored for wiring open and short circuit.
4. Output fire relay is a set of changeover volt free-contacts and is not monitored.
5. This unit should only be finally connected to the 230V ac mains supply and battery, during system commissioning.

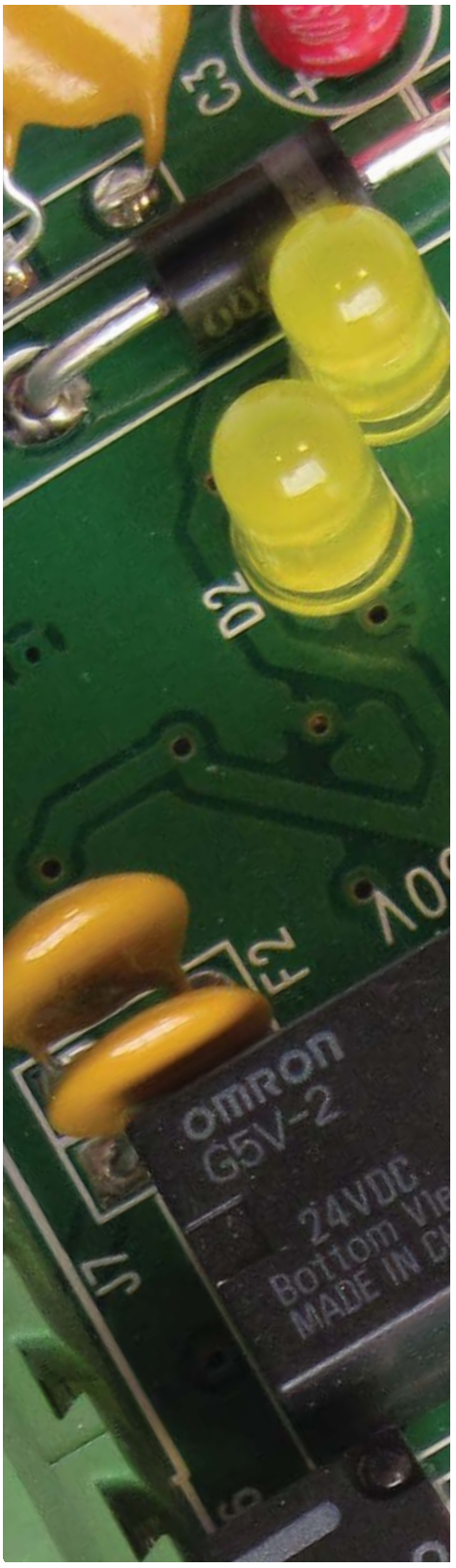
Product Codes

Code	Description
CSC354	4 Way Sounder Controller Unit

COOPER Safety
Fire Systems

VdS

Zone Monitor Unit



CZMU352 - Zone Monitor Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The zone monitor unit (CZMU352) connects a zone of suitable Cooper conventional detectors and a separate zone of Cooper conventional callpoints (if required).

Features

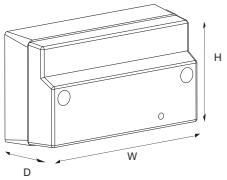
- Soft addressed
- Integral short circuit isolator
- Single address
- Accepts a zone of Cooper conventional detectors
- Input monitored for open, short circuit and earth contact faults

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Easy to expand a system using existing wiring

Dimensions

H (mm)	W (mm)	D (mm)
88	147	60



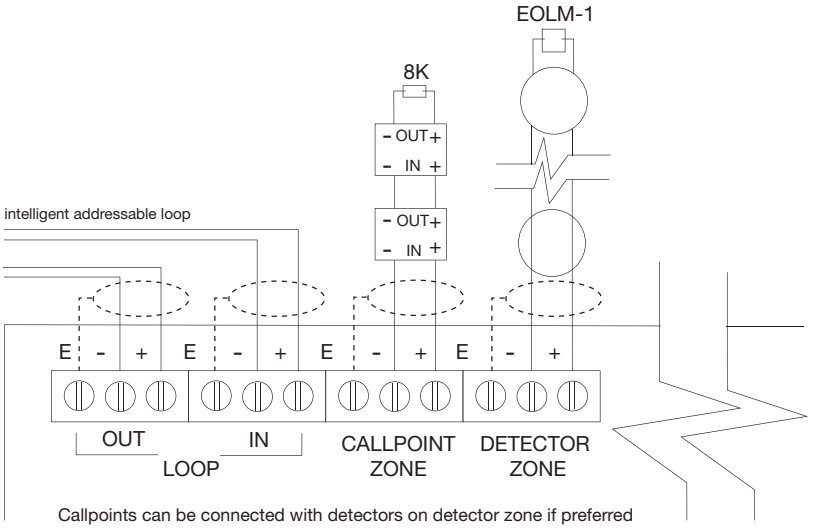
Technical Specification

Code	CZMU352
Description	Zone Monitor Unit
Standards	EN54 Pt17 & Pt18 2005
Specification	
Operating Voltage	18V dc to 30 V dc
Quiescent Current	2.8mA
Alarm Current	8mA
Current with 20 Detectors	3.4mA
Detector Load	20 detectors per zone (max)
Callpoint Load	Unlimited
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	88mm x 147mm x 60mm
Weight	0.23kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Zone monitor unit is fixed to a deep double gang back box (supplied).
2. All connections are via heavy duty terminals.
3. Cable entry can be top, bottom, side or rear.
4. Can be surface or semi recessed mounted.

Standard Connections



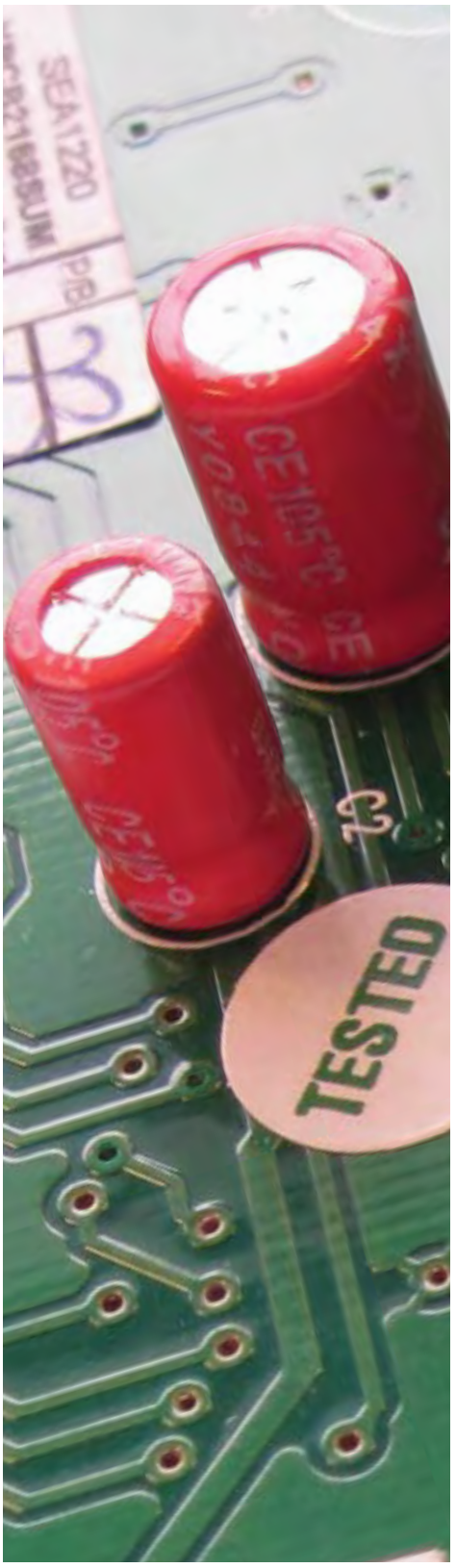
Callpoints can be connected with detectors on detector zone if preferred

NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if input is not used.
3. Maximum spur length - see BS5839 Pt:1 2002 for zone coverage.
4. There is no maximum number of conventional callpoints allowed per zone output.
5. Unit can only be used with its respective Cooper fire systems and compatible sensor and base.

Product Codes

Code	Description
CZMU352	Zone Monitor Unit

Shop Monitor Unit



CSUM355 - Shop Monitor Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The shop monitor unit (CSUM355) is designed to enable small units with conventional fire detection to be fully integrated with a main intelligent addressable fire system.

This unit is ideal for applications such as connecting individual shop units into a main shopping centre system.

An external power supply is required to drive the 2 conventional sounder circuits. This power supply must be regulated for fire and current limited.

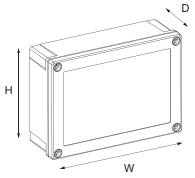
Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Provides 2 conventional sounder circuits
- Accepts a zone of Cooper conventional detectors and a zone of conventional callpoints
- Inputs monitored for open, short circuits and earth contact faults

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Easy to expand a system using existing wiring
- Reduced installation cost by using the 2 sounder circuits

Dimensions

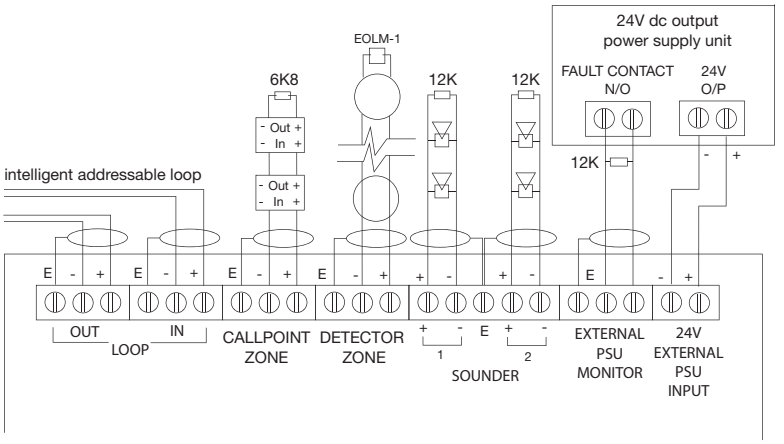


H (mm)	W (mm)	D (mm)
129	180	60

Technical Specification

Code	CSUM355
Description	Shop Monitor Unit
Standards	EN54 Pt17 & Pt18
Specification	
Operating Voltage	15V dc to 30V dc
Quiescent Current	3.4mA (max)
Quiescent Load Current	2.8mA (max)
Alarm Current	8mA (max)
Zone Circuits	
Number Input Circuits	2
Zone Circuit 1	Callpoints only
Zone Circuit 2	Detectors and Callpoints
Number of Callpoints	Unlimited
Callpoint Resistance	470Ω to 680Ω
Zone Circuit 1 EOL	6K8
Zone Circuit 2 EOL	Active EOL
Number of Detectors	20 (max)
Short Circuit Fault Threshold	150Ω
Open Circuit Fault Threshold	N/A active EOL
Sounder Circuits	
Number of Sounder Circuits	2
Load per Output	300mA (max)
Sounder Circuit 1 and 2 EOL	12K
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	129mm x 180mm x 60mm
Weight	1kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Standard Connections



Callpoints can be connected with detectors on detector zone if preferred

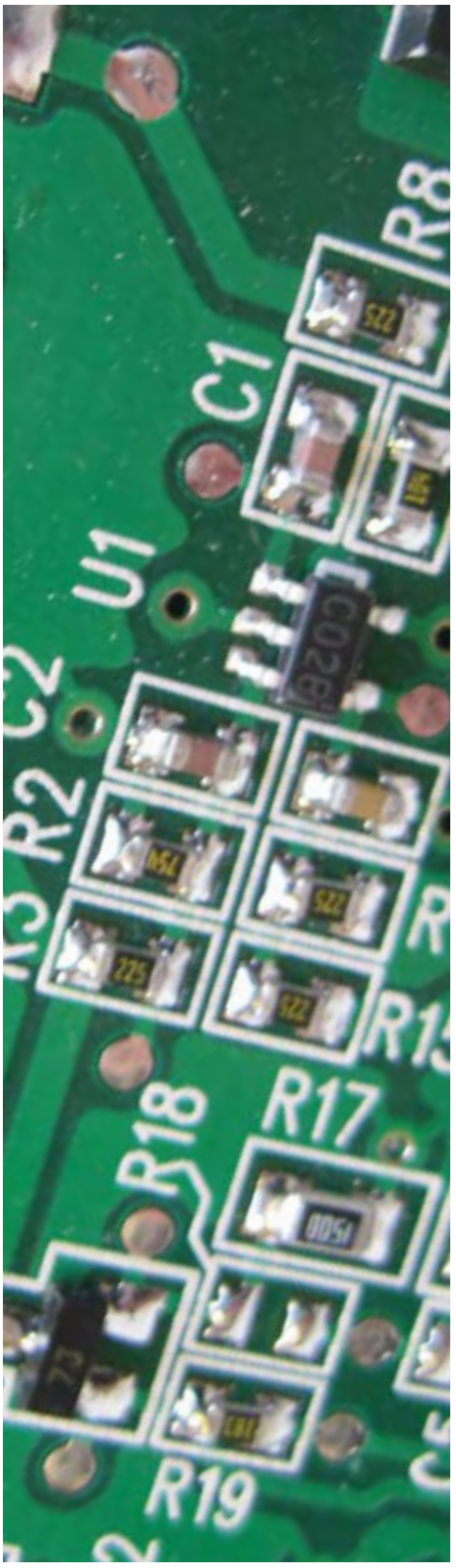
Product Codes

Code	Description
CSUM355	Shop Monitor Unit

COOPER Safety
Fire Systems

VdS

Spur Isolator Unit



CSI350 - Spur Isolator Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The spur isolator unit (CSI350) enables a spur of intelligent addressable devices to be connected to a main analogue loop, the device is designed to simplify installation of remote parts of buildings or for simple system extensions.

Features

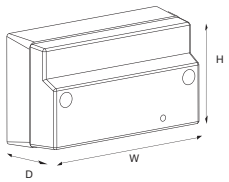
- Soft addressed
- Integral short circuit isolator
- Single address
- Allows a spur of intelligent addressable devices to be connected to the main loop for the loop and the spur
- Automatically controls addressing sequence

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Easy to expand a system using existing wiring
- Reduced installation cost

Dimensions

H (mm)	W (mm)	D (mm)
88	147	60



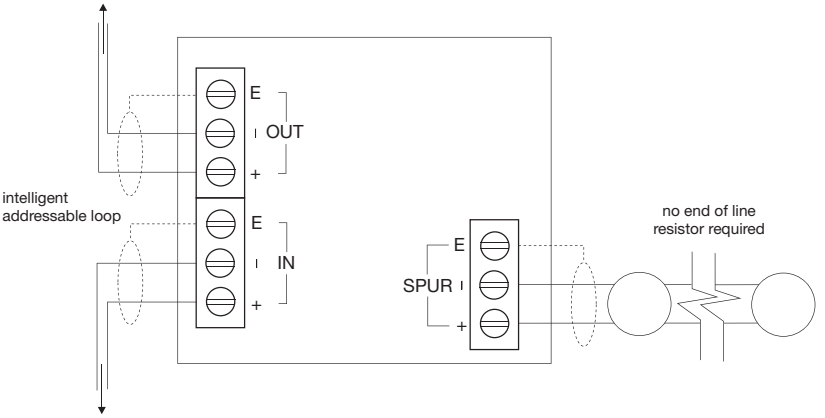
Technical Specification

Code	CSI350
Description	Spur Isolator Unit
Standards	EN54 Pt17 2005
Specification	
Quiescent Current	170µA
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	88mm x 147mm x 60mm
Weight	0.23kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Please refer to current edition of BS5839-1 for details of the maximum allowable area to be covered by a single zone.
2. Spur isolator unit is fixed to a deep double gang back box (supplied).
3. All connections are via heavy duty terminals.
4. Cable entry can be top, bottom, side or rear.
5. Can be surface or semi recessed mounted.

Standard Connections



NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. For maximum spur length/load see BS5839 Pt1:2002.
3. Unit can only be used with its respective Cooper fire systems and compatible sensor and base.

Product Codes

Code	Description
CSI350	Spur Isolator Unit

VdS

3 Channel I/O Unit

CIO351 - 3 Channel I/O Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The 3 channel I/O unit (CIO351) 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.

Two models of the 3 channel I/O unit are available:

CIO351 - resets on reset
CIO351S - resets on silence alarms

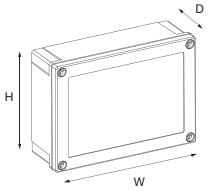
Features

- Soft addressed
- Integral short circuit isolator
- 3 separate inputs and 3 separate outputs
- Inputs monitored for open and short circuits

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Unit takes 3 inputs, and 3 outputs
  - Only 1 address required to monitor and control saving on equipment and installation (main unit)

Dimensions



H (mm)	W (mm)	D (mm)
129	180	60

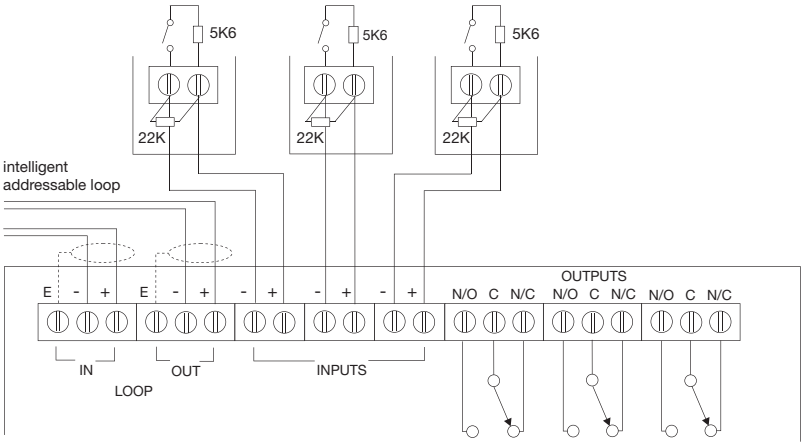
Technical Specification

Code	CIO351 / CIO351S
Description	3 Channel I/O Unit
Standards	EN54 Pt17 & Pt18 2005
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	310µA
Maximum Switching Voltage	50V ac or 30V dc
Output Relay Contact Rating	1A at 30V resistive, 0.5A inductive
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	129mm x 180mm x 60mm
Weight	0.23kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. 3 Channel input output unit is fixed to a deep double gang back box (supplied).
2. All connections are via heavy duty terminals.
3. Cable entry can be top, bottom, side or rear.
4. Can be surface or semi recessed mounted.
5. Relay contacts are rated at 30V dc 1A.

Standard Connections

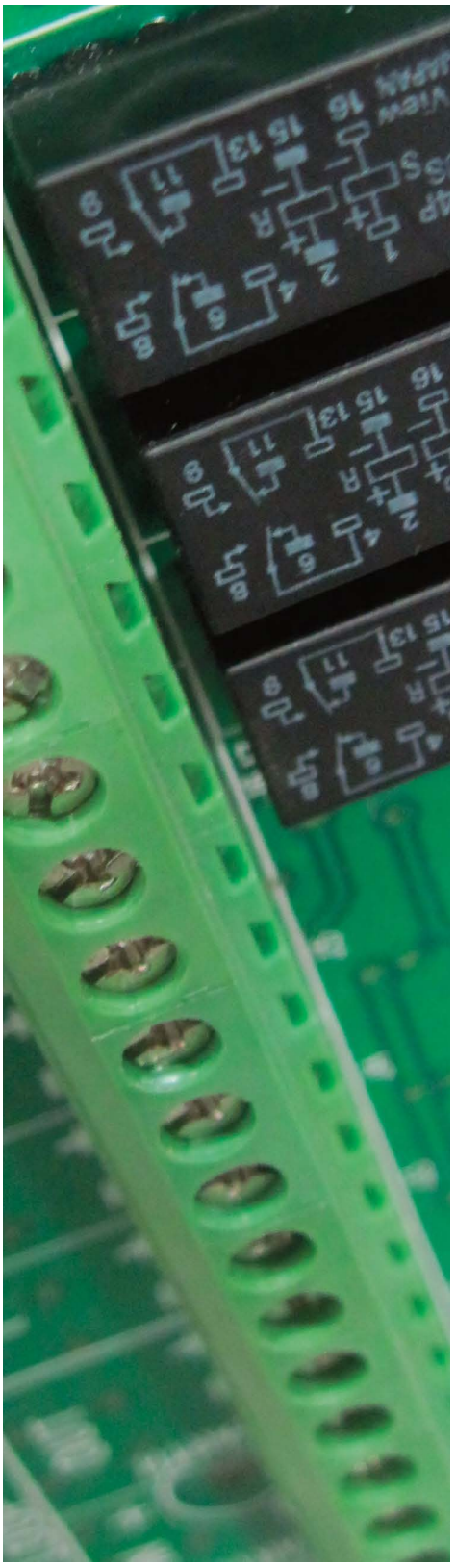


NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if input is not used.
3. Input circuit is monitored for wiring open and short circuit.
4. Output relay is a set of changeover volt free-contacts and is not monitored.

Product Codes

Code	Description
CIO351	3 Channel I/O Unit (resets on reset)
CIO351S	3 Channel I/O Unit (resets on silence alarms)

230V ac Relay Unit



CMIO353 - Relay Unit

Overview

An extensive range of interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The 230V ac relay unit (CMIO353) 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 therefore can be used for fire input applications such as monitoring sprinkler flow switches.

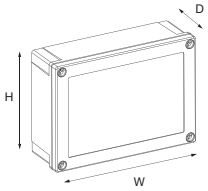
Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Mains rated relay unit
- Input monitored for open and short circuits

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Achieves simplified inter-panel interfacing

Dimensions



H (mm)	W (mm)	D (mm)
129	180	60

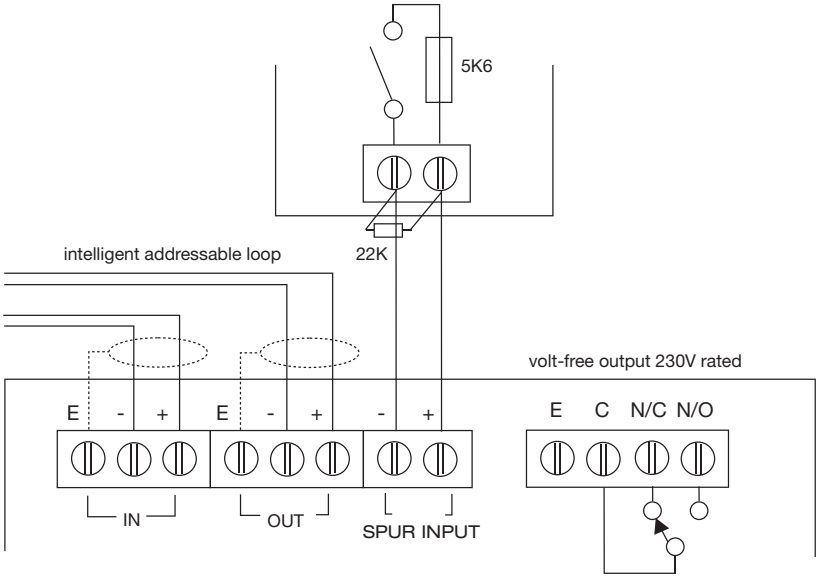
Technical Specification

Code	CMIO353
Description	230V ac Relay Unit
Standards	EN54 Pt17 & Pt18 2005
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	310µA
Maximum Switching Voltage	230V ac
Maximum Switching Current	8A
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	129mm x 180mm x 60mm
Weight	0.6kg
Ingress Protection	IP65
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Mains rated input relay is designed for surface fixing.
2. All connections are via heavy duty terminals.
3. Cable entry can be top, bottom or side.
4. Output relay contacts are rated at 230V ac.

Standard Connections

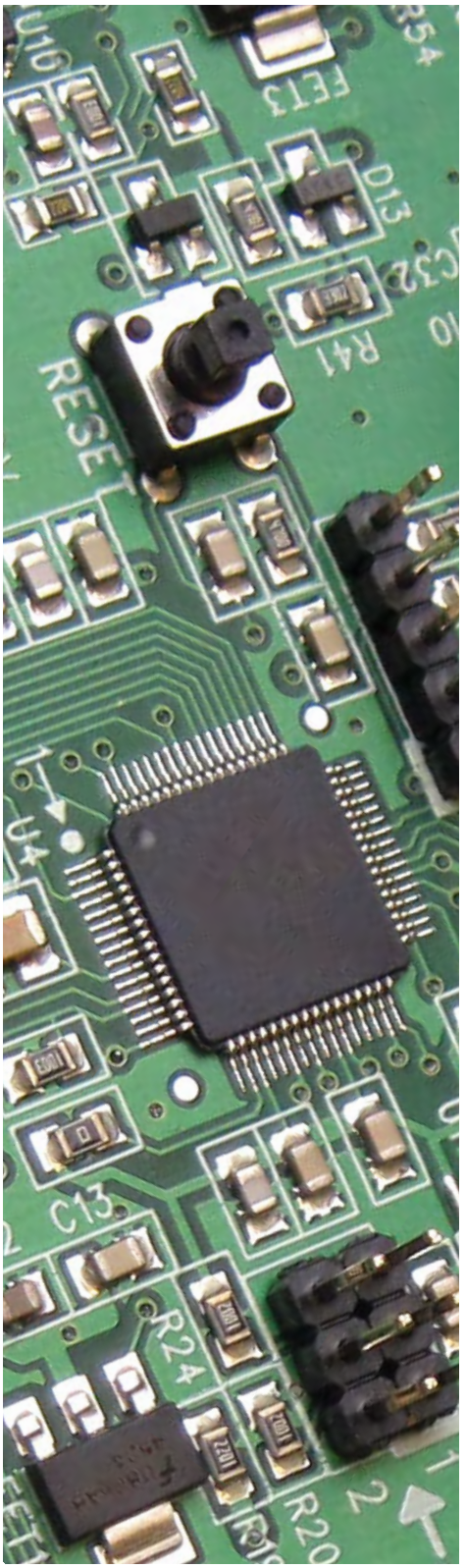


NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if input is not used.
3. Input circuit is monitored for wiring open and short circuit.
4. Output relay is a set of changeover volt free-contacts and is not monitored.

Product Codes

Code	Description
CMIO353	230V ac Relay Unit

Technical I/O Unit



CFC301 - Technical I/O Unit

Overview

This device has been designed to meet the requirements of today's building management systems, switching controls and dampers offering manual control, cause & effect programming and monitoring capability's when integrated with the Cooper range of control modules.

The technical I/O unit (CFC301) was designed to be installed in any convenient position on the loop local to the various elements of building services and provides a cost effective installation solution.

The device is associated to the relevant Cooper control & display device by utilizing Cooper site installer software and coupled with the Cooper device's makes programming effortless and reliable. Data linking the two devices is sent via the addressable loop.

Further flexibility is offered to the installer & end user with the ability to change the CFC301's relay output configuration with 3 mode settings available; this is easily selected by terminating a 22K resistor across Input 2 or 3.

Features

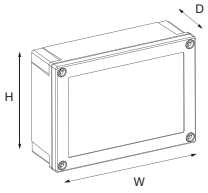
- Soft addressed
- Integral short circuit isolator
- Requires two address
- Designed to operate in conjunction with the Cooper fan controller unit (FC6/18)
- Simplified BMS interface for system control
- Meets the requirements of today's building management systems
- 3 mode settings available

Benefits

- Quick and simple to install
- No hard addressing required (Plug and play)
- Control and feedback in one unit
- Cost effective installation solution

Dimensions

H (mm)	W (mm)	D (mm)
129	180	60



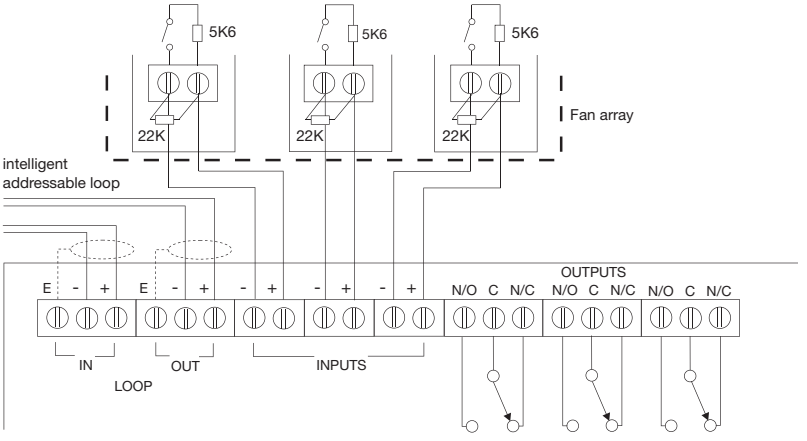
Technical Specification

Code	CFC301
Description	Technical I/O Unit
Standards	BS5839: Pt1 (installation) & AS1668
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	310µA
Addressing Mode	Auto addressed
Output Relay Contact Rating	1A at 30V resistive, 0.5A inductive
Maximum Switching Voltage	50V ac or 30V dc
Cable Size (Min-Max)	0.5 to 2.5mm²
Recommended Cable Types	(UK) Draka - FIRETUF, Pirelli - FP200
Number of Input Circuits	3
Number of Output Circuits	3
End of Line Resistance	(input cct) 22K
Short Circuit Fault Threshold Resistance	1K
Open Circuit Fault Threshold Resistance	33K
Output Relays	3 sets change over contacts
Maximum Relay Contact	1A at 30V resistive, 0.5A inductive
Switching Voltage	50V ac / 30V dc
Switching Power	30W
Environmental	
Operating Temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	ABS
Dimensions (H x W x D)	129mm x 180mm x 60mm
Weight	0.6kg
Ingress Protection	IP65
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Mode Settings

Mode 1		
22k across all inputs	Relay 1	**ON** when a fire occurs fan control in automatic mode)
	Relay 2	**ON** when the fan control start button is pressed (fan control in manual mode)
	Relay 3	**ON** relay 2 de-activated when the fan control stop button is pressed (fan control in manual mode)
Mode 2		
22k across input 1 & 2	Relay 1	**ON** when system is in alarm or when the fan control start button is pressed **OFF** when system is healthy or when the fan control stop button is pressed
Short Circuit Across Input 3	Relay 2 & 3	**N/A**
Mode 3		
22k across all inputs	Relay 1, 2 & 3	Same as Mode 1
Input 2 alarm	Relay 1 & 2	Turns off if the system was in alarm
	Relay 3	**ON**
Input 2 cleared	Relay 1	**ON** after 60s provided system is still in alarm
	Relay 2 & 3	**OFF**

Standard Connections

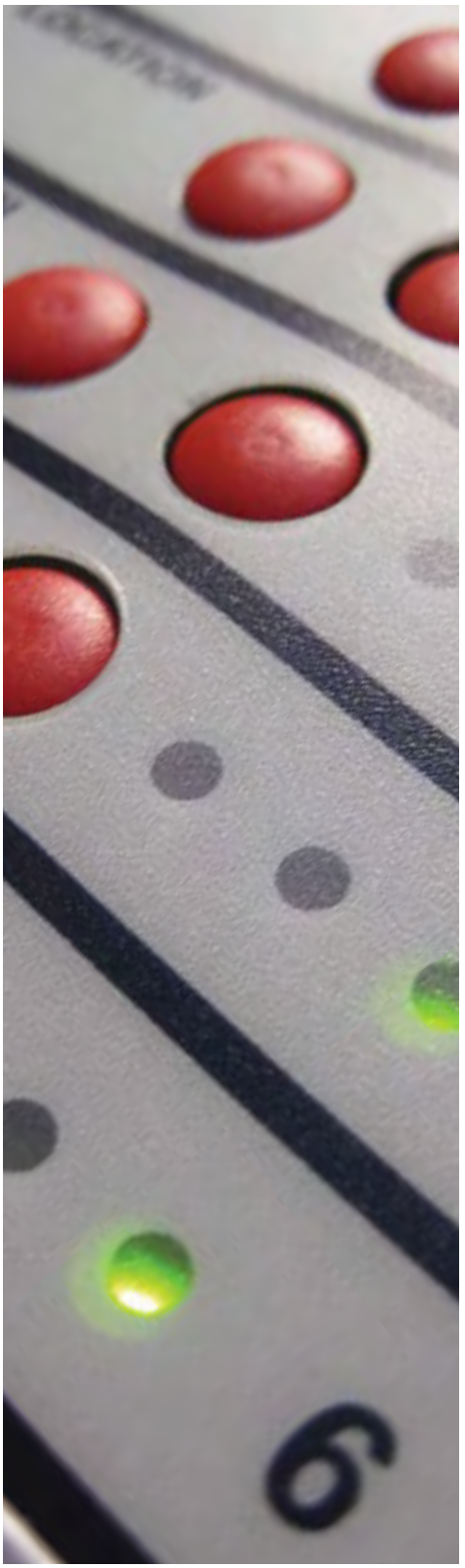


NOTES:
1. Earth (Screen) cable must be connected to its adjacent earth terminal.
2. The end of line resistor must always be fitted, even if input is not used.
3. Input circuit is monitored for wiring open and short circuit.
4. Output relay is a set of changeover volt free-contacts and is not monitored.

Product Codes

Code	Description
CFC301	Technical I/O Unit

Fan Controller Unit



FC6 - Fan Controller Unit

Overview

The fan controller units (FC18) and (FC6) are designed to work with the Cooper range of intelligent addressable control panels, providing the capability to control and display the status of AHU fans.

The (FC18) and (FC6) are connected to a Cooper intelligent addressable control panel by means of the comms loop, utilizing only one address whilst providing the ability to monitor and control up to 18/6 AHU fans.

Each (FC18) and (FC6) unit incorporates its own CPU specifically configured to control the relevant input and output logic making programming quick and easy via the Cooper site installer software.

Using Cooper site installer software, each individual fan control channel is programmed to an output and feedback input field device to control and monitor the status of an AHU fan.

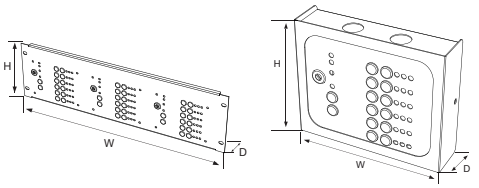
Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Designed to operate in conjunction with the Cooper technical I/O unit (CFC301)
- Comprehensive LED display
- Surface or rack mounting
- Key operated auto/manual operation
- Comprehensive cause and effect software
- Controls:
  - FC6 up to 6 fans
  - FC18 up to 18 fans
- Automatic or manual operation

Benefits

- Quick and simple to install
- No hard addressing required (plug and play)
- Control and feedback in one unit
- Cost effective installation solution

Dimensions



FC18 FC6

Description	H (mm)	W (mm)	D (mm)
FC18	133	482	30
FC6	125	155	42

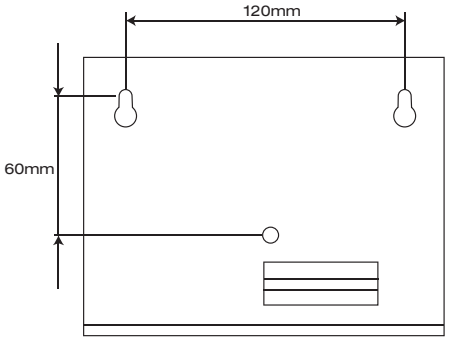
Technical Specification

Code	FC18	FC6 / FC6-AU
Description	Fan Controller Unit, Rack Mount	Fan Controller Unit, Surface Mount
Specification		
External 24V Supply	18V dc to 24V dc	18V dc to 24V dc
External Current	150mA	150mA
Quiescent Current	310µA (nom)	310µA (nom)
Environmental		
Operating Temperature	-10°C to +60°C	-10°C to +60°C
Humidity (Non Condensing)	0 to 95% RH	0 to 95% RH
Physical		
Dimensions (H x W x D)	133mm x 482mm x 30mm	125mm x 155mm x 42mm
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

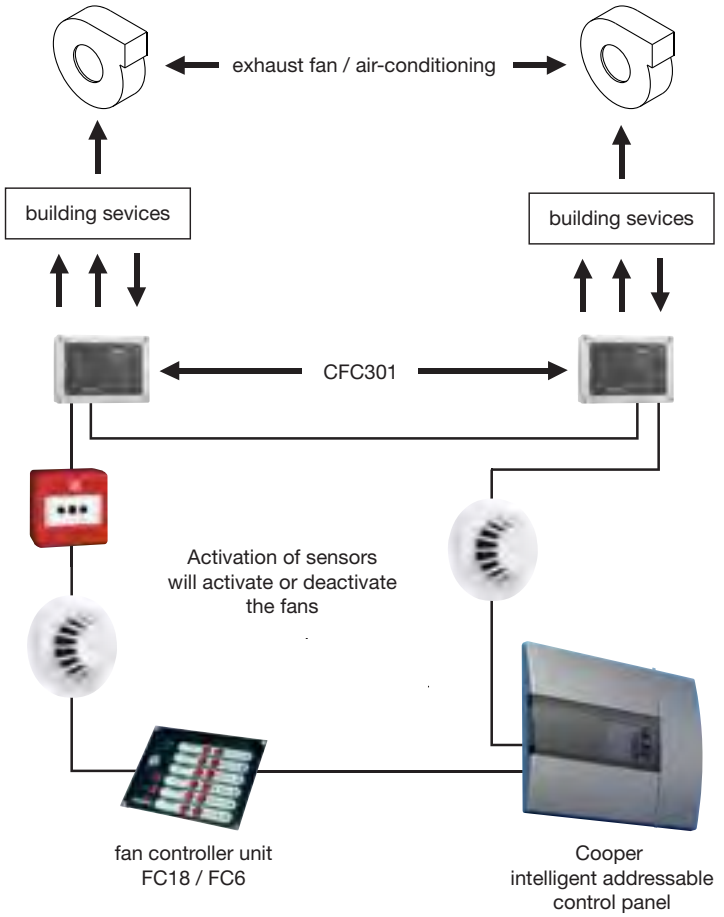
Mounting Details

The FC18 is designed to be rack mounted.
The FC6 is designed to be surface mounted.
The FC6-AU is supplied un-mounted.

FC6 - Fixing Centres



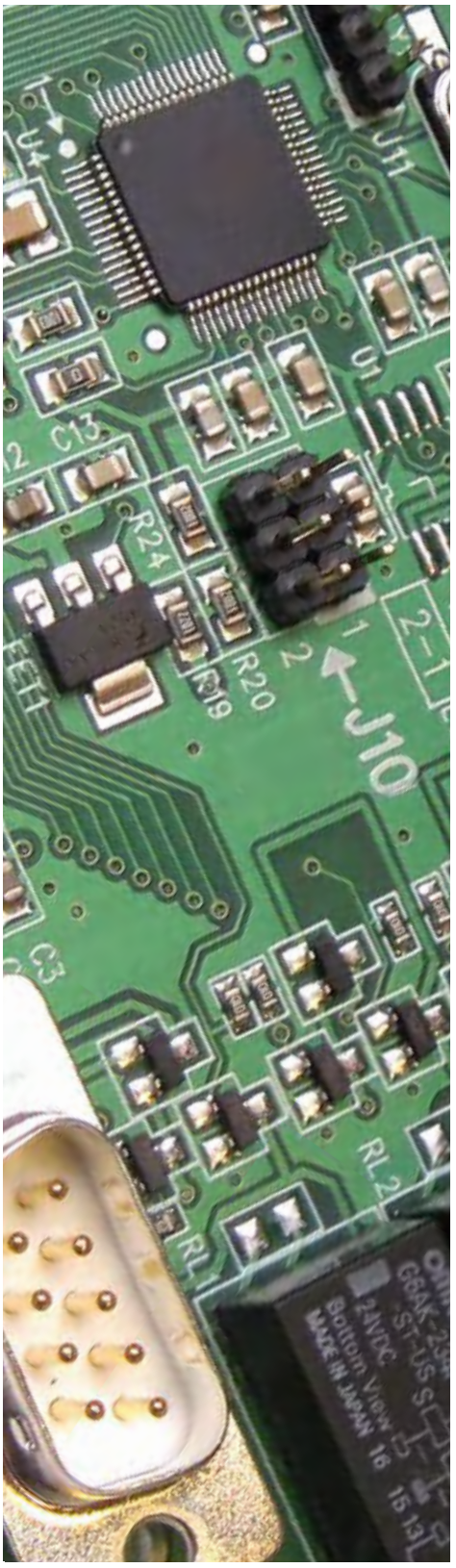
Typical System Architecture



Product Codes

Code	Description
FC6	Fan Controller Unit (surface mount)
FC18	Fan Controller Unit (rack mount)
FC6-AU	Fan Controller Unit (Australia standard - supplied w/o back box)

Mimic Relay Boards



CIOP4 / CIOP8 - Addressable Mimic Relay Boards

Overview

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

Both the (CIOP4) and the (CIOP8) mimic relay boards are fully compatible with the current range of Cooper intelligent addressable control panels. The units are suitable for switching low voltage (24V dc at 1A maximum), via a set of non 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 pre-alarm, fire routing equipment, fire protecting equipment and reset with up to 16 different trigger sources per output.

The trigger source can be global, by panel, by loop, by zone or by address. The logic can be an OR and AND function.

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

They can be programmed using the CF3000 programmable site installer software and downloaded using the RS232 port.

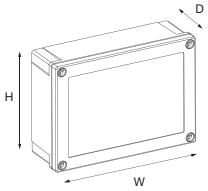
Features

- Loop powered
- Units can be soft or hard addressed
- Integral short circuit isolator
- Single address
- 4 input, 4 output version
- 4 input, 8 output version
- PCB version incorporates 4 inputs:
  - Reset
  - Silence
  - Evacuate
  - Test
- 16 settings per output
- Trigger types: fire, fault, disablement, test, pre-alarm, FRE, FPE, reset
- Trigger source: global, by panel, by loop, by zone, by address
- Logic functions (OR and AND)

Benefits

- Quick and simple to install
- Pluggable terminals for ease of wiring
- Programmable via site installer software
- Cost effective installation solution

Dimensions



H (mm)	W (mm)	D (mm)
180	244	63

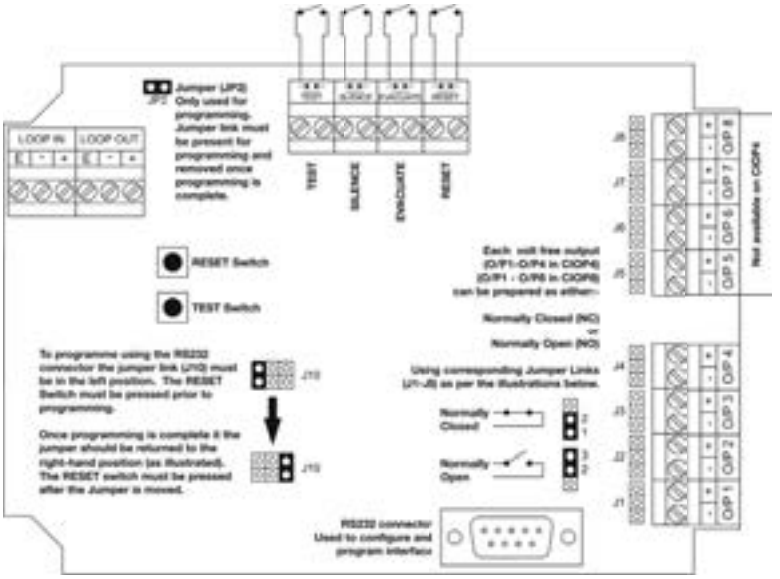
Technical Specification

Code	CIOP4	CIOP8
Description	4 Way Mimic Relay Board	8 Way Mimic Relay Board
Specification		
Operating Voltage	24V dc to 30V dc	24V dc to 30V dc
Operating Loop Voltage	18V dc to 30V dc	18V dc to 30V dc
Current	1A (max)	1A (max)
Quiescent Current	6mA (nom)	6mA (nom)
Environmental		
Humidity (Non Condensing)	0 to 95% RH	0 to 95% RH
Physical		
Construction	Boxed - ABS	Boxed - ABS
Dimensions (H x W x D)	Boxed - 180mm x 244mm x 63mm Board - 113mm x 163mm	Boxed - 180mm x 244mm x 63mm Board - 113mm x 163mm
Weight	Boxed - 1.2kg / Board - 180kg	Boxed - 1.2kg / Board - 180kg
Ingress Protection	Boxed - IP65	Boxed - IP65
Compatibility		
Suitable for use with	Cooper Intelligent Addressable Fire Systems	Cooper Intelligent Addressable Fire Systems

Configuration Instructions

1. At the mimic relay board:
   - Change the jumper on J10 from LOOP to RS232 SETUP and place a jumper on J2.
   - Press the RESET button on the mimic relay board and connect a serial cable.
2. In site installer:
   - The configuration is not stored in the control panel and must be downloaded to the mimic hardware directly.
   - "right-click" on the icon within site installer and select "upload rules to repeater".
   - The download from site installer will commence and a confirmation message will be displayed if successful.
3. At the mimic relay board:
   - Remove the serial cable to the graphical relay board.
   - Change the jumper on J10 from RS232 SETUP back to LOOP and remove the jumper on J2.

Standard Connections



Product Codes

Code	Description
CIOP4	4 Way Mimic Relay Board, 4 inputs, 4 outputs
CIOP8	8 Way Mimic Relay Board, 4 inputs, 8 outputs

Micro Zone Monitor Unit

MIU872 - Micro Zone Monitor Unit

Overview

An extensive range of micro interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The (MIU872) is a single zone input, soft addressed, micro interface, incorporating integral short circuit isolators.

It is fully compatible with the current range of Cooper intelligent addressable control panels.

It is suitable for interfacing a zone of up to 20 conventional Cooper detectors onto a Cooper intelligent addressable control panel.

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

Features

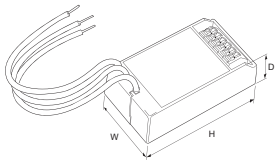
- Soft addressed
- Integral short circuit isolator
- Single address
- Accepts a zone of up to 20 Cooper conventional detectors
- Input monitored for open, short circuit and earth contact faults
- Active end of line monitoring

Benefits

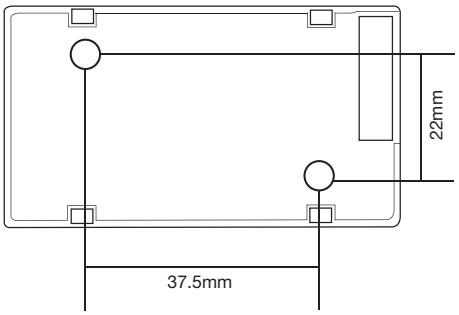
- Quick and simple to install
- No hard addressing required (Plug and play)
- Compact size
- Easy to expand a system using existing wiring
- No external power supply required

Dimensions

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



Mounting Details



Technical Specification

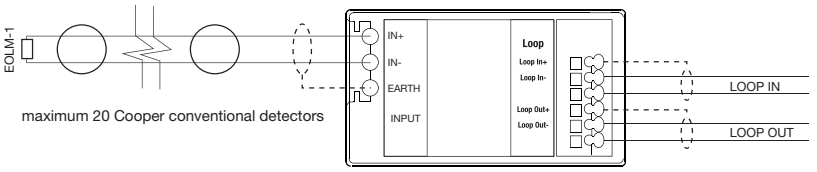
Code	MIU872
Description	Micro Zone Monitor Unit
Standards	EN54 Pt17 & Pt18
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	2.6mA (nom)
Load With 20 Detectors, and Unlimited Callpoints	3.2mA (nom)
Alarm Load With 20 Detectors, and Unlimited Callpoints	8.0mA (nom)
Detector Zone	
Detectors per Zone	20 (max)
End of Line Monitor	Active end of line unit - EOLM-1
Fire Input Trigger Resistance	680Ω (nom)
Short Circuit Fault Threshold Resistance	100Ω (max)
Open Circuit Fault Threshold Resistance	39KΩ (min)
Environmental	
Operating Temperature	-10ºC to +60ºC
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	65mm x 35mm x 18.5mm
Weight	0.28kg
Ingress Protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Suitable for use with any Cooper conventional detector.
2. Connections suitable for single strand fireproof cable up to 2.5mm².
3. Loop and input cable screen must be connected to interface earth terminals.

Note: No addressing of the interface is required (see control panel operation for details)

Standard Connections

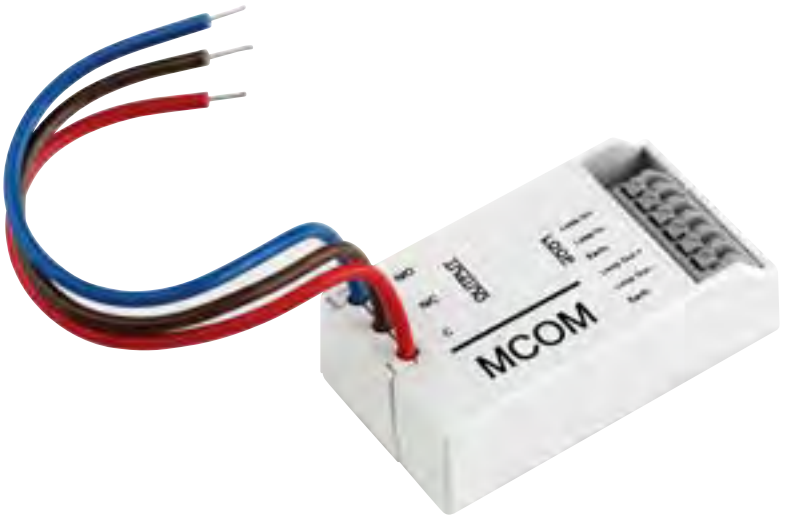


Product Codes

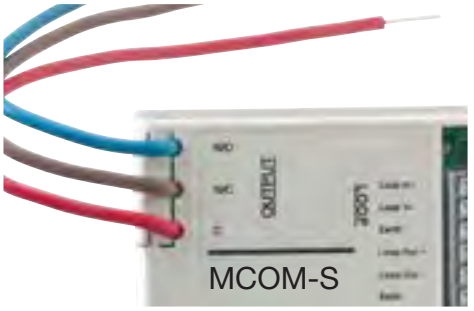
Code	Description
MIU872	Micro Zone Monitor Unit

Micro Single Channel Output Units

MCOM-R - Micro Single Channel Output Unit



MCOM - Micro Single Channel Output Unit



MCOM-S - Micro Single Channel Output Unit

Overview

An extensive range of micro interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The (MCOM) is a single output, soft addressed, micro interface, incorporating integral short circuit isolators. It is extremely compact and therefore ideal for incorporation into other equipment.

The (MCOM) is fully compatible with the current range of Cooper intelligent addressable control panels. It is suitable for switching low voltage (24V dc at 1A maximum), via a set of non latching relay contacts. It is suitable for switching HVAC control circuits, plant shutdown control circuits, fire door closure etc.

Optional 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 on silence, resets on reset only.

Features

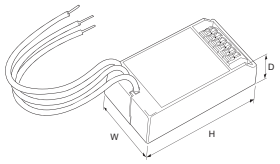
- Soft addressed
- Integral short circuit isolator
- Single address
- Non latching changeover relay contacts
- Suitable for switching low volts control gear
- Optional variants:
  - MCOM-R
  - MCOM-S

Benefits

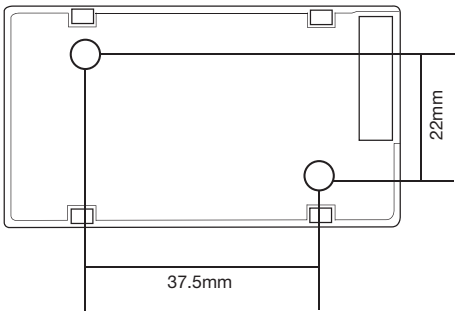
- Quick and simple to install
- No hard addressing required (Plug and play)
- Compact size

Dimensions

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



Mounting Details



Technical Specification

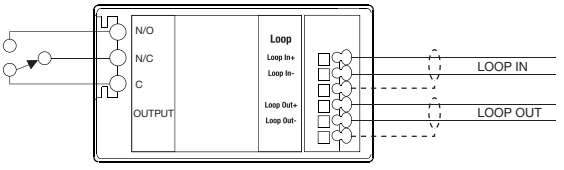
Code	MCOM
Description	Micro Single Channel Output Unit
Standards	EN54 Pt17 & Pt18
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	310µA
Output Relay	
Switching Voltage	24V dc to 30V dc
Contact Rating	1A
Switching Power	30 Watts
Environmental	
Operating temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	65mm x 35mm x 18.5mm
Weight	0.078kg
Ingress protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Suitable for switching 24V dc control circuits (fire door retainers etc).
2. Connections suitable for single strand fireproof cable up to 2.5mm².
3. Loop and output cable screen must be connected to interface earth terminals.
4. The relay output is a set of change over, non-latching, volt free contacts which are non monitored.

Note: No addressing of the interface is required

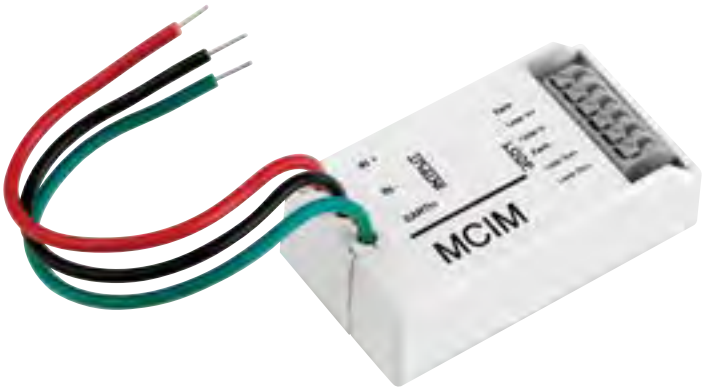
Standard Connections



Product Codes

Code	Description
MCOM	Micro Single Channel Output Unit (recognised as output unit)
MCOM-S	Micro Single Channel Output Unit (recognised as sounder)
MCOM-R	Micro Single Channel Output Unit (5 second reset pulse)

Micro Single Channel Input Units



MCIM - Micro Single Channel Input Unit

Overview

An extensive range of micro interfaces are available to support the Cooper range of control panels, providing solutions for most design requirements.

The (MCIM) is a single input, soft addressed micro interface, incorporating integral short circuit isolators. It is extremely compact and therefore ideal for incorporation into other equipment.

The (MCIM) is fully compatible with the current range of Cooper intelligent addressable fire control panels. It is suitable for monitoring a set of normally open, volt free contacts such as sprinkler system flow switches, auxiliary panel fire/fault signals as well as non fire input signals such as flow valve open contacts, generator start up, fire door closed etc.

Features

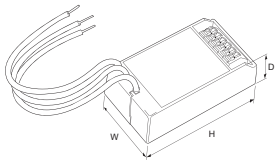
- Soft addressed
- Integral short circuit isolator
- Single address
- Suitable for monitoring:
  - Flow switches
  - Non fire inputs
  - Auxillary panels
- Up to 200 units per loop

Benefits

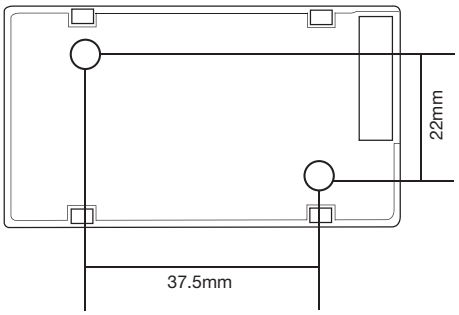
- Quick and simple to install
- No hard addressing required (Plug and play)
- Compact size
- Programable by Cooper site installer software as technical input/non fire input

Dimensions

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



Mounting Details



Technical Specification

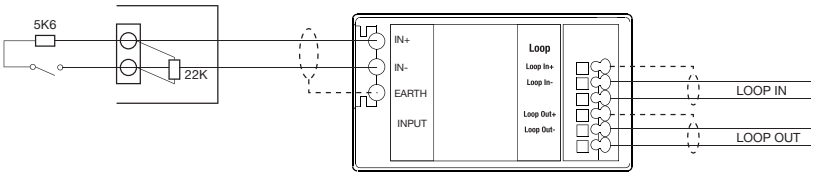
Code	MCIM
Description	Micro Single Channel Input Unit
Standards	EN54 Pt17 & Pt18
Specification	
Operating Voltage	18V dc to 30V dc
Quiescent Current	310µA
Inputs	
Trigger Resistance	5K6Ω
End of Line Resistor	22KΩ
Short Circuit Fault Threshold Resistance	1KΩ
Open Circuit Fault Threshold Resistance	33KΩ
Environmental	
Operating temperature	-10°C to +60°C
Humidity (non condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	65mm x 35mm x 18.5mm
Weight	0.078kg
Ingress protection	IP40
Compatibility	
Suitable for use with	Cooper Intelligent Addressable Fire Systems

Installation

1. Inputs monitored for open and short circuit fault conditions.
2. Suitable for monitoring normally open volt free contacts (flow switches etc).
3. Connections suitable for single strand fireproof cable up to 2.5mm^2.
5. Loop and input cable screen must be connected to interface earth terminals
6. The end of line monitoring resistor, must always be fitted at the end of the input wiring, if the input is unused the end of line resistor must be fitted at the interface input terminals.

Note: No addressing of the interface is required (see control panel operation for details)

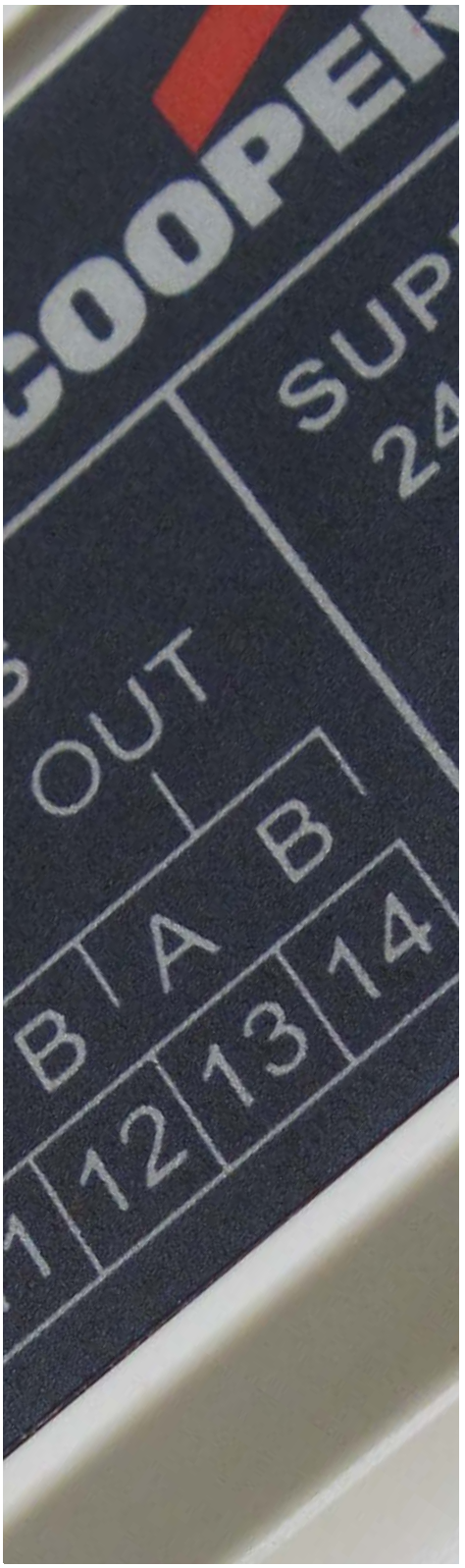
Standard Connections



Product Codes

Code	Description
MCIM	Micro Single Channel Input Unit

EC200 Dual-Channel LonWorks BMS Interface



EC200 - Dual-Channel LonWorks BMS Interface

Overview

The control panels on a Cooper fire network communicate using pre-configured network variables and cannot normally be used with a BMS where binding is required.

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.

The gateway has 2 channels:

Channel 1 - connects to the Cooper fire network
Channel 2 - connects to the BMS

Features

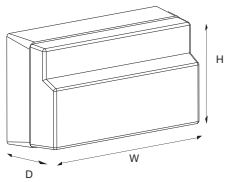
- Allows a Cooper fire network to be controlled by a LonWorks enabled BMS
- Uses Echelon FT5000 smart transceivers for high noise immunity
- 32 message input buffer

Benefits

- Compact DIN rail mounting enclosure
- Fully compatible with Cooper fire network (no need for binding)
- Open protocol to 3rd party BMS system

Dimensions

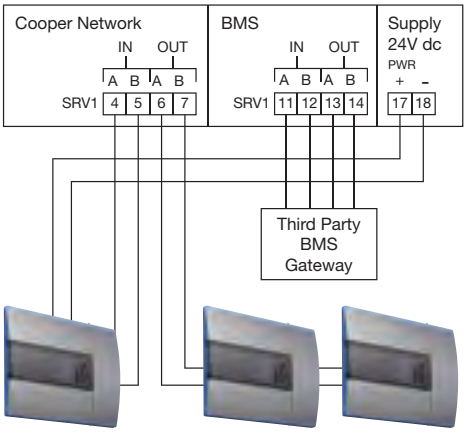
H (mm)	W (mm)	D (mm)
86	105	58



Technical Specification

Code	EC200
Description	Dual-Channel LonWorks BMS Interface
Standards	CE / UL compliant
Specification	
Supply Voltage	12V dc to 30V dc
Supply Current	< 30mA
Transceivers	Echelon FT5000 / FT-X1
Baudrate	78kbs
Connectors	5mm screw terminals
Physical	
Enclosure	ABS DIN Rail mounting.
Dimensions (H x W x D)	86mm x 105mm x 58mm

Typical System Architecture



Cooper Intelligent Addressable Control Panels

If the EC200 is located at the end of the system (spur) a 102Ω termination resistor must be fitted 1A, 1B.

Standard Connections

Channel 1 - must be connected to the Cooper fire network.

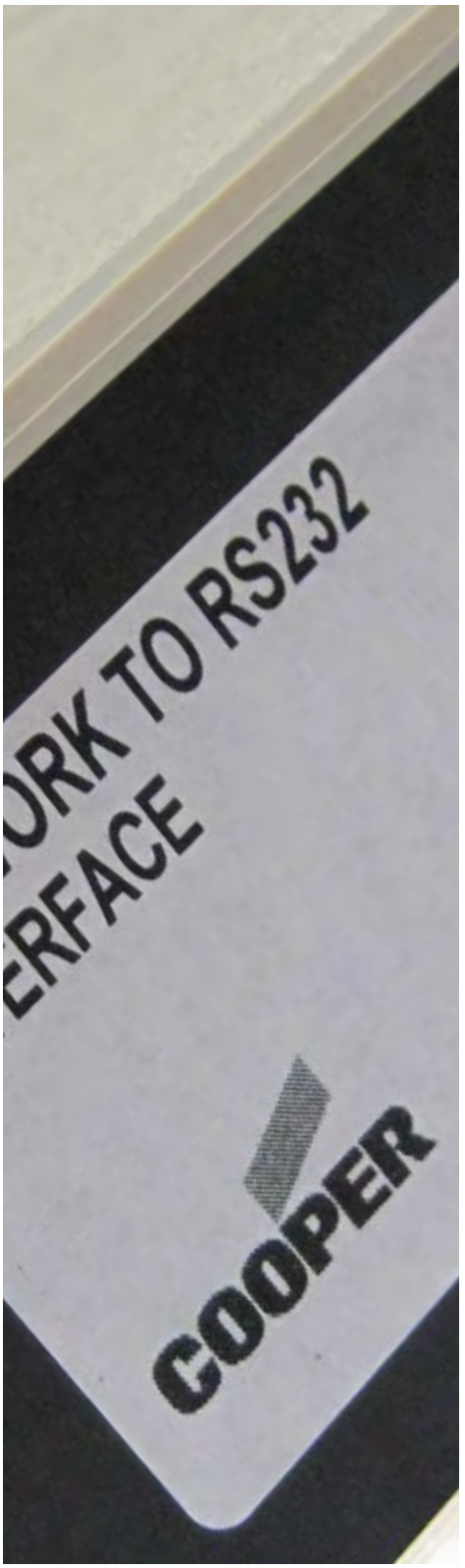
Channel 2 - must be connected to the BMS.

PIN	Description
4	CHANNEL 1 A
5	CHANNEL 1 B
6	CHANNEL 1 A
7	CHANNEL 1 B
11	CHANNEL 2 A
12	CHANNEL 2 B
13	CHANNEL 2 A
14	CHANNEL 2 B
17	SUPPLY +
18	0V

Product Codes

Code	Description
EC200	Dual-channel LonWorks BMS Interface (non handshake)
EC200H	Dual-channel LonWorks BMS Interface (handshaking)
EC200S	Dual-channel LonWorks BMS Interface (self configuring for use with EC700)

EC0232 Lon to RS232 Adapter



EC0232 - Lon to RS232 Adapter

Overview

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

The (EC0232PAVA) offers a similar interfacing facility to the HMX PA/VA (public address voice alarm) system by withholding the handshaking functionality, and if required the (EC0232PAVA3D) offers an additional 3 minute time delay before the voice alarm function is actuated. The bi-directional link allows the status of the HMX PA/VA system to be displayed and monitored at the control panel. Different messages may be played depending on the configuration of the cause and effect programming.

The interface may be located anywhere on the Cooper peer to peer network allowing information from any intelligent addressable control panel to be routed through the bi-directional RS232 port to PC or PA/VA system.

Features

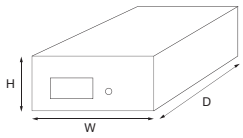
- Allows connection of Cooper system network devices to PC based applications
- Can be connected at any point on peer to peer network
- Allows Cooper system network to be connected to PC or PA/VA

Benefits

- Integrates PC based applications
- Integrates PA/VA systems, site monitor and graphpack
- Flexibility to use any PC application

Dimensions

H (mm)	W (mm)	D (mm)
36	116	135

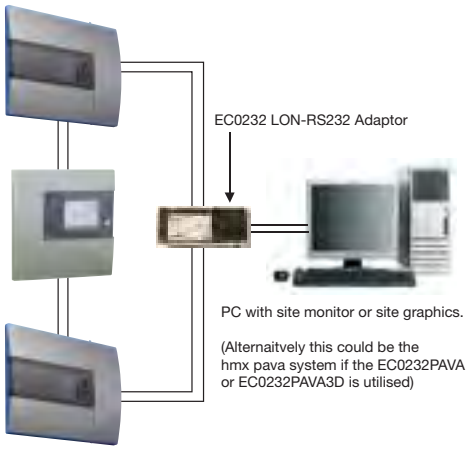


Technical Specification

Code	EC0232 / EC0232PAVA / EC0232PAVA3D
Description	Lon to RS232 Adapter
Specification	
Mains Supply	230V ac +10% -15%
Communication Protocol	LonWorks
LonWorks Connectors	Screw terminal block
Lonworks Rate	78 Kbps / 1.25 Mbps
Bit Error Rate	10e-9
Serial Baud Rate	4800 bd
Network Termination	102 ohm (if required)
Environmental	
Operating Temperature	-10°C to +70°C
Humidity (Non Condensing)	20 to 95% RH
Physical	
Dimensions (H x W x D)	36mm x 116mm x 135mm

Typical System Architecture

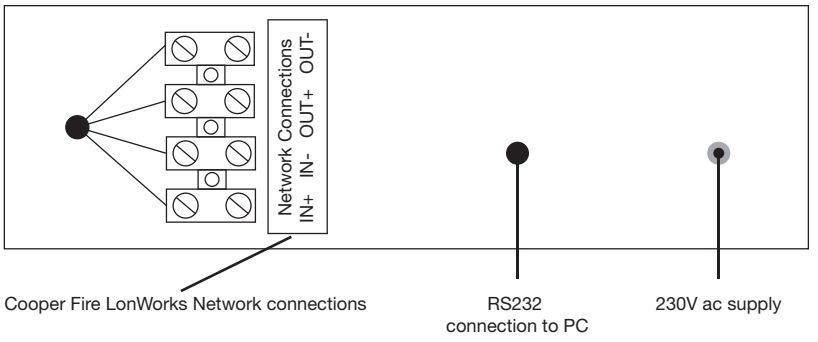
Intelligent Addressable Control Panels (with network card)



Installation

1. Ensure that the power supply is switched off during installation.
2. Take care when inserting the RS232 connector to avoid damage.
3. Connect the LonWorks network cables.
4. Repower the system.
5. The EC0232 range of devices simply translate the LonWorks protocol and will require no setup or configuration.

Mechanical Layout and Standard Connection



RS232	Connection to PC or HMX PA/VA
NETWORK	Connections to Cooper fire LonWorks Network
POWER	230V ac mains supply

Product Codes

Code	Description
EC0232	Lon to RS232 Adapter
EC0232PAVA	Lon to RS232 Adapter (for HMX PA/VA system - no handshake)
EC0232PAVA3D	Lon to RS232 Adapter (for HMX PA/VA system - 3 min time delay)

EC400 TCP/IP Interface

EC400 - TCP/IP Interface

Overview

The (EC400) is high performance, reliable and secure network infrastructure device for accessing Cooper 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.

This unit supports DHCP even with changing IP addresses in an intranet environment.

The easy to understand, diagnostic LED's allow installers to install and trouble shoot the device without expert knowledge and dedicated troubleshooting tool.

To connect the Cooper Lon network via intranet will require a minimum of 2 EC400's. The first EC400 must be configured as a "configuration server" and the second as a "client".

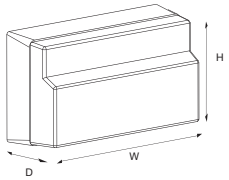
The EC400 when configured as a server requires the address list of all the EC400's IP addresses in the network.

Benefits

- Uses existing infrastructure
- Ideal for remote mounting when used with Cooper webserver software
- Easy to configure

Dimensions

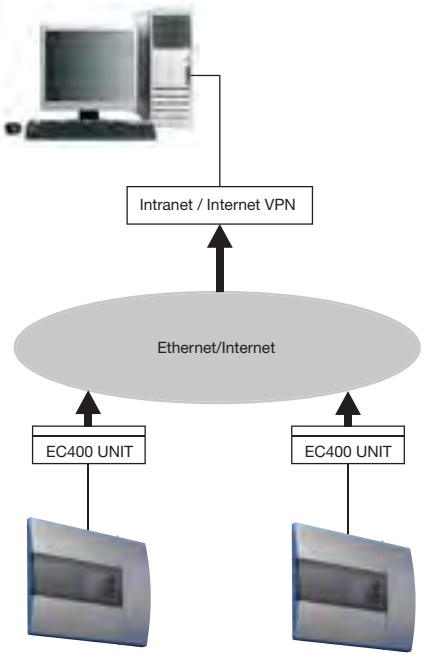
H (mm)	W (mm)	D (mm)
60	105	86



Technical Specification

Code	EC400
Description	TCP/IP Interface
Specification	
Operating Voltage	9V dc to 35V dc
Power Consumption	3W (typical)
In Rush Current	Up to 950mA at 24V ac
Environmental	
Operating Temperature	-0°C to +50°C
Storage Temperature	-10°C to 85°C
Operating Humidity	10 to 90% RH at 50°C (Non Condensing)
Storage Humidity	90% RH at 50°C (Non Condensing)
Physical	
Enclosure	DIN43 880
Dimensions (H x W x D)	60mm x 105mm x 86mm
Ingress protection	IP40 (enclosure) IP20 (screw terminals)
Installation	Dill Rail mounting or wall mounting

Typical System Architecture



EC400 requires only the IP address to be configured

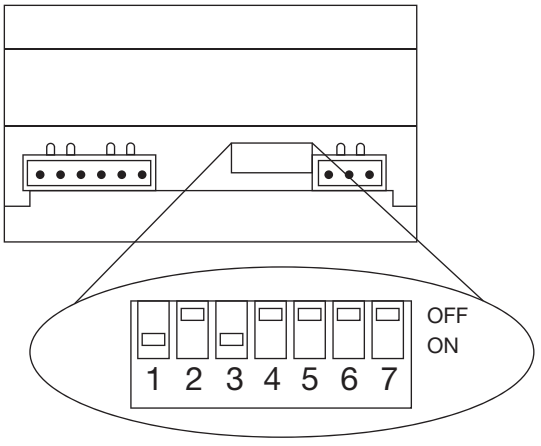
DIP Functions

The EC400 has 7 switches to select the operating mode.

The EC400 must be configured to operate in a repeater mode, where all messages are forwarded regardless of the address format.

To put the EC400 into repeater mode, the following steps need to be performed.

DIP	Function
DIP1	Must be ON
DIP2	Must be OFF
DIP3	Must be ON
Press status button for at least 20 seconds.	



Product Codes

Code	Description
EC400	TCP/IP Interface

EC540 Lon Network Booster

EC540 - Lon Network Booster

Overview

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".

Smart Switch Mode

The plug and play installation capability of the (EC540) allows connecting it to the network without any further configuration. The smart switch technology automatically detects the bit rates of the connected channels, learns the configuration of the network (domains, subnet/node addresses, group addresses) and forwards the packets between the different ports of the (EC540).

Configured Router Mode

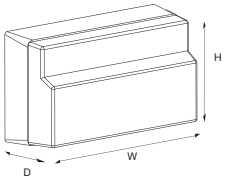
In this mode the (EC540) behaves like a standard router. Network management tools must configure the router.

Benefits

- Extends Cooper network
- Plug and play
- No configuration required
- Simple to use

Dimensions

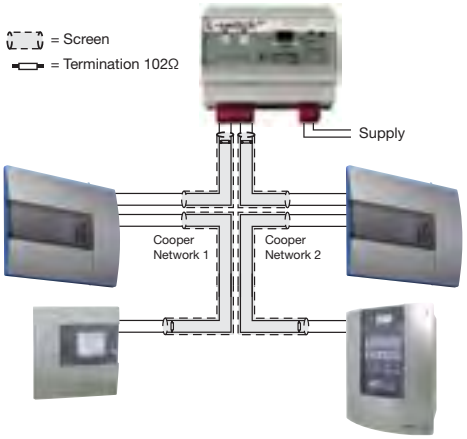
H (mm)	W (mm)	D (mm)
60	105	86



Technical Specification

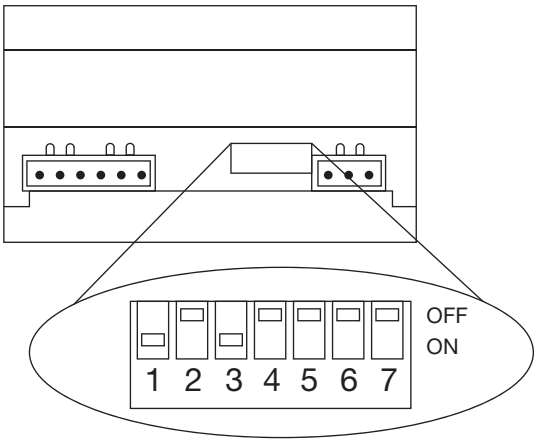
Code	EC450
Description	Lon Network Booster
Specification	
Operating Voltage	9V dc to 35V dc / 9V ac to 24V ac
Physical	
Dimensions (H x W x D)	60mm x 105mm x 86mm
Ingress protection	IP40 (enclosure) IP20 (screw terminals)
Installation	Dill Rail mounting or wall mounting

Typical System Architecture



DIP Functions

DIP1	DIP2	Function
ON	ON	Smart Switch Mode
ON	OFF	Repeater Mode
OFF	ON	Smart Switch Mode/Subnet Learning
OFF	OFF	Configured EIA-709 Router
DIP3		**Function (RS-485 version only)**
ON		Bit-Rate Auto Detection On
OFF		Bit-Rate Auto Detection Off
DIP4		Must be OFF
DIP5		Must be OFF
DIP6		Must be OFF
DIP7		Must be OFF



Product Codes

Code	Description
EC540	Lon Network Booster

EC650 BACnet Gateway

EC650 - BACnet Gateway

Overview

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 Cooper intelligent addressable CF3000 system interface board.

NVs are mapped to binary or intelligent addressable objects (inputs and outputs) according to CEN/TS 15231:2005. Scalar NVs are mapped to one BACnet object. Structured NVs are mapped to several BACnet objects, one for each member (members can be selected individually).

BMS systems can subscribe and synchronise to a set of BACnet server objects that are updated each time a status change occurs anywhere in the fire system.

Features

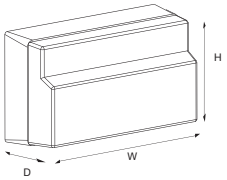
- Fully compliant with ANSI/ASHRAE 135-2004 and ISO 16484-5
- Maps network variables to BACnet server objects based on CEN/TS 15231:2005
- Supports one BACnet MS/TP or BACnet/IP channel (configurable)
- Event-driven email notification
- BACnet/IP and BACnet/MSTP activity LED

Benefits

- Easy to configure
- DIL rail mount
- Permits several Cooper panels to connect to 3rd party BACnet BMS system

Dimensions

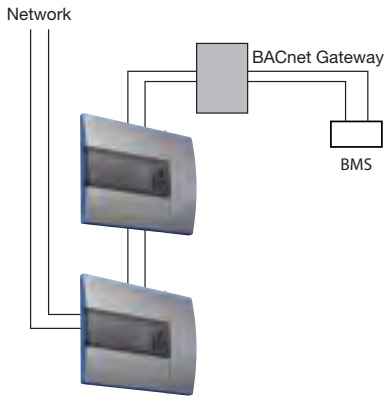
H (mm)	W (mm)	D (mm)
60	105	86



BACnet Addresses

Object Name	Type	Description
System Events		
RxPanelData_CmdStatus	Binary Input	System event data consists of 31 BACnet server objects that update simultaneously when a fire system event is generated by any control panel in the system. BMS systems should take care to subscribe to each update event synchronously and not poll these objects.
RxPanelData_PanelNumber	Analogue Input	
RxPanelData_CmdStatusNumber	Analogue Input	
RxPanelData_Address	Analogue Input	
RxPanelData_Analogue	Analogue Input	
RxPanelData_Zone	Analogue Input	
RxPanelData_Loop	Analogue Input	
RxPanelData_Always_1	Binary Input	
RxPanelData_TypeID	Analogue Input	
RxPanelData_Location_Location_1...25	Analogue Input	
System Command Status		
nviReset_state	Binary Input	System Reset Status
nviEvacuate_state	Binary Input	System Evacuation Status
nviSilence_state	Binary Input	System Silence Status
System Command Action		
nvoReset_state	Binary Output	Send Reset Command
nvoEvacuate_state	Binary Output	Send Evacuate Command
nvoSilence_state	Binary Output	Send Silence Command
Additional Info		
Id_in	Analogue Input	Panel Id of Last Event
nviLoop	Analogue Input	Loop Id of Last Event

Typical System Architecture



Communication and Automation Functions

On the CEA-709 side, the (EC650) supports either the ethernet/IP (IP-852) channel or the TP/FT- 10 channel (configurable).

The BACnet server objects are accessible from the BACnet network where BACnet/IP or BACnet MS/TP is supported (configurable).

Additionally:
L-GATE supports basic automation functions such as alarming, scheduling, and trending for a seamless integration of CEA-709 applications in a BACnet network.

L-GATE features event driven email notifications for pre-defined actions. This way, the user is promptly informed about problems such as a specific status or an exceeded high-limit.

Network Variables

Easy and fast mapping of network variables to BACnet server objects is guaranteed with the gateway configuration utility supplied with the unit. The software can run as a stand alone tool, connecting to the (EC650) via FTP or as an LNS® plug-in, compatible with LNS® 3.0 and LNS® TE applications like NL220, ALEX and LonMaker®.

Product Codes

Code	Description
EC650	BACnet Gateway

EC700 Modbus Gateway

EC700 - Modbus Gateway

Overview

The modbus gateway (EC700) is part of the InfraLINK range of network infrastructure components from partners.

All of the modbus gateway (EC700) series gateways feature a robust hardware platform with high performance CPU and UART for fast communications without loss of data. When ordered with this part code (EC700), the LonWorks to modbus address mapping is pre-loaded and ready for use with the Cooper CF3000 fire system interface board.

The modbus (EC700) has 3 communications ports for LonWorks, serial and programming connections. The serial port is capable of either RS232 or RS485 (2-wire) communications.

Features

- High speed host processor with LonWorks Neuron communications co-processor
- Robust high speed UART for serial communications
- Compact design for easy installation
- 6 multi function LED indicators for instant status diagnostics

Benefits

- Saves time by allowing simple integration with 3rd party modbus BMS system
- Easy to install
- Din rail mounted

Translation

Network Variable	SNVT Type	Length (bytes)	Modbus Type	Modbus Address
nvoTxFireData	UNVT_panel_data	31	Input (16-bit)	1 - 16
nvoFireStatus64	SNVT_state_64	8	Input (16-bit)	17 - 20
nvoFireStatus	SNVT_state	2	Input (16-bit)	44
nvoFireStatus.b0	N/A		Discrete (1-bit)	1
nvoFireStatus.b1	Fire		Discrete (1-bit)	2
nvoFireStatus.b2	Loop/Detector Fault		Discrete (1-bit)	3
nvoFireStatus.b3	Pre-Alarm		Discrete (1-bit)	4
nvoFireStatus.b4	Panel Fault		Discrete (1-bit)	5
nvoFireStatus.b5	Network Fault		Discrete (1-bit)	6
nvoFireStatus.b6	N/A		Discrete (1-bit)	7
nvoFireStatus.b7	N/A		Discrete (1-bit)	8
nvoFireStatus.b8	Evacuate		Discrete (1-bit)	9
nvoFireStatus.b9	N/A		Discrete (1-bit)	10
nvoFireStatus.b10	N/A		Discrete (1-bit)	11
nvoFireStatus.b11	N/A		Discrete (1-bit)	12
nvoFireStatus.b12	Data Ready *		Discrete (1-bit)	13
nvoFireStatus.b13	FRE Active		Discrete (1-bit)	14
nvoFireStatus.b14	N/A		Discrete (1-bit)	15
nvoFireStatus.b15	N/A		Discrete (1-bit)	16
nviCommand	SNVT_count	2	Holding (16-bit)	1
UNVT_panel_data (split into individual field elements for easy access to data)				
nvoTxStatus	SNVT_count	2	Input (16-bit)	21
nvoTxStatusNum**	SNVT_count	2	Input (16-bit)	22
nvoTxAddress	SNVT_count	2	Input (16-bit)	23
nvoTxAnalogue	SNVT_count	2	Input (16-bit)	24
nvoTxZone	SNVT_count	2	Input (16-bit)	25
nvoTxLoop	SNVT_count	2	Input (16-bit)	26
nvoTxTypeId	SNVT_count	2	Input (16-bit)	27
nvoLocation	SNVT_str_asc	31	Input (16-bit)	28 - 43
nvoBuffOvr ***	SNVT_count	2 l	Input (16-bit)	45

Note: Command structure for nviCommand is:

0 = Not Used
1 = Next Alarm/Event
2 = Evacuate
3 = Silence
4 = Reset
5 = Clear Stats***

* Once the BMS has read all event data (modbus Input 21-43), it must signal to the EC700 that it is ready to process the next event by updating nviCommand (modbus holding 1) to a value of 1 (next alarm/event). The data ready bit is then reset to zero and only set back to 1 when a new alarm/event is available to be read by the BMS.

** nvoTxStatusNum = Fire = 0 x 0a : Device fault = 0 x 09 : Panel Fault = 0 x 19 : pre-alarm = 0 x 0d

*** nvoBuffOvr (Modbus Input 45) increments when the message queue in the Cooper LonWorks BMS interface is full while a new event arrives from a control panel. This can happen when he BMS does not process events over a period of time.

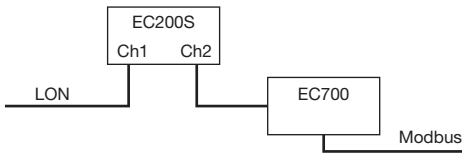
Default Serial Parameters:

Transceiver: RS485 2-wire
Communications: 19200 bits per second, 8 data bits, 1 stop bit, even parity.

Technical Specification

Code	EC700
Description	Modbus Gateway - LonWorks Transceiver FT-X1 (Smart Transceiver), TP/FT-10 (use on free topology twisted pair channel)
Specification	
Baudrate	78 kbit/s
Connections	1 x 2-pole wieland connector
Supply Voltage / Mains Connector	24V dc ± 10% 50Hz
Current Consumption	Max 280mA on 24V dc (typically 100mA)
Serial Communications	Modbus RTU slave
Transceiver	RS232 / 422 (4-wire) / 485 (2-wire)
Baud Rate	Configurable up to 57.6 kbits/s
Connector	DSUB-9 female connector
Environmental	
Operating Temperature	0°C to + 55°C
Non Operating Temperature	-5°C to +85°C
Physical	
Dimensions (H x W x D)	120mm x 27mm x 75mm
Weight	150g
Ingress Protection	IP20
EMC Certification	CE marked, UL & cUL conformance

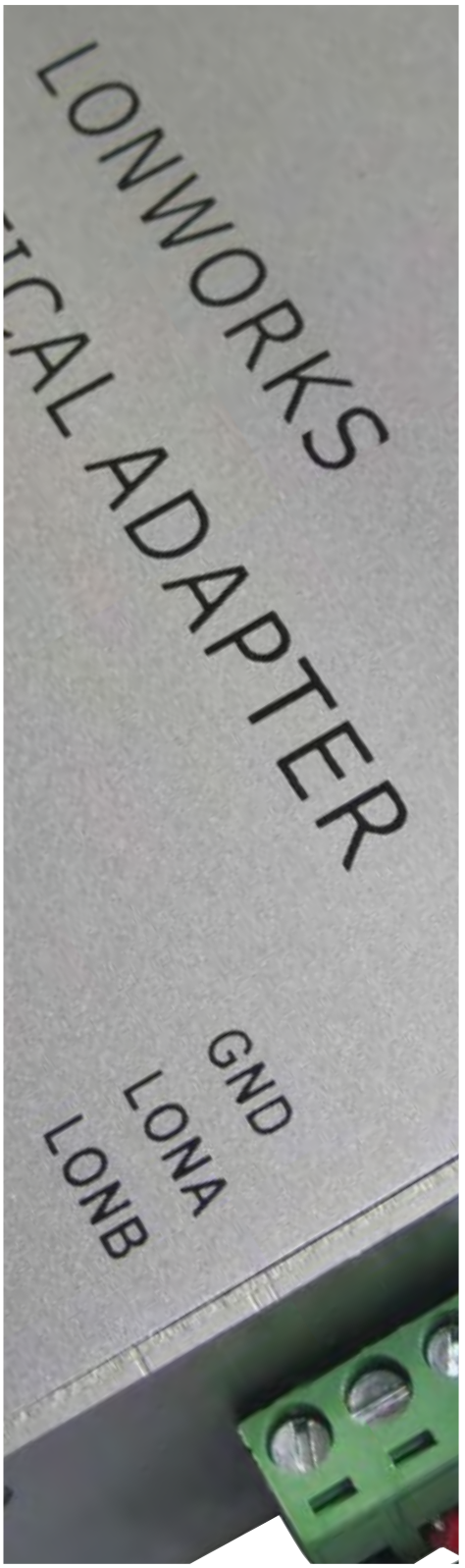
Standard Connections



Product Codes

Code	Description
EC700	Modbus Gateway

Single Mode Lon to Fibre Optic Adaptor



CFSFL01 - Single Mode Lon to Fibre Optic Adaptor

Overview

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

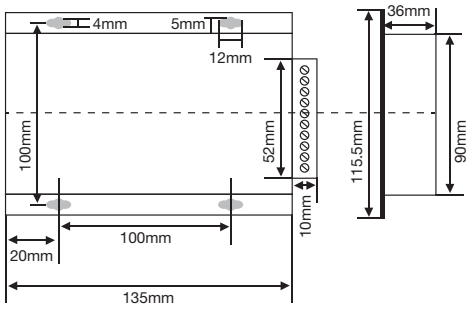
Using only single mode fiber optic, the (CFSFL01) adapter allows extension of the Cooper system network LonWorks to a maximum distance of 15km with a transmission speed of up to 78Kbit/s or 1.25Mbit/s.

Connection is made using SC type fibre optic connectors. In comparison with conventional twisted pair cable, the fibre optic usage in a LonWorks network has many advantages; it is reliable and fast in long distance network transmission even in difficult industrial environments (with transients, surges or electromagnetic interference etc.) without requiring any additional transient protection.

Benefits

- Simple to install
- Easy to use
- Extends Cooper panel network
- Fast response

Dimensions

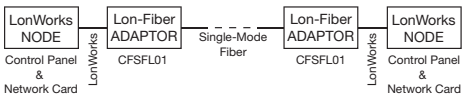


Technical Specification

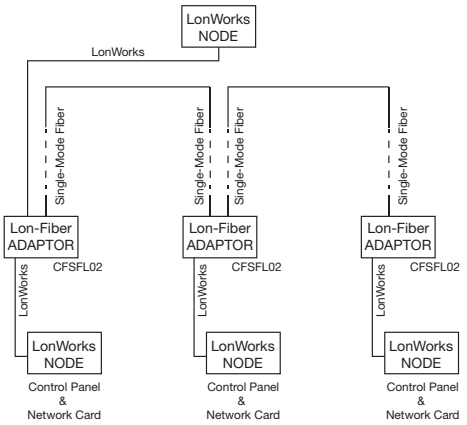
Code	CFSFL01
Description	Single Mode Lon to Fibre Optic Adaptor
Specification	
Operating Voltage	24V dc
Communication Protocol	LonWorks
LonWorks Connectors	Screw terminal block
LonWorks Rate	78 Kbps / 1.25 Mbps
Bit Error Rate	10e-9
Wavelength	1310nm
Fiber Type	Single mode fiber
Fibre Diameter	9/125 micron
Fibre Connector	SC type (optional ST type)
Link Distance	15km
Environmental	
Operating Temperature	-30°C to +70°C
Humidity (Non Condensing)	20 to 90% RH
Physical	
Dimensions (H x W x D)	36mm x 116 mm x 135mm

Typical System Architecture

Fiber Optic Point to Point Link



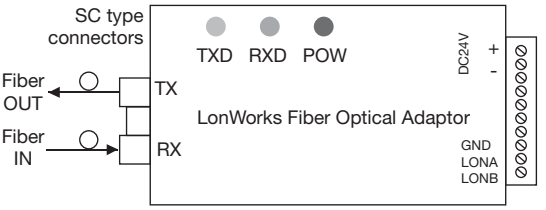
Fiber Optic Star Topology Link



Installation

1. Ensure that the power supply is switched off during installation.
2. Take care when inserting the fibre optic connector to avoid damage. Note that the "RX" connector in the local module's port should connect to the "TX" connector in the far end module's port and vice versa.
3. LonA connects to Net_A of the LonWorks Bus (network card), LonB connects Net_B.

Mechanical Layout and Connections



Terminals

10	+	
9	Unused	
8	-	
7	Unused	
6	Unused	
5	Unused	
4	Unused	
3	GND	Network Screen Connecttion
2	LONA	Net_A of Network Card
1	LONB	Net_B of Network Card

TX	Fiber Transmitting
RX	Fiber Receiving
GND	Network Screen
LonA	Net_A
LonB	Net_B

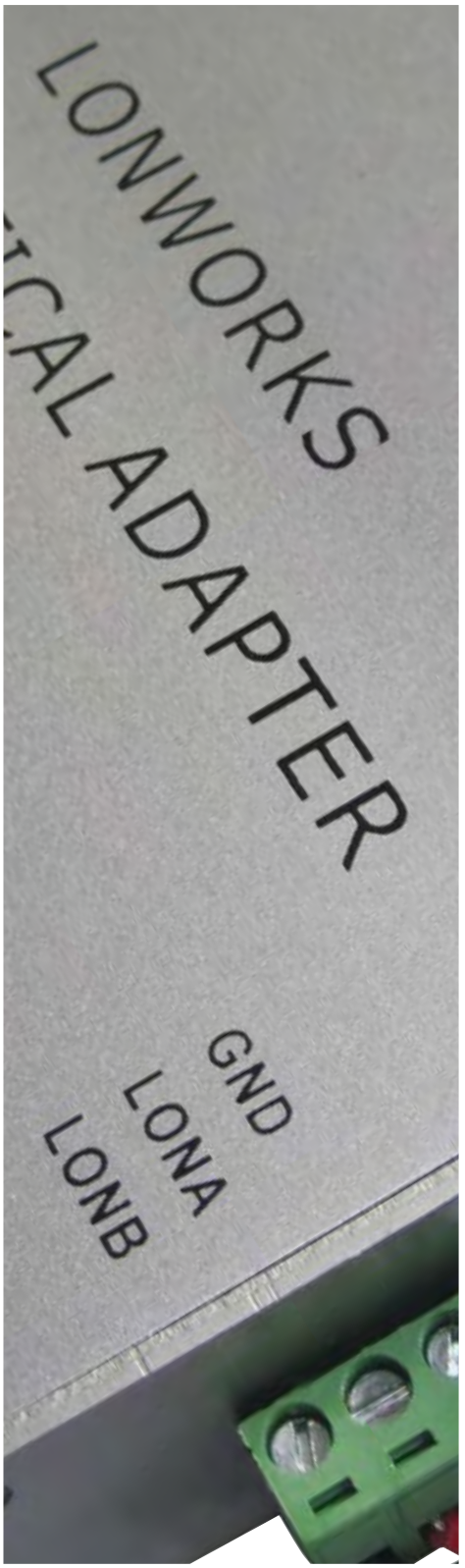
LED Indication

POW	Power On Indication	on	Power On
TXD	Fibre Port Transmitting Data	Flashing	Working
RXD	Fibre Port Receiving Data	Flashing	Working

Product Codes

Code	Description
CFSFL01	Single Mode Lon to Fibre Optic Adaptor

Multi Mode Lon to Fibre Optic Adaptor



CFSFL02 - Multi Mode Lon to Fibre Optic Adaptor

Overview

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

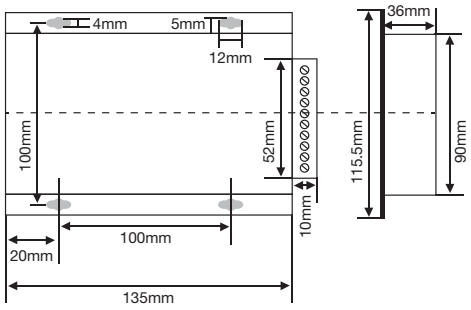
Using only single-mode fiber optic, the (CFSFL02) adapter allows extension of the Cooper system network LonWorks to a maximum distance of 15km with a transmission speed of up to 78Kbit/s or 1.25Mbit/s.

Connection is made using SC type fibre optic connectors. In comparison with conventional twisted pair cable, the fibre optic usage in a LonWorks network has many advantages; it is reliable and fast in long-distance network transmission even in difficult industrial environments (with transients, surges or electromagnetic interference etc.) without requiring any additional transient protection.

Benefits

- Simple to install
- Easy to use
- Extends Cooper panel network
- Fast response

Dimensions

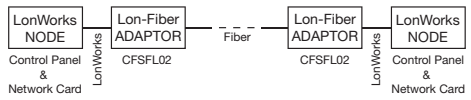


Technical Specification

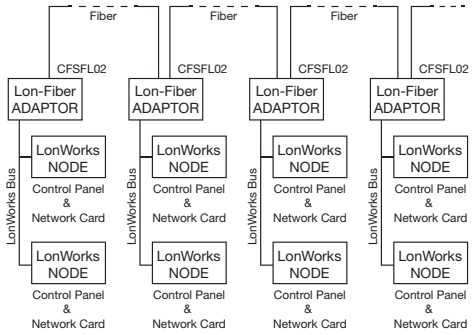
Code	CFSFL02
Description	Multi Mode Lon to Fibre Optic Adaptor
Specification	
Operating Voltage	24V dc
Communication Protocol	LonWorks
LonWorks Connectors	Screw terminal block
LonWorks Rate	78 Kbps / 1.25 Mbps
Bit Error Rate	10e-9
Wavelength	1310nm
Fiber Type	Single mode fiber
Fibre Diameter	9/125 micron
Fibre Connector	SC type (optional ST type)
Link Distance	15km
Environmental	
Operating Temperature	-30°C to +70°C
Humidity (Non Condensing)	20 to 90% RH
Physical	
Dimensions (H x W x D)	36mm x 116 mm x 135 mm

Typical Application Schematic

Fiber Optic Point to Point Link



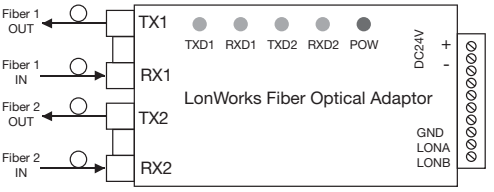
Fiber Optic Multi-Drop Link



Installation

1. Ensure that the power supply is switched off during installation.
2. Take care when inserting the fibre optic connector to avoid damage. Note:
   RX1 should connect to the previous modules TX2.
   TX1 should connect to the previous modules RX2.
   RX2 should connect to the next modules TX1.
   TX2 should connect to the next modules RX1.
3. LonA connects to Net_A of the LonWorks Bus (network card), LonB connects Net_B.

Mechanical Layout and Connections



SC type connectors

Terminals

10	+	12V dc
9	Unused	
8	-	0V
7	Unused	
6	Unused	
5	Unused	
4	Unused	
3	GND	Network Screen Connecttion
2	LONA	Net_A of Network Card
1	LONB	Net_B of Network Card

TX	Fiber Transmitting
RX	Fiber Receiving
GND	Network Screen
LonA	Net_A
LonB	Net_B

LED Indication

POW	Power On Indication	on	Power On
TXD1	Fibre Port 1 Transmitting Data	Flashing	Working
RXD1	Fibre Port 1 Receiving Data	Flashing	Working
TXD2	Fibre Port 2 Transmitting Data	Flashing	Working
RXD2	Fibre Port 2 Receiving Data	Flashing	Working

Product Codes

Code	Description
CFSFL02	Multi Mode Lon to Fibre Optic Adaptor

4 to 20mA Interface

Overview

The (CGI420) and (CGI420R) are 4 to 20mA intelligent addressable modules designed to interface with gas detection modules and are compatible with Cooper intelligent addressable control panels.

These interfaces have a unique address on the loop and built in isolator for loop short circuit protection.

Each of the DIL switches JP1, JP2 and JP3 can be programmable to set the threshold level for prealarm1, pre-alarm 2 and alarm respectively. This can be expressed as a percentage of L.E.L (lower explosion limit) or PPM (parts per million).

Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Ideal interface for gas detection modules
- 3 volt free outputs for each of the 3 alarm levels (optional)
- Requires external power supply

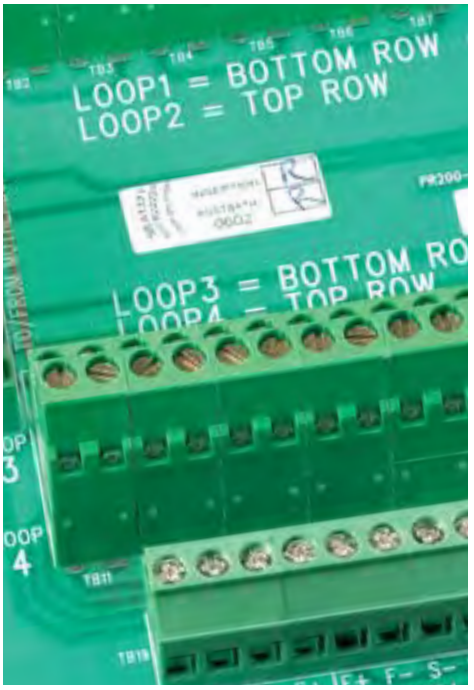
Benefits

- The supply to the gas detector is taken directly from the interface
- Programmable levels of sensitivity

Product Codes

Code	Description
CGI420	4 to 20mA Interface
CGI420R	4 to 20mA Interface (relay output)

Loop Splitter Unit (approved)



Overview

The loop splitter interface (ZPCB2222) allows the expansion of the Cooper CF3000 from a 4 loop panel to a 16 loop panel.

Each loop of the CF3000 is connected to 4 sub loops totalling a maximum number of 200 addresses per main loop.

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.

Features

- Loop connected
- Splits each connected loop into 4 smaller loops

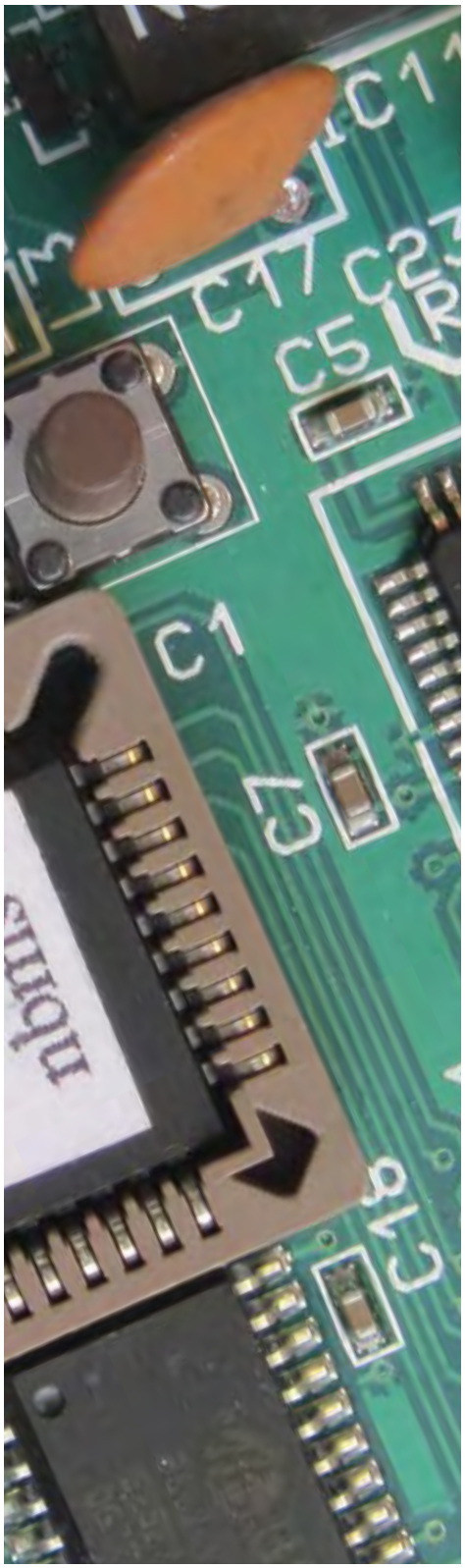
Benefits

- Allows greater system design flexibility
- Permits callpoints to be wired on separate loop
- Supports greater number of smaller loops

Product Codes

Code	Description
ZPCB2222	Loop Splitter Unit

Mimic PCB



Overview

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

The (ZPCB2252MML) is the master PCB which can control up 32 outputs. If further outputs are required (ZPCB2252MSL) can daisy chain onto the master PCB offering a total outputs of 250.

Each slave can control up to 32 outputs.

The master board can be loop or network driven and does required an external 1A 24V dc power supply.

The flexibility of these boards is further enhanced by the fact that each output can be programmed for fire or fault with up 5 different zones or addresses per output.

This can be programmed using the CF3000 programmable repeater software and downloaded using the RS232 port.

These boards are typical used for geographical LED mimic displays.

Features

- Available as master or slave, each has 32 outputs
- 250 outputs (1 master and 7 slaves)
- Ideal for mimic panel provision
- Each output can be programmed as fire or fault
- Each output can be operated by address, zone or panel activation
- 2 versions available:
  - LED
  - Relay output
- Soft addressed
- Built in short circuit isolation

Benefits

- Simple configuration using Cooper site installer
- Easy to install

Technical Specification

Code	ZPCB2252MML / ZPCB2252MSL
Description	Mimic PCB
Specification	
Quiescent Current	310mA
Operating Loop Voltage	18V dc to 30V dc
Inputs	4mA to 20mA
External PSU	15V dc to 30V dc
Outputs	
Voltage	24V dc to 30V dc
Current	10mA
Environmental	
Humidity (Non Condensing)	0 to 95% RH
Physical	
Dimensions (H x W)	10mm x 290mm
Weight	0.25Kg
Compatibility	
Suitable for use with	Cooper Fire Systems

Loop powered Installation

1. Connect the unit according to the diagram below
2. Recommended loop cable: FIRETUF / FP200 / MICC
3. Boards have built in isolators

Notes

If loop powered no addressing of the interface is required

1. Only connect cable screen to its adjacent earth terminal
2. 24V dc external power supply is required

Product Codes

Code	Description
ZPCB2252MML	Mimic PCB (master)
ZPCB2252MSL	Mimic PCB (slave)

Heavy Duty Relay Unit

MAR724 - Heavy Duty Relay Unit

Overview

The heavy duty relay unit (MAR724) is 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. The front mounted status LED illuminates when relay is energised.

Features

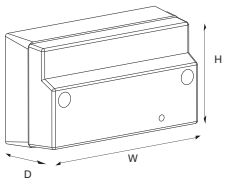
- Simple to install
- Visible status indication LED
- Double pole change over contacts

Benefits

- Low current consumption
- 230V ac rated contacts
- Will switch up to 10A (resistive)

Dimensions

H (mm)	W (mm)	D (mm)
89	150	58

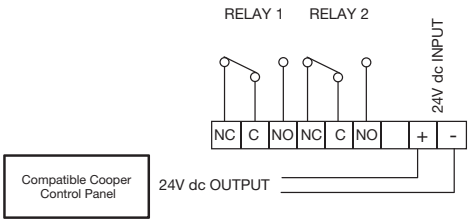


Technical Specification

Code	MAR724
Description	Heavy Duty Relay Unit
Specification	
Coil Rating	24V dc 10mA
Contact Rating	10A at 240V ac or 30V dc
Contacts	2 x sets of changeover contacts
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Dimensions (H x W x D)	89mm x 150mm x 58mm
Weight	0.24Kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Fire Systems

Standard Connection

MAR724



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Installation

1. Heavy duty relay unit fixes to a standard deep double gang back box (supplied).
2. Cable entry is via back box, cables are terminated into heavy duty terminals on relay PCB.

Interface Options

1. Relay is powered by an external 24V dc supply.

Product Codes

Code	Description
MAR724	Heavy Duty Relay Unit

EN54 Pt.4 Approved Power Supply

With battery backup

Overview

Switch mode power supply unit with 24V dc output voltage, available with a maximum output current of 1.5A, 2.5A and 5A.

The unit is a high efficiency switching power supply; protected from overloads, polarity reversals and short circuits. 4 LEDs indicate power supply status: mains power (green), battery charging (green), battery discharged (yellow) & fault (yellow).

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 case comes provided with a mechanical lock and tamper switch for opening and closing the front door.

Power Supply Units series 82000B are certified in accordance with the standard UNI EN54-4:1997 + A1:2002 +A2:2006

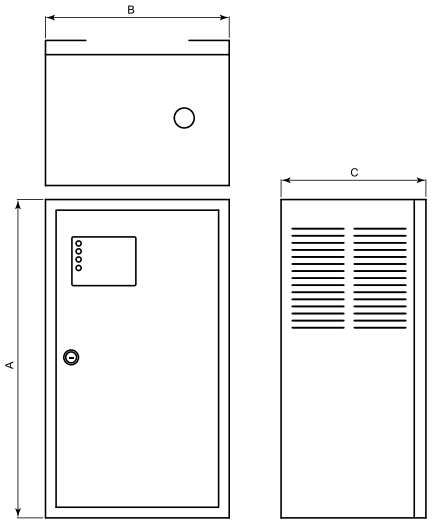
Features

- Switching Technology
- Fault relay
- Tamper switch
- Integral battery
- Fault indicator
- Small & large versions of metallic casing available
- EN54 Pt.4 Approved
- Output currents available: 1.5A, 2.5A, 5A

Benefits

- Simple to use
- Secure steel enclosure
- Battery back up

Dimensions



	H (mm)	W (mm)	D (mm)
P Case	290	250	180
G Case	450	260	205

Installation

1. Enclosure is designed for wall mounting.
2. 2 x 20mm knockouts are provided for cable entry at the rear of the enclosure.
3. A fused terminal block is provided for mains supply connection.
4. Output is protected by internal fuse (displayed in table below).

System Functionality

1. FX range power supplies provide outputs between 1.5A and 5A.
2. Output is used to supply any connected load and also to recharge the integral batteries.
3. To enable batteries to be charged correctly maximum continuous external load should not exceed the values displayed in the table below.
4. LED indicators are provided to signify:
   - Mains healthy (Green)
   - System fault (Yellow)
   - Battery Charging (Green)
   - Charger output fault (Yellow)
5. Mains healthy and system fault LED's are visible without removing front cover.

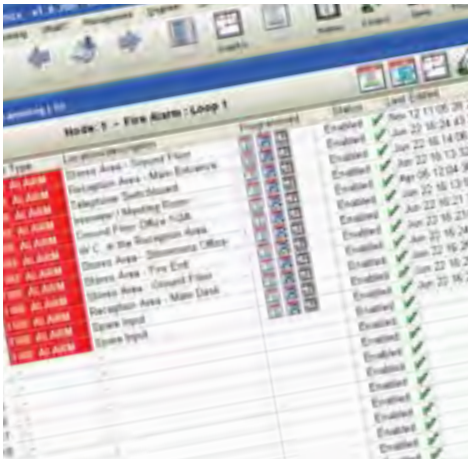
Technical Specification

Code	FX1-5ABP	FX1-5ABG	FX2-5ABG	FX5-0ABG
Description	Power supply			
Standards	EN 60950 pt1, EN 50130 Pt 4, EN50081, EN54 Pt4, A1:2002, A2:2006			
Specification				
Output Voltage (-)	Min 20.2, Norm 27.6, Max 29.4			
Load Current (A)	1.3	1.3	2.2	4.4
Ripple (mV)	174	174	166	246
Input Voltage (V~)	230 V~ -15+10%, 50/60 Hz	230 V~ -15+10%, 50/60 Hz	230 V~ -15+10%, 50/60 Hz	230 V~ -15+10%, 50/60 Hz
Current Absorption (A max)	0.42	0.42	0.68	1.21
Battery (Pb)	2 x 12V 4.0 Ah	2 x 12V 4.0 Ah	2 x 12V 7.0 Ah	2 x 12V 17.0 Ah
Rechage Current Battery (A)	0.15	0.15	0.25	0.55
Fuses				
Switching Fs1	**F2**	**F2**	**F3.15**	**F4**
Switching Fs2	**F6.3**	**F6.3**	**F6.3**	**F6.3**
Circuit of Control F1	F2	F2	F3.15	F5
Circuit of control F2	F2	F2	F3.15	F5
Physical				
Operating Temperature	+5°C to +40°C			
Housing Material	Epoxy varnished sheet			
Standard equipment	Two keys per lock			
Packaging	1pc. / package			
Insulation Class	Classe I			
Ingress Protection	IP30			
Electrical Protection	Fuses for mains and battery overload. Short circuit in output, battery inversion. Door opening tamper.			

Product Codes

Code	Description
FX1-5ABP	24V 1.5A PSU P CASE
FX1-5ABG	24V 1.5A PSU G CASE
FX2-5ABG	24V 2.5A PSU G CASE
FX5-0ABG	24V 5.0A PSU G CASE

Graph Pack Software



Graph Pack Software

Overview

Graph pack software is a powerful alarm management tool and graphical user interface designed to work with many Cooper safety fire system products.

Users can monitor, control and interrogate their systems to ensure alarms are detected and dealt with quickly and efficiently. Simple and easy to use, the graph pack software includes a host of advanced features, offering users a system that's powerful and truly comprehensive. All of the information required, all of the control needed, is literally at the users fingertips.

The graph pack software not only delivers alarm information, it also records other system events and faults, allowing the generation of detailed reports. Alarms can be displayed and controlled in a variety of ways to best suit the user's requirements.

Graph Pack Lite Software:
Designed for small 1 to 2 panel systems, the graph pack lite provides a comprehensive level of control at a very competitive price.

Graph Pack Software:
Designed for a range of systems, the graph pack gives users the maximum level of control and accessibility over their alarm system.

Features

- Multiple users
- Secure system
- Multiple PC work stations
- Simple navigation
- In-depth history analysis

Benefits

- All system events displayed and recored
- Fully configurable
- Simple and clear user interface
- Programmable to suit any application

Graphics Parameters

File	Type	Colours	File Size	Loading Speed
BMP	Bitmap	16 million	Very Large	Medium
BMP	Bitmap	256	Large	Fast
BMP	Bitmap	16	Medium	Fast
RLE	Bitmap	256	Small	Fast
WMF	Metafile	16 million	Small	Slow
EMF	Metafile	16 million	Small	Slow
GIF	Bitmap	256	Small	Fast
JPEG	Bitmap	16 million	Small	Medium

Symbol Parameters

File	Resizable	Transparency	Max Size
BMP	Poor	No	128 x 128
RLE	Poor	No	128 x 128
GIF	Poor	Yes	128 x 128
WMF	Good	Yes	Unlimited
JPG	Poor	No	64 x 64
ICO	Poor	Yes	16 x 16, 32 x 32 or 48 x 48

Sound Parameters

Graph pack lite and graph pack premium lite can use any windows .WAV (wave) file, but compressed file formats should be avoided.

Technical Specification

Programming Parameters	Quantity
Event Types	32,000
Graphics Pages	32,000
Symbols	32,000
Text Pages	2,000,000
Sounds	2,000
Users	2,000
Manual Controls	32,000
Time Controls	2,000
Automatic Control Actions per I/P	255
Text/Reset Text/Graphic Pages per Input State	1
Loops/Zones per Node	255
Inputs Per Zone	255
Input Types per Input	16
Text Page per input	1
Graphics Page per input	1
Reset Page per input	1

System Requirements

Hardware Requirements	Intel Pentium or equivalent 2GHz or better 32 bit, 1GB Memory, 80GB disc space, 1 RS232 Serial Port, 100 and/or 1000 Mps LAN ports, 1 USB port
Platform	Windows XP-Pro Service Pack 2 or 3, Windows Vista, Windows 7
Display	High resolution 1024 x 768 hi-colour or true colour display with 32,768 or 16 million colours

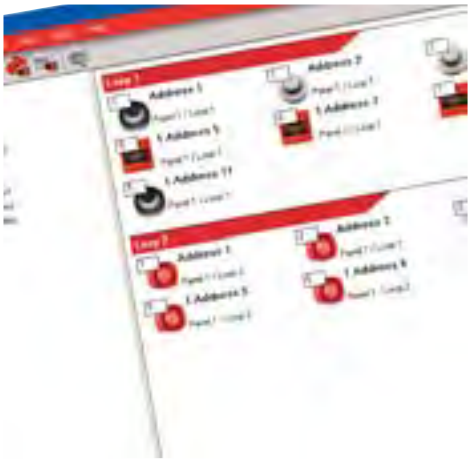
Features List

Features List	Graph Pack Lite	Graph Pack
Maximum Nº Panels	1-2	1-99 (dependent on version)
History Storage	18 Months	Unlimited
Printing of History Events	Last 20 Events	Unlimited
Graphics Page Printing	No	Yes
Printing and Exporting of Lists	No	Yes
History Analysis	No	Yes
Control Panel Control Dialogs	Yes	Yes
Control Panel Control from Graphics Pages	Yes	Yes
Fire Device Isolation from Graphics Page	Yes	Yes
Fire Devince Isolation from Dialog Box	Yes	Yes
Manual and Time Control Lists	No	Yes
Alarm Reminders	No	Yes
Multiple Displays (additional option)	No	Yes
Line Printer (additional option)	No	Yes
Pager Notification (additional option)	No	Yes
SMS Notification (additional option)	No	Yes

Product Codes

Code	Description
GRAPHPACK1-2LITE	Graph Pack Software (lite)
GRAPHPACK1	Graph Pack Software (1 panel)
GRAPHPACK2-5	Graph Pack Software (2-5 panels)
GRAPHPACK6-10	Graph Pack Software (6-10 panels)
GRAPHPACK11-20	Graph Pack Software (11-20 panels)
GRAPHPACK21-99	Graph Pack Software (21-99 panels)

Site Monitor Software / Webserver



Site Monitor / Webserver Software

Overview

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

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

The site monitor / webserver software continually monitors network activity and records every event in detail. This information can then be processed and generated into HTML reports or used to trigger automated email notifications.

To extend the benefits of PC based access, the site monitor / webserver software is also designed to work remotely and can be accessed through the desktop client software or a web browser. This ensures that where ever you are, you can always quickly connect and perform vital administration. Additionally, the software also supports multiple users, of which each can be assigned a particular role. This means non-technical staff can use the software to overview the system state, while technicians can log in and manage any issues.

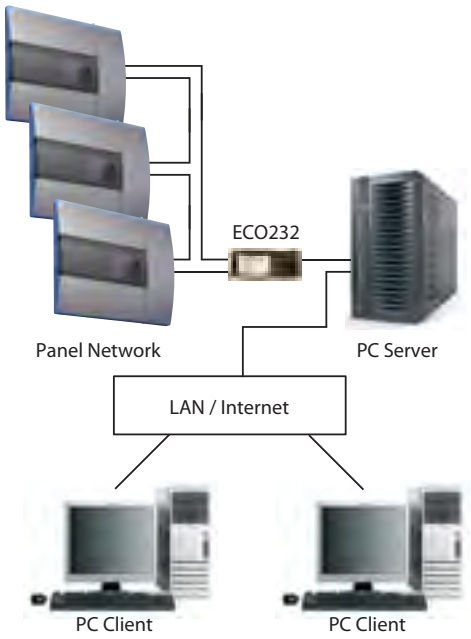
Features

- Monitor multiple networks
- Network event log and event reports
- View any networked panel, loop, zone or device
- Up to date device status
- Panel/device administration
- Setup automated email notifications
- Full remote access via client software or a web browser
- License controlled client software to enforce security
- Built in password security
- Restrict user access to view only, technicians and administrators
- Supports up to 1000 users

Benefits

- Remote system interrogation
- Improved maintenance efficency and planning

Typical System Architecture



Technical Specification

Description	Site Monitor / Webserver Software
Panels per Network	126
Networks	50
Loops per Panel	250
Zones per Network	250
Max Events	9,999
Max Conditions per Event	100
Max Actions per Event	100
Max Users	1000
User Access Levels	4
Max Connections	200
Site Installer Database Format Version	2.0 or Above
Max History Log Size	4 GB
Supported Network Protocols	DF6000NetworkV1
Supported Panels	Cooper Intelligent Addressable Panels
Report File Format	HTML
Email Notification Protocol	SMTP
Remote Protocol	TCP/IP
Web Interface Technologies / Protocols	ASP.Net 2.0, XHTML, CSS 2.0, JavaScript

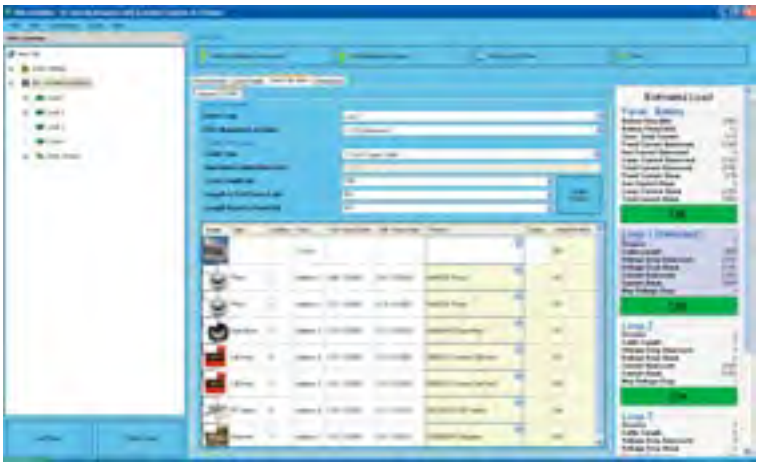
System Requirements

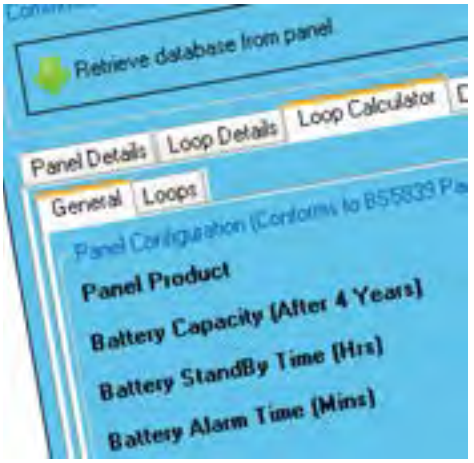
Hardware Requirements	Intel Pentium or equivalent 2 GHz or better 1GB memory, 100MB free disc space 1 RS232 serial port or USB port with serial adapter, 100/1000 Mps LAN port or wireless LAN card.
Platform	Windows 2000 SP 4 Windows 2003 Windows XP SP2 Windows Vista Windows 7
Display	High resolution 1024x768 hi-colour or True-colour display with 32,768 or 16 million colours
Software Libraries	Microsoft .Net 2.0 SP2 Microsoft SQL Server Compact 3.5 SP1
Remote Access (Server)	1 Open TCP/IP Port
Web Access (Server)	ASP.Net 2.0 Enabled Web Server
Web Access (Client/Browser)	CSS 2.0, JavaScript. Supported browsers include: Internet Explorer 5.5+ Mozilla Firefox 3.5+ Opera 10.0+ Safari 4.0+
Automated Email Events	SMTP server

Product Codes

Code	Description
SITEMONITOR	Site Monitor / Webserver Software

Loop Calculator Software





Loop Calculator Software

Overview

Loop calculator software is designed to aid engineers in the design and testing of Cooper fire systems. Its primary purpose is to ensure the viability of a proposed loop design before any installation work is conducted, and also help identify problems in existing systems.

By accepting a small amount of information on the loop design, it can accurately model the loop and provide estimates on the expected voltage drops, current loads and battery requirements. The results of all the calculations are clearly displayed and any problems are highlighted to the user.

The loop calculator software is included as part of the site installer software package and so can quickly provide estimates of loop configurations which are uploaded and downloaded to any Cooper control panel. Once battery and cable details are entered, the loop calculator will consistently check any changes made to the loop design and warn if any limitation is exceeded.

Features

- Accurate loop modeling
- Battery requirement estimates
- Voltage drop and current estimates
- Produce estimates on proposed system designs
- Easily test existing systems
- Generate detailed HTML reports
- Manual or automatic cable length management
- Included as part of site installer

Benefits

- Printable reports for design files
- Ensures system viability
- Highlights problems at the design stage

Technical Specification

Technical Limits	Quantity
Max Panels	126
Loops Per Panel	4
Max Devices Per Loop	200
Voltage Drop Formula	V=IR V=Voltage Drop, I=Current (Amps), R=Resistance (Ohms)
Battery Requirement Formula	B=C(IQTQ) + 1.75(IATA) B=Battery Capacity Required (Ah), I=Current (Amps), T=Time (Hours), C=Battery Capacity (1.25 or 1.11)
Supported Devices	All Cooper Fire Alarm Devices
Supported Panels	All Cooper Fire Alarm Intelligent Addressable Control Panels
Report File Format	HTML
Site Installer File Format	SDF

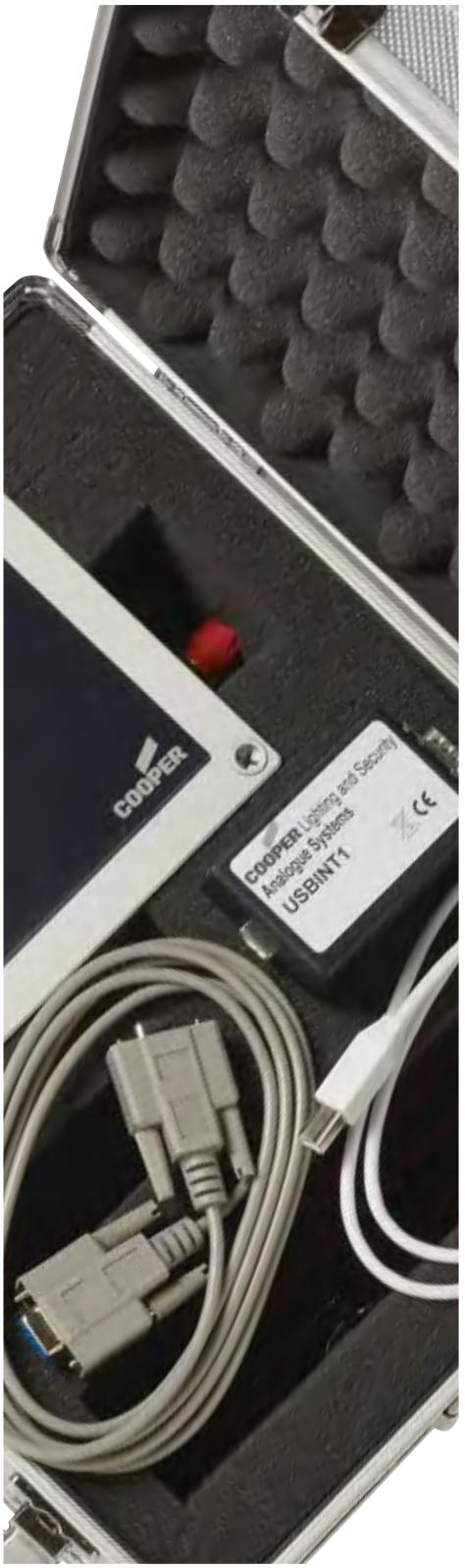
Requirements

Minimum Hardware Requirements	Intel Pentium or Equivalent 2 GHz or Better, 500MB Memory, 100MB Free Disc Space
Platform	Windows 2000 SP 4, Windows 2003, Windows XP SP2, Windows Vista, Windows 7
Display	High Resolution 1024x768 Hi-Colour or True-Colour Display with 32,768 or 16 Million Colours
Software Libraries	Microsoft .Net 2.0 SP2, Microsoft SQL Server Compact 3.5 SP1

Product Codes

Code	Description
LOOPCAL	Loop Calculator Software

Loop Tester Kit



LP800KIT - Loop Tester Kit

Overview

The loop tester kit (LP800KIT) 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 Cooper intelligent addressable control panel.

The loop tester is connected between the loop and PC. It allows the engineer to quickly identify and locate any loop device that is operating outside its operating conditions by varying the alarm threshold of any loop device (alarm, pre-alarm and fault).

The loop tester hardware requires a free serial port on the PC, either internal or via a USB extension, a mains power supply and a direct connection to the device loop.

Product Codes

Code	Description
LP800KIT	Loop Tester Kit

Features

- Pre-addressing: Identifies all field devices and determines their address and device type.
- Analogue values: Constantly displays in real time the analogue value of all loop devices in order to determine their status.
- Test LED: This command operates the LED of any inputs (sensors/callpoints) as well as controls the outputs of sounders and output modules.
- Device settings: Analogue values of all devices can be interpreted according to ranges which can be set and altered by the user (OK, pre-alarm, fire).
- Event Log: A history of events can be stored from the date the application was started.
- Soft addressing: Automatically assigns a new, and potentially different, address to every device found on the loop.

Addressable Device Programmer

CF800PROG - Addressable Device Programmer

Overview

The addressable device programmer (CF800PROG) 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.

This addressable device programmer has a built in addressable base as well as two external terminals for use with all other current addressable ancillary devices.

Features

- Reads addresses
- Writes addresses
- Reads analogue values
- Tests devices
- Deletes addresses
- Programmes the 3 heat settings

Benefits

- Simple re-programming of devices
- Portable no power supply required
- Suitable for use with current range of devices

Product Codes

Code	Description
CF800PROG	Addressable Device Programmer

USB Analogue Systems Panel Interface

USBINT2 - USB Analogue Systems Panel Interface

Overview

The analogue systems panel interface (USBINT2) 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.

Features

- Intelligent addressable control panel to PC site installer connection using the RS232 to USB configuration
- Wireless control panel to PC site installer connection using the RS232 to USB configuration
- Wireless control panel to PC wireless live monitor connection using the TTL to USB/RS232 configurations
- Wireless survey tool to PC survey tool connection using the TTL to USB/RS232 configurations

Benefits

- Simple PC driver installation
- Simple DIP switch configuration

Kit Contents

1 x USBINT2
1 x Driver CDROM
1 x USB Cable
1 x RS232 Cross-Over Cable
1 x TTL Cable

Configuration Settings

Switch Positions					
4	3	2	1	Mode	Usage
OFF	OFF	OFF	OFF	TTL to USB	• Wireless Panel to PC Live Monitor • Wireless Survey Tool to PC Survey Tool
ON	ON	OFF	OFF	TTL to RS232	• Wireless Panel to PC Live Monitor (no USB available) • Wireless Survey Tool to PC Survey Tool (no USB available)
OFF	OFF	ON	ON	RS232 TO USB	• Intelligent Addressable Panel to PC Site Installer • Wireless Panel to PC Site Installer

Cable Connections

TTL to USB - Wireless survey tool connection

TTL to RS232 - Wireless survey tool connection (serial link)

RS232 to USB - Wireless panel to PC (site installer)

Product Codes

Code	Description
USBINT2	USB Analogue Systems Panel Interface

Wireless Contents

Wireless System Architecture

Statement

Cooper Fire Systems design and manufacture fire products to the latest international standards. The products are approved through reputable third party test houses such as LPCB, and UL laboratories for use around the world. During the design process of the Cooper Wireless range of products, EN54 Pt25 and BS5839 Pt1 were considered.

EN54 Pt25 is a mandatory product performance standard, whereas BS5839 Pt1 is a code of practice that gives recommendations where no product standard exists.

EN54 Pt25 (clauses 5.3.2, 5.3.3 and table C.2 of EN54 Pt25) state that the low battery fault warning of the single battery is given when the capacity for 30 days of normal operation plus 30 min alarm condition remains in the battery.

BS5839 Pt1 recommends that radio linked components should be supplied from 2 independent supplies but does not state that the second battery needs to be monitored (for capacity or voltage). Therefore, the addition of a second primary battery does not give any advantage over the use of a single monitored battery as stated in EN54 Pt25.

In our opinion having 2 batteries performing the same function as a single battery, without the correct monitoring of the second battery, could be regarded as degradation in performance as the condition of the second battery is not known and therefore could be flat.

For both business and leisure wireless technology is now common place. Such are the advances made in wireless technologies in recent years that most people use wireless devices without a second thought.

Using Cooper wireless protocol the CW9000 provides a fire detection system using secure wireless connections between the field devices and the control panel.

Based on well proven components the sensors, sounders, beacons and callpoints give the CW9000 a highly reliable foundation into which the wireless technology has been integrated to provide a fully featured intelligent addressable wireless fire detection and alarm system.

The development of CW9000 has tracked the progress of the European standard EN54-25. “Fire detection and fire alarm systems. Components using radio links”, and has therefore been designed to conform fully with all aspects of this document.

Features and Benefits

Wireless technology offers unique advantages when compared to the installation of wired detection and alarm systems:

- Meets the requirements of EN54-25
- Range greater than 1km in free air
- European tones, fully synchronised
- Peripherals use standard AA cells
- Minimise disruption
- Capability to address 250 devices
- Low profile aesthetics
- Dual anti-tamper function (sensor/base)
- Eliminates cabling difficulties
- Preserve aesthetics

Fast and Simple Installation
Requiring only limited cabling, installation time is greatly reduced. CW9000 is ideally suited to situations where there are limited time periods for work to be undertaken, such as in educational, healthcare and retail establishments.

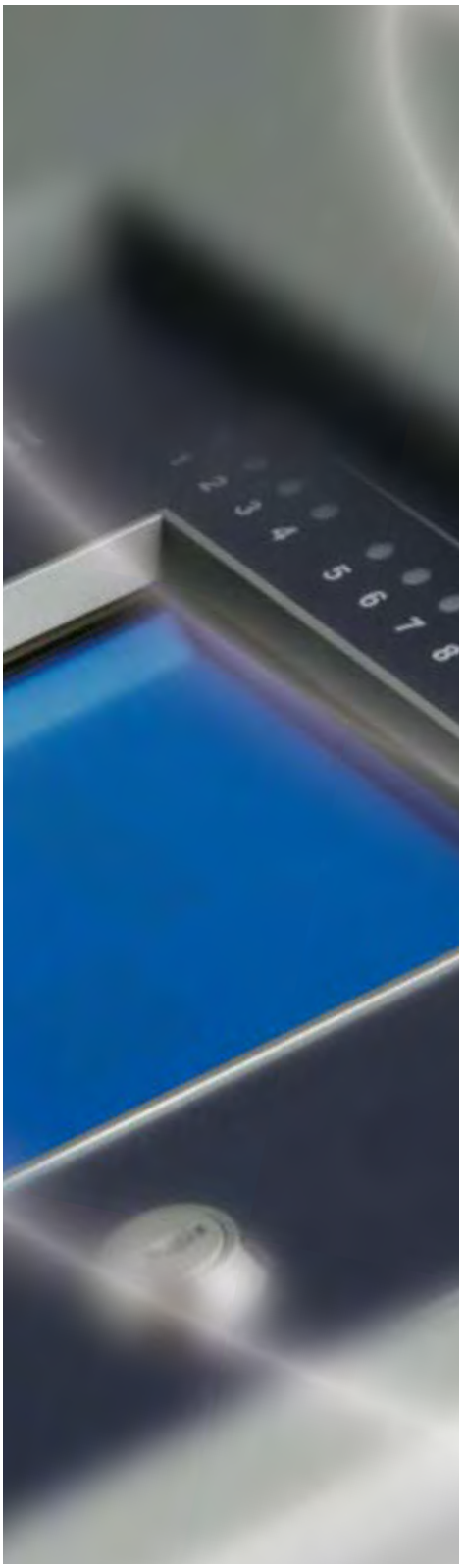
Reduced Disruption
The lack of cables also means that there is little damage to the fabric of the building, especially important in heritage sites or prestigious areas. Apart from precious décor, the lack of invasion into the structure reduces mess and the risk that dust and rubble will enter vital areas which is particularly important in sterile and food preparation areas and other places where cleanliness is paramount.

Flexibility
Changes to the configuration of a building and reconfiguration of the system can be accommodated both quickly and simply, minimising down time and essential for rapid refits. For temporary installations or situations such as small retail outlets where occupation can change frequently the lack of cables means that an optimum system configuration can be maintained without major system reworking.

Cost saving
As devices only have to be fixed to the building, there is no need to run fire resistant cable, trunking, conduit or concealed cables, saving in both materials and labour. The use of multifunction components, such as the integrated AV sounder beacon means there are fewer points to install leading to further economies in the installation process.

The unique survey and commissioning tool has been designed to allow these critical functions to be performed by a single person, again saving effort on site and reducing cost. A further consideration is the cost of the batteries used in the system, by standardising on easily available off the shelf batteries, and ultra-low power consumption to extend operational life and minimise system running costs.

CW9000 Range



CW9000 - Wireless Control Panel

Overview

Using Cooper wireless protocol the wireless control panel (CW9000) provides a fire detection system using secure wireless connections between the field devices and the control panels.

Based on well proven components the sensors, sounders, beacons and callpoints give CW9000 a highly reliable foundation into which the wireless technology has been integrated to provide a fully featured intelligent addressable fire detection and alarm system.

The development of CW9000 has tracked the progress of the European Standard EN54-25 “Fire detection and fire alarm systems. Components using radio links”, and has therefore been designed to conform fully with all aspects of this document.

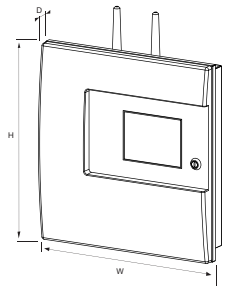
Features

- Meets the requirements of EN54 Pt25
- Address capacity up to 250 wireless devices
- Range > 1km in free air
- Soft addressing
- Multi-language selection capability
- Monitor battery status under all conditions
- Large versatile touch-screen user interface

Benefits

- Simple to operate end user touch-screen interface
- Eliminates difficulties and costs associated with wired fire systems
- Minimise disruption
- Helps preserve building aesthetics
- Full system integrity with Cooper developed protocol

Dimensions

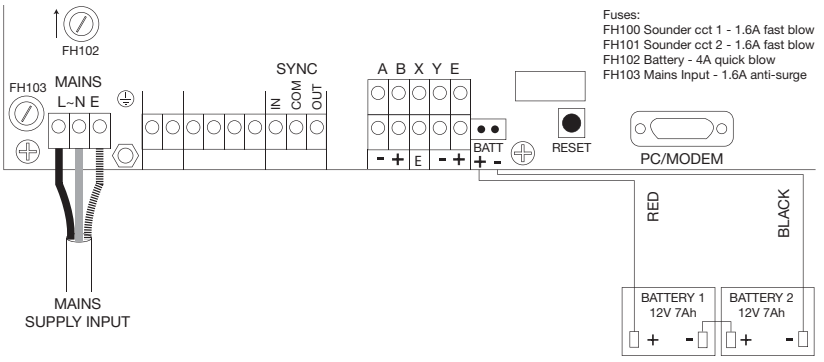


	H (mm)	W (mm)	D (mm)
Panel	375	357	95
Arials	85	85	

Technical Specification

Code	CW9000
Description	Wireless Control Panel
Standards	EN54 Pt25
Power	
Operating Voltage	230V ac +10%/-15% (nom)
Current Consumption	75mA (nom)
Mains Fuse	1.6A slow blow
Batteries	
Number	2
Manufacturer	Yuasa, YSP12-4
Capacity	4Ah
Battery Fuse (F4)	4A quick blow
Battery Current	3.5A (max)
Standby Current	(mA) 100 (1 loop)
Wireless Capacity	
Address Capacity	250 devices (max)
Wireless Outputs	60 sounders + 20 3 channel input/outputs
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	Back box - mild steel (powder coated) Fascia - PC/ABS
Colour	Graphite
Dimensions (H x W x D)	375mm x 375mm x 95mm
Weight (incl. batteries)	9kg
Weight (excl. batteries)	4kg
Cable Knockouts	11mm x 20mm
Flammability Rating	UL 94 V0
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

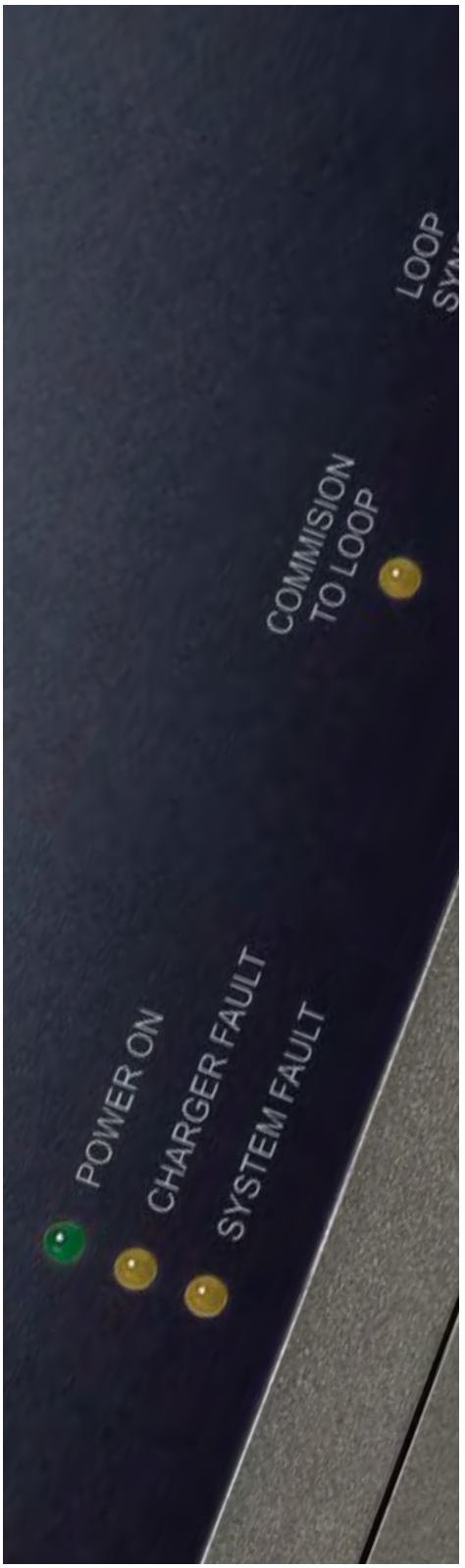
Standard Connection



Product Codes

Code	Description
CW9000	Wireless Control Panel

Booster Panel



CWB9500 - Wireless Booster Panel

Overview

The wireless booster panel (CWB9500) allows devices outside the range of the wireless control panel (CW9000) to be addressed, monitored and controlled.

Each wireless booster panel operates its own dedicated wireless loop on a different system ID and frequency from the control panel.

The wireless loop of the booster panel, with up to 28 intelligent addressable wireless devices, is operated in synchronisation with the control panel's wireless loop to provide a transparent link between the wireless control panel and the intelligent addressable devices.

The intelligent addressable devices on the wireless booster panel's wireless loop are commissioned and directly accessed by the control panel.

Up to 8 booster panels can be commissioned onto the control panel wireless loop.

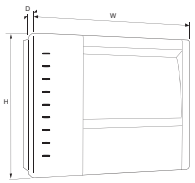
Features

- Meets the requirements of EN54 Pt25
- Up to 8 booster panels can be positioned on the loop
- Address capacity up to 28 wireless devices (per booster panel)
- Range > 1km in free air
- Fully addressable
- Duplex technology (2 way communication)
- Mains powered with battery back up
- Power supply designed to comply with EN54 Pt4

Benefits

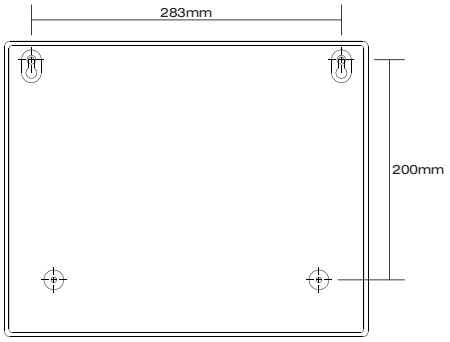
- Extends control panel range
- Eliminates difficulties and costs associated with wired fire systems
- Minimise disruption
- Helps preserve building aesthetics
- Easy to install and commission
- Save time and cost

Dimensions



H (mm)	W (mm)	D (mm)
331	270	90

Mounting Details



Technical Specification

Code	CWB9500
Description	Wireless Booster Panel
Standards	EN54 Pt25
Power	
Operating Voltage	230V ac +10%/-15% (nom)
Current Consumption	50mA
Input Fuse Protection	6A fast-blow fuse (F1)
Monitored Supply	Yes
Batteries	
Number	1
Battery Type	12V 3.2Ah
Standby Current	35mA
Fuse Protection	3A polyswitch (PTC2)
Monitored	Yes
Radio	
Frequency Band	868 MHz
Wireless Devices	28 (max)
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	Graphite
Dimensions (H x W x D)	331mm x 270mm x 90mm
Weight (incl. batteries)	3.5kg
Weight (excl. batteries)	2.1kg
Cable Entry	1 for mains
Cable Entry	Diameter 20mm
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

Installation

- The wireless booster (CWB9500) should be fixed and wired first.
- The wireless ancillaries should then be positioned and fixed as per the drawings.
- The wireless booster should be positioned clear of metal structures, cables, metal piping, and foil backed plasterboard.
- For ease of access the front panel can be removed by removing the screws underneath the flap.
- The display section can also be removed by unscrewing the screw at the top of the cover, tilting the cover forward to disconnect the large ribbon cable, and then removing the cover by pulling it out of the brackets.
- Refitting is the reverse of removal.
- The booster should be fixed using four suitable fixings through the holes provided.
- Do not drill through the box to locate the fixings as dust and debris will contaminate the electronics.

Product Codes

Code	Description
CWB9500	Wireless Booster Panel

Hybrid Panels

CWH9600 / CWH9601 - Addressable / Zonal Hybrid Panel

Overview

Both the addressable hybrid panel (CWH9600) and zonal hybrid panel (CWH9601) provide a seamless interface between Cooper intelligent addressable control panels and Cooper wireless accessories. These units are ideal for expanding a wired system into areas where there are architectural or customer restrictions on cabling.

The (CWH9600) requires 1 address for itself and up to 32 addresses for the wireless accessories on the Cooper loop, and intelligently handles/monitors the wireless accessories using the new Cooper wireless protocol. The (CWH9600) operates like a spur, with the wireless ancillaries being fully visible to the control panel, and reporting a individual fault and fire states for all wireless accessories.

The (CWH9601) requires a single address on the Cooper loop and intelligently handles/monitors wireless accessories using the new Cooper wireless protocol. The (CWH9601) operates like a zone monitor unit, with the wireless accessories not being visible to the control panel, but reports a generic fault and fire state for all wireless accessories.

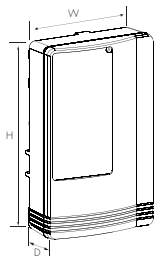
Features

- Meets the requirements of EN54 Pt25
- Loop powered
- Soft addressed
- Integral short circuit isolator
- Requires a single loop address for the hybrid and an addresses per wireless ancillary
- Maximum of 10 hybrids per control panel
- Supports up to 32 wireless ancillaries
- Intelligent wireless fire and fault monitoring
- Simple user interface for common commissioning functions
- USB interface for advanced engineering functions

Benefits

- Provides a cost effective solution
- Overcomes any cabling restrictions within a building
- No AC supply (loop driven)
- Long range (>1km in free air)

Dimensions

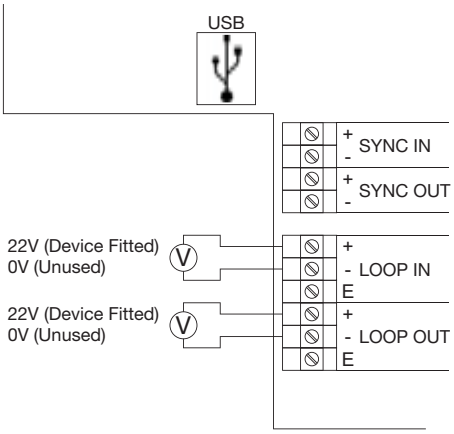


H (mm)	W (mm)	D (mm)
262	155	68

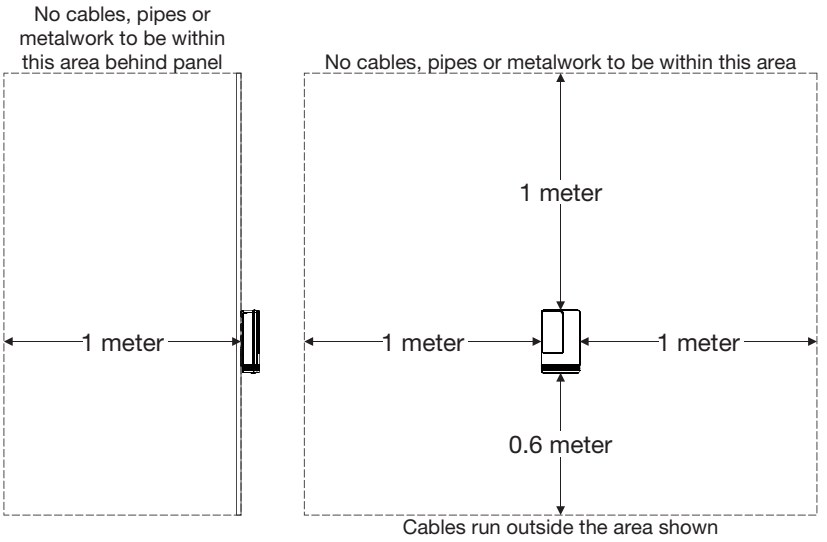
Technical Specification

Code	CWH9600	CWH9601
Description	Addressable Wireless Hybrid Panel	Zonal Wireless Hybrid Panel
Standards	EN54 Pt17, Pt18 & Pt25	EN54 Pt17, Pt18 & Pt25
Power		
Power Source	Loop	Loop
Nominal Voltage	18V dc to 30V dc	18V dc to 30V dc
Nominal Current	5mA (average)	10mA (average)
Alarm Current	10mA (average)	
Wireless Capacity		
Wireless Loops	1 (max)	1 (max)
Address capacity	32	32
Wireless Inputs	32 (max)	32 (max)
Wireless Outputs	32 (max)	32 (max)
Connectivity		
Loop	In/Out terminals	In/Out terminals
PC	USB	USB
Physical		
Construction	Back box & fascia – Polycarbonate	Back box & fascia – Polycarbonate
Colour	Red	Red
Dimensions (H x W x D)	262mm x 155mm x 68mm	262mm x 155mm x 68mm
Weight	0.8kg	0.8kg
Cable Knockouts	1 (rear)	1 (rear)
Flammability Rating	UL V-2	UL V-2
Compatibility		
Suitable for use with	Cooper Wireless Fire Systems	Cooper Wireless Fire Systems

Standard Connection



Cable Exclusion



Product Codes

Code	Description
CWH9600	Wireless Hybrid Panel (addressable)
CWH9601	Wireless Hybrid Panel (zonal)

Survey Kit

CW500 - Wireless Survey Kit

Overview

The wireless survey kit (CW500) is an essential tool for evaluating a site's suitability for a Cooper wireless system prior to installation.

The wireless survey kit achieves this by performing a thorough scan (on all available frequencies) to detect any interference or other wireless systems close to the site.

The wireless survey kit can then be used to perform a full site survey (on all available frequencies) to check the signal quality between the control panel location and the desired location of each individual remote device.

These results provide the unit with all the information it requires to calculate the optimum frequency for the site.

This tool is also essential for establishing if the installation site requires any wireless booster panels.

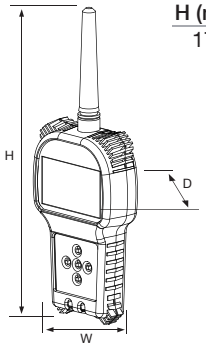
Features

- 3 x Standard AA batteries
- Duplex technology (2 way communication)
- Range > 1km in free air
- Simple menu driven interface
- Site survey for checking signal quality before system installation
- Survey analysis to identify the best frequency channel
- Device commissioning
- Database containing site scan, site survey and commissioning data
- Upload/download database to/from a PC or Laptop

Benefits

- Site scan for detecting interference and other wireless systems
- Simple to operate
- Ease of commissioning system
- Identifies the ideal operational channel frequencies

Dimensions



H (mm)	W (mm)	D (mm)
176	100	39

Technical Specification

Code	CW500
Description	Wireless Survey Kit
Description	
Batteries	3 x AA Lithium (4.5V) 3000 mAhr (min)
Wireless Frequency	868 MHz
Units per Fit	2
Interface	
Visual	Graphical LCD display Green “GO” LED Red “NO GO” LED
Audible	Internal buzzer
Keyboard	5 button keyboard
Attachments	Camera stand attachment Extendable pole cradle
Batteries	
Number	1
Battery Type	12V 3.2 Ah
Standby Current	35mA
Fuse Protection	3A polyswitch (PTC2)
Monitored	Yes
Radio	
Frequency Band	868 MHz
Wireless Devices	28 (max)
Physical	
Construction	Housing - PC/ABS Boot - silicon rubber
Colour	Housing - Grey Labelling - Blue
Dimensions (H x W x D)	176mm x 100mm x 39mm
Weight	2.4kg
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

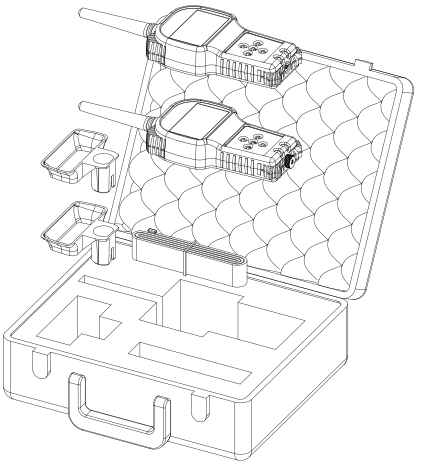
USBINT2 Overview

The analogue systems panel interface (USBINT2) 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.

This interface is included with the wireless survey kit to provide a comprehensive site survey and commissioning tool.

Wireless Survey Kit



Product Codes

Code	Description
CW500	Wireless Survey Kit (includes USBINT2 interface)

Sensors

CWD910 - Wireless Sensor / CWDB920 - Wireless Sensor Sounder Beacon

Overview

The wireless sensor (CWD910) and wireless sensor sounder beacon (CWDB920) are designed to comply with EN54 Pt5 & Pt7.

Both the (CWD910) and the (CWDB920) are compatible with the Cooper wireless fire system.

These units are based on multi-sensor technologies and use combinations of optical smoke detection, fixed temperature and rate of rise heat detection.

These elements can be selected to provide optimum detection of all types of fire and operating conditions.

Features

- 3 x Standard AA batteries
- Long battery life
- Anti tamper protection
- Concealed antennas
- Multi-sensor technology combining optical smoke detection and configurable heat detection (fixed, rate of rise and high temperature)
- Drift compensation
- First fix base

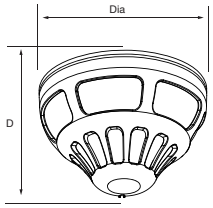
Additional Features CWDB920

- Highly visible LED beacon
- Alarm sounder
- 3 Volume settings
- 4 Tones

Benefits

- Single sensor solution
- Eliminates cabling difficulties
- Minimise disruption
- Helps preserve building aesthetics

Dimensions



CWD910 / CWDB920

Description	Dia (mm)	D (mm)
CWD910	114	78
CWDB920	114	78

Technical Specification

Code	CWD910 / CWDB920
Description	CWD910 - Wireless sensor CWDB920 - Wireless sensor sounder beacon
Standards	EN45 Pt25 components using wireless links EN54 Pt3, EN54 Pt5 & EN54 Pt7
Description	
Battery	3 x AA Lithium (4.5V) 3000 mAhr (min)
Wireless Frequency	868 MHz
Tones	**750 Hz steady (BS fire tone) -** dB(A) min 70, med 80, high 90 **500 - 1200 Hz 3.5s sweep, 0.5s silence, then repeat (Dutch fire tone) -** dB(A) min 70, med 80, high 90 **750 - 880Hz 2Hz (250ms -250ms)** **(BS fire tone) -** dB(A) min 70, med 80, high 90
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	114mm x 78mm
Weight	0.3kg
Ingress Protection	IP21C
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

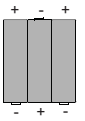
Batteries

While wireless control panels and boosters operate from a battery backed mains supply (which is designed to comply with the latest EN54 Pt4) the true economy and reliability of the wireless fire system is highly dependant on the cost and availability of the batteries used in the various field devices.

The wireless system incorporates a number of innovative design features that enables battery life in excess of 3 years, from readily available, across the counter, standard AA cells. Battery monitoring functions ensure that early warning of any low battery conditions is signalled and can therefore be co-ordinated with normal maintenance procedures.

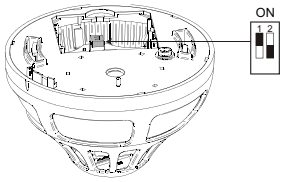
Battery replacement is therefore both economic and simple.

Battery Layout



Specified Battery
Energizer L91 ultimate lithium

Sensor Switch Settings

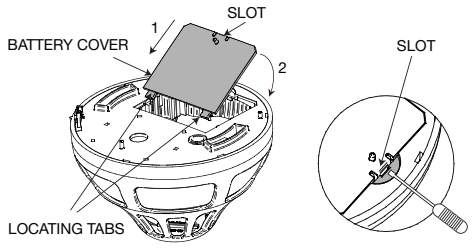


Sensor Setting	SW1	SW2
Opto Only	ON	ON
Opto-Heat	ON	OFF
Heat (A1R) 66°C	OFF	ON
Heat (BS) 77°C	OFF	OFF

Installation

1. First fit the mounting base in the desired position. (Set by the survey).
2. Check that the sensors switches are set to the appropriate positions to give the correct detection characteristics. (See switch settings).
3. Fit the 3 batteries into the sensor. (As per commission requirements).
4. Present the sensor to the base, aligning the pips on the sensor and base to achieve correct orientation and then twist clockwise until the sensor slots onto the base and cannot be turned any further.
5. Dust covers must be removed before the system is commissioned.

Battery Installation



1. To insert battery cover, follow steps 1 and 2.
2. To remove, insert terminal screw driver into slot.

Product Codes

Code	Description
CWD910	Wireless Sensor
CWDB920	Wireless Sensor Sounder Beacon

Callpoint

CWC950 - Wireless Callpoint

Overview

The wireless callpoint (CWC950) is designed to comply with EN54 Pt11 and shares all the features and benefits of the Cooper intelligent addressable callpoint on which it is based.

The (CWC950) is compatible with the Cooper wireless fire system.

In addition to standard intelligent addressable callpoint features a tamper switch is provided so that a fault alarm is transmitted to the control panel if the callpoint is dismantled or removed.

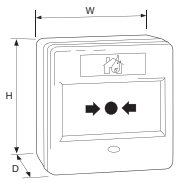
Features

- 3 x Standard AA batteries
- Anti tamper protection
- Concealed antennas
- Fast fit clip on front cover
- High visibility status LED
- Glass or plastic resettable element (both provided)

Benefits

- Long battery life
- Eliminates cabling difficulties
- Minimise disruption
- Helps preserve building aesthetics
- Single tool for test and access

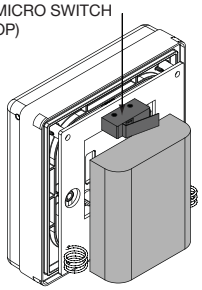
Dimensions



H (mm)	W (mm)	D (mm)
87	87	57

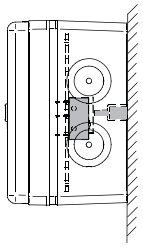
Anti-Tamper System

ANTI-TAMPER MICRO SWITCH (ALWAYS ON TOP)



NOTE
Tamper alarm can only be reset at panel.

COMPRESSED TO WALL TO SET =



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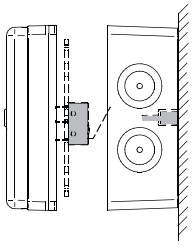
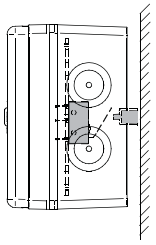


UNIT REMOVED FROM WALL =



Technical Specification

Code	CWC950
Description	Wireless Callpoint
Standards	EN45 Pt25 components using wireless links EN45 Pt11 callpoint
Description	
Batteries	3 x AA Lithium (4.5 V) 3000 mAhr (min)
Wireless Frequency	868 MHz
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	ABS
Colour	Red
Dimensions (H x W x D)	87mm x 87mm x 57mm
Weight	0.3kg
Ingress Protection	IP21C
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

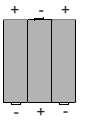
Batteries

While wireless control panels and boosters operate from a battery backed mains supply (which is designed to comply with the latest EN54 Pt4) the true economy and reliability of the wireless fire system is highly dependant on the cost and availability of the batteries used in the various field devices.

The wireless system incorporates a number of innovative design features that enables battery life in excess of 3 years, from readily available, across the counter, standard AA cells. Battery monitoring functions ensure that early warning of any low battery conditions is signalled and can therefore be co-ordinated with normal maintenance procedures.

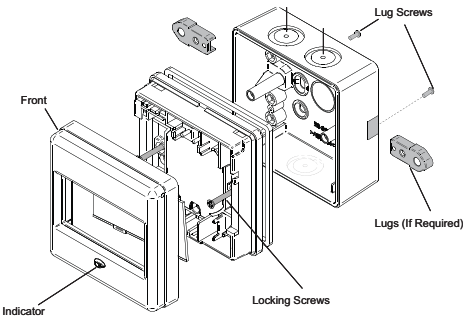
Battery replacement is therefore both economic and simple.

Battery Layout



Specified Battery
Energizer L91 ultimate lithium

Installation Diagram



Installation Instructions

1. The wireless callpoint can only be surface mounted and is provided with a back box as standard.
2. The wireless callpoint has test facility via special test key to prevent unauthorised operation.
3. Insertion of test key for test purposes and for cover removal is at bottom of callpoint to facilitate ease of access when mounted next to door architrave.
4. Test key is dual function, used to test callpoint operation by simulating activation and also to allow removal of clip on cover to gain access to element.
5. Element is held in place by clip on self locking cover which can only be removed by use of a special tool (callpoint test key).

User Interface

1. To enable quick and simple installation, callpoints use a fast fit self locking clip on front cover which is very simple to fit, but once in place, can only be removed by use of a special key (supplied).
2. Callpoint is triggered by pressing against the element.

Product Codes

Code	Description
CWC950	Wireless Callpoint

Sounder Beacon

CWSB980 - Wireless Sounder Beacon

Overview

The wireless sounder beacon (CWSB980) is designed to comply with EN54 Pt25 & Pt7.

The (CWSB980) is compatible with the Cooper wireless fire system.

The high efficiency design of this wireless sounder beacon offers excellent sound output levels, whilst also including a high powered LED beacon to provide both audible and visual alarm signals.

This unit is designed for wall mounting, and has a choice of different tones and volume levels.

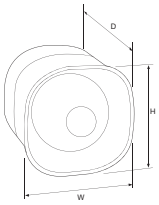
Features

- 3 x Standard AA batteries
- Anti tamper protection
- Concealed antennas
- Combined sounder beacon
- 4 selectable tones controlled by the panel
- 3 adjustable volume controlled by the panel

Benefits

- Long battery life
- Eliminates cabling difficulties
- Minimise disruption
- Helps preserve building aesthetics

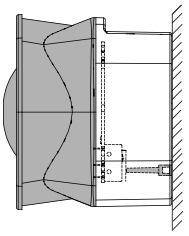
Dimensions



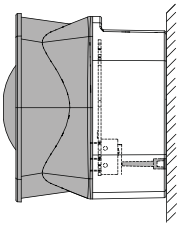
Dia (mm)	D (mm)
105	91

Anti-Tamper System

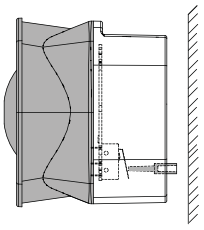
COMPRESSED TO WALL TO SET =



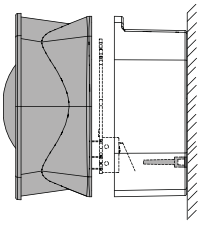
COMPRESSED TO WALL TO SET =



UNIT REMOVED FROM WALL =



FRONT REMOVED FROM BACK BOX =



Technical Specification

Code	CWSB980
Description	Wireless Sounder Beacon
Standards	EN45 Pt25 components using wireless links EN45 Pt3 sounder
Description	
Batteries	3 x AA Lithium (4.5 V) 3000 mAhr (min)
Wireless Frequency	868 MHz
Tones	**970 Hz. steady (BS fire tone) -** dB(A) min 70, med 90, high 100 **800 - 970 Hz. 3.5s sweep, 0.5s silence, then repeat (Dutch fire tone) -** dB(A) min 70, med 90, high 100 **660 - 880 Hz. 2 Hz (250ms -250ms) (BS fire tone) -** dB(A) min 70, med 90, high 100
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	PC/ABS
Colour	Red
Lens Colour	Red
Dimensions (Dia x D)	105mm x 91mm
Weight	0.3kg
Ingress Protection	IP21C
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

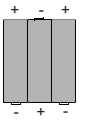
Batteries

While wireless control panels and boosters operate from a battery backed mains supply (which is designed to comply with the latest EN54 Pt4) the true economy and reliability of the wireless fire system is highly dependant on the cost and availability of the batteries used in the various field devices.

The wireless system incorporates a number of innovative design features that enables battery life in excess of 3 years, from readily available, across the counter, standard AA cells. Battery monitoring functions ensure that early warning of any low battery conditions is signalled and can therefore be co-ordinated with normal maintenance procedures.

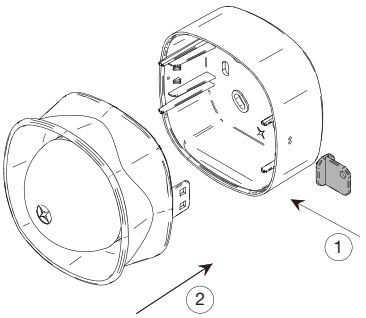
Battery replacement is therefore both economic and simple.

Battery Layout



Specified Battery
Energizer L91 ultimate lithium

Installation Diagram



Installation Instructions

1. First fix base is fixed to the mounting surface using 2 fixing holes.
2. Main body is then clipped into position on mounting base, body locks into position when pressed home.

System Functionality

1. Volume is set by control panel, no need to access sounder to alter setting.
2. Tone is set by control panel, no need to access sounder to alter setting.

Product Codes

Code	Description
CWSB980	Wireless Sounder Beacon

Input/Output Unit

CWIF930 - Wireless Input/Output Unit

Overview

The wireless input/output (CWIF930) is designed to comply with EN54 Pt25 & Pt18.

The (CWIF930) is compatible with the Cooper wireless fire system.

The wireless 3 channel input/output unit provides the facility to monitor 3 independent inputs for fault and fire as well as providing the facility to operate 3 volt free contacts for operating devices such as magnetic door holders, in areas where the installation of system wiring is not an option.

This unit is assigned 1 address and this address is recognised by the Cooper wireless control panel.

The wireless 3 channel input/output unit is fully monitored and controlled by the Cooper wireless control panel. It is fully programmable using the sophisticated and powerful Cooper cause and effect programming.

Both input and outputs are available from the same unit and may be operated

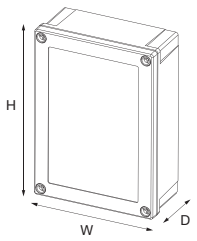
Features

- 3 x Standard AA batteries
- Fully addressable
- Concealed antennas
- Long range up to 1km in free pace
- Duplex technology (2 way communication)
- 3 Volt free outputs
- 3 monitored hard wired inputs

Benefits

- Long battery life
- Eliminates cabling difficulties
- Minimise disruption
- Helps preserve building aesthetics

Dimensions



H (mm)	W (mm)	D (mm)
225	180	63

Technical Specification

Code	CWIF930
Description	Wireless Input/Output Unit
Standards	EN45 Pt25 components using wireless links EN45 Pt18 & BS5839 Pt1
Description	
Batteries	3 x AA Lithium (4.5V) 3000 mAhr (min)
Wireless Frequency	868.05 MHz - 869.95 MHz. uses alarm specific frequencies to cut other user interference (can be programmed to other countries frequencies)
Number of Units per Panel	20 (max)
Wireless Range	> 1km in free space
Data Rate	4.8k bs (manchester), 9.6k bs (standard)
Frequency Agile	Yes
Inputs	
End of Line Resistor	22K
Alarm	5K6
Outputs	
Switching Voltage	30V dc
Contact Rating	1A
Switching Power	30W
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	95% RH
Physical	
Construction	PC
Dimensions (H x W x D)	225mm x 180mm x 63mm
Weight	0.9kg
Ingress Protection	IP21
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

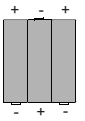
Batteries

While wireless control panels and boosters operate from a battery backed mains supply (which is designed to comply with the latest EN54 Pt4) the true economy and reliability of the wireless fire system is highly dependant on the cost and availability of the batteries used in the various field devices.

The wireless system incorporates a number of innovative design features that enables battery life in excess of 3 years, from readily available, across the counter, standard AA cells. Battery monitoring functions ensure that early warning of any low battery conditions is signalled and can therefore be co-ordinated with normal maintenance procedures.

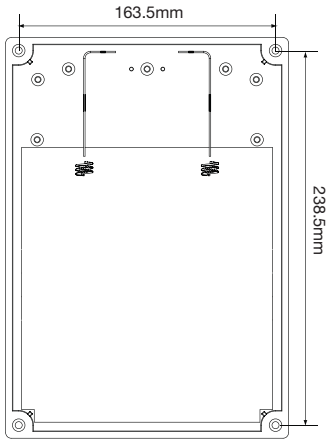
Battery replacement is therefore both economic and simple.

Battery Layout

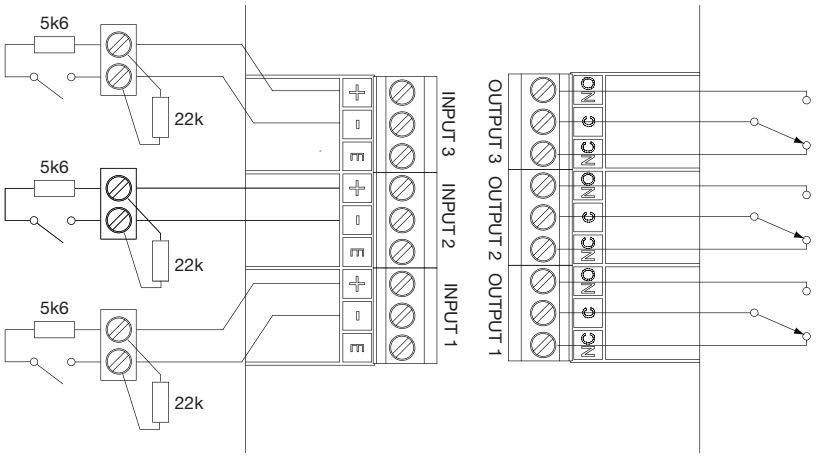


Specified Battery
Energizer L91 ultimate lithium

Fixing Centres



Standard Connection



Product Codes

Code	Description
CWIF930	Wireless Input/Output Unit

Dual External Aerials

CWEXA - Wireless Dual External Aerials

Overview

The wireless dual external aerials (CWEXA) are a pair of 868MHz high gain large collinear aerials that are a direct replacement for both of the standard aerials supplied with the wireless control panel.

The (CWEXA) are compatible with the Cooper wireless fire system.

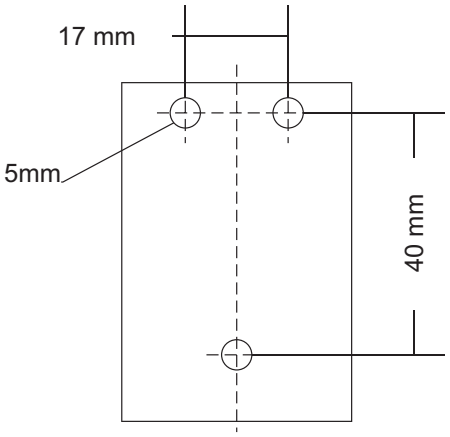
Features

- Easy to install with no additional components or modifications required
- Totally waterproof allowing outdoor usage

Benefits

- Allows radio obstructions to be easily bypassed to provide maximum coverage

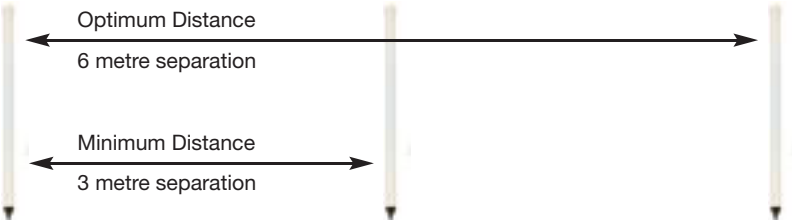
Mount Fixing Centres



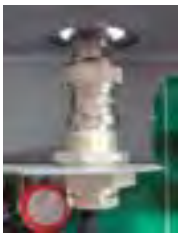
Technical Specification

Code	CWEXA
Description	Wireless Dual External Aerials
Electrical	
Frequency Range	860MHz to 870Mhz
Maximum Input Power	20dBm
DC Voltage	0V dc to 12V dc
Resistance	10K +/- 5% 250mW
Mechanical	
Cable Length	3 meters +/- 0.05
RF Connector	Straight BNC
Cable Type	RG58U
Antennae Length	60cm (nom)
Antennae Tube Diameter	25mm (typical)
Antennae Bracket	Pole / wall type
Environmental	
Operating Temperature	-30°C to +50°C
Physical	
Ingress Protection	IP65
Compatibility	
Suitable for use with	Cooper Wireless Fire Systems

Aerial Installation



Cable Installation



Remove the rubber sheaths from both panel aerials.

Disconnect both panel aerials by twisting the top half of connector anticlockwise as shown in the diagram.

Connect both external aerials to the panel by threading the BNC connector through the hole at the top of the panel and then twisting the connector clockwise to lock it into place.

Product Codes

Code	Description
CWEXA	Wireless Dual External Aerials

Conventional Contents

Conventional System Architecture

The philosophy of a conventional system revolves around dividing the building into a number of areas called zones. The detectors and callpoints within each zone are then wired on dedicated circuits. In the event of a detector or callpoint 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.

It is then necessary to manually search the indicated zone to pinpoint the exact cause of the fire alarm.

Unwanted Alarms
Because most conventional detectors are simple two state devices they can only be in either a normal or fire condition. Although modern components and good system design can go some way to reducing potential problems, it is not uncommon for conventional systems to generate unwanted alarms due to certain operating conditions or transient environmental conditions such as the presence of steam near to a smoke detector.

A key development aimed at reducing such unwanted alarms has been the multi-criteria detector. Traditionally, detectors were designed to respond to particular fire phenomena such as heat or the presence of smoke. However, Cooper now offer multi-criteria devices, which contain both a smoke sensing element and a thermal sensing element.

The fire alarm decision is taken by analysis of the responses from both elements, resulting in improved detection performance as well as greatly enhanced false alarm suppression.

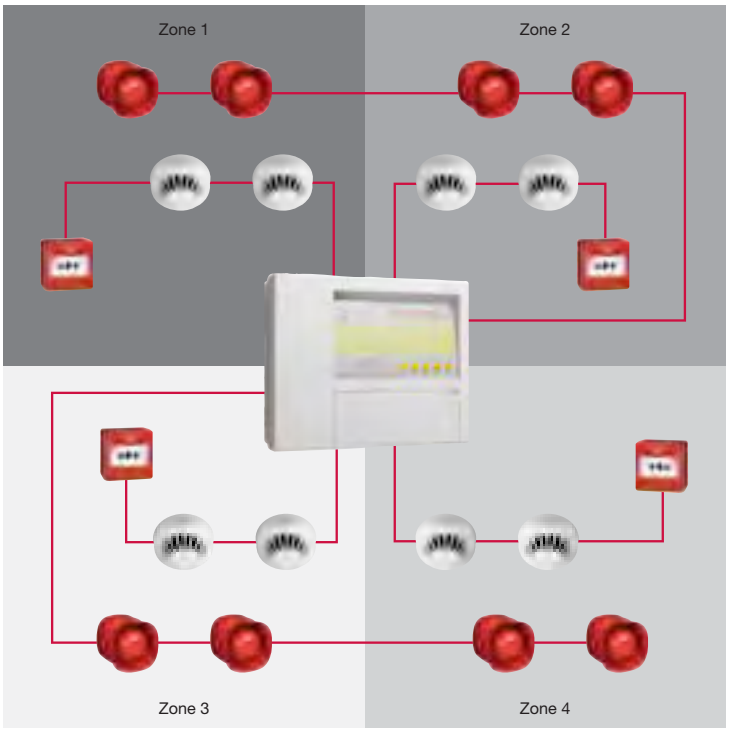
Sounder Circuits
In addition to the detection circuits, there is also a need for separate circuits of alarm annunciation devices such as sounders and beacons to signal the existence of a fire alarm condition to the building users. For sounder circuit continuity monitoring to function effectively, sounder circuits have to be wired in a single radial circuit, spurs and tees are not permitted.

Almost every conventional control panel will have facilities for more than one sounder circuit and generally the higher the specification of the panel or the higher the number of detection zones provided, the more sounder circuits will be provided.

Normally however there will be less sounder circuits than detection zone circuits so it will be necessary for a sounder circuit to provide cover for more than one zone.

This increases installation complexity by forcing the sounder wiring to follow different routes to that of the detector wiring.

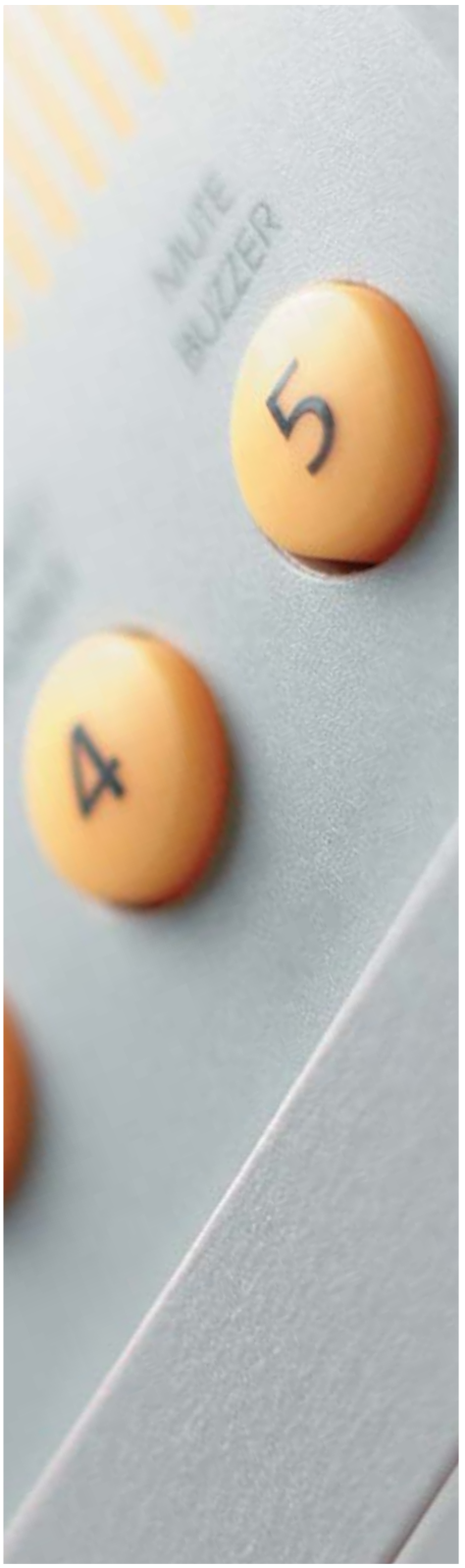
When designing a conventional system it is important to ensure that the panel has adequate zone capacity for the size and complexity of the building and that the panel can support the intended sounder circuit wiring and loading.



COOPER Safety
Fire Systems

BOSEC CPD APPROVED PRODUCT

FX2200CF Range



FX2202CF - 2 Zone Control Panel

Overview

The FX2200CF range of conventional control panels provide a solution to any conventional system requirement. The advanced features include a simple "one-shot" user test facility, class change contacts, battery voltage alarms and charger temperature compensation, all included as standard to ensure ease of use and high reliability.

Attention to detail is emphasised by the neat log book holder feature, allowing essential records to be stored close to hand, ready for quick reference.

For larger installations, custom configuration of the panels offers even greater flexibility, allowing project specific requirements to be easily met, in a competitive and cost effective package.

Features

- 1, 2, 4 or 8 zones panels
- Flexible, high specification system
- Surface or semi-flush mounting
- Simple "one-shot" auto-reset user test facility
- Maintenance free poly switch circuit protection, with auto reset
- Class change and programmable fire/fault relay as standard
- Custom configured versions available to meet specific project requirements

Benefits

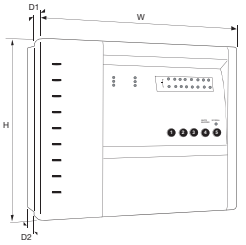
- Suitable for a large range of projects
- No fuses required
- Discreet panel design for incorporation in to any decor
- Numerical access code (no lost keys)
- Easy to maintain/service

Technical Specification

Code	FX2202CF	FX2204CF	FX2208CF
Description	2 Zone Control Panel	4 Zone Control Panel	8 Zone Control Panel
Standards	EN54 Pt2: 1997 + A1: 2006 EN53 Pt4: 19197 + A1: 2002 + A2: 2006 EN50130 Pt4 1996, EN50130 Pt4	EN54 Pt2: 1997 + A1: 2006 EN53 Pt4: 19197 + A1: 2002 + A2: 2006 EN50130 Pt4 1996, EN50130 Pt4	EN54 Pt2: 1997 + A1: 2006 EN53 Pt4: 19197 + A1: 2002 + A2: 2006 EN50130 Pt4 1996, EN50130 Pt4
Specification			
Number of Zones	2	4	8
Detectors per Zone	32	32	32
Number of Alarm Circuits	2 (4 on FX22002CR)	2 (4 on FX22004CR)	4
Alarm Circuit Load	150mA per circuit, 0.3A total	400mA per circuit, 0.8A total	500mA per circuit, 2A total
End Of Line Devices	Detection circuits: EOLM-1 monitoring unit Alarm lines: 6.8KΩ resistor	Detection circuits: EOLM-1 monitoring unit Alarm lines: 6.8KΩ resistor	Detection circuits: EOLM-1 monitoring unit Alarm lines: 6.8KΩ resistor
Auxiliary Fire Signal/Fault Output	5A 24V dc single pole changeover contacts	5A 24V dc single pole changeover contacts	5A 24V dc single pole changeover contacts
Auxiliary DC Output	No*	No*	24V dc fused. 30mA
Repeater Port	No*	No*	Yes
Mains Input Voltage	230V ac -15% +10%	230V ac -15% +10%	230V ac -15% +10%
System Operating Voltage	24V dc	24V dc	24V dc
Standby Duration	24 hours	24 hours	24 hours
Battery (Sealed Lead Acid)	1 x 3.2Ah	1 x 3.2Ah	2 x 3.2Ah
Recharge Period	24 hours	24 hours	24 hours
Environmental			
Operating Temperature	-5°C to +40°C	-5°C to +40°C	-5°C to +40°C
Humidity (Non Condensing)	0 to 75% RH	0 to 75% RH	0 to 75% RH
Physical			
Construction	Polycarbonate housing & back box	Polycarbonate housing & back box	Polycarbonate housing & back box
Dimensions (H x W x D)	Surface: 270mm x 332mm x 90mm Recessed: 279mm x 332mm x 122mm	Surface: 270mm x 332mm x 90mm Recessed: 279mm x 332mm x 122mm	Surface: 270mm x 332mm x 90mm Recessed: 279mm x 332mm x 122mm
Weight	5.2kg	5.8kg	6.0kg
Ingress Protection	IP30	IP30	IP30
Cable Entry	Top: 12x20mm entries with blanking plugs Rear cable entry aperture	Top: 12x20mm entries with blanking plugs Rear cable entry aperture	Top: 12x20mm entries with blanking plugs Rear cable entry aperture

* Available on the FX2202CR and FX2204CR

Dimensions



Description	H (mm)	W (mm)	D1 (mm)	D2 (mm)
1 zone	212	260	72	-
2 / 4 / 8 zone	270	332	45	47

Description	Cut-out (mm)
2 / 4 / 8 zone	265 x327

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

Product Codes

Code	Description
FX2202CF	Conventional 2 Zone Panel
FX2204CF	Conventional 4 Zone Panel
FX2208CF	Conventional 8 Zone Panel
FX2202CR	Conventional 2 Zone Panel (configured for use with a repeater)
FX2204CR	Conventional 4 Zone Panel (configured for use with a repeater)
FXRP2200CF	Conventional Repeater Panel
FX22003300 MB	Steel Back Box (for use with FX2202CF/4/8)
MFALOG	Fire Alarm System Log Book

Installation Notes

1. A full set of Installation and User Instructions is supplied with each panel to assist the installer to carry out the work efficiently and safely and the user to perform routine tests.
2. Panels are wall mounted. Surface mounted via 4 x screw fixing holes on back of housing. Use drill template supplied. Recessed mounting requires appropriate cut-out for steel semi-recessing box, which is screw fixed to wall. Panel is then screwed to back box via 4 x screw fixing holes (Note: Single zone panel cannot be recessed).
3. Mains power supply cable must be routed via the designated 20mm conduit entry on the top or rear of the housing. The mains terminal block is provided with maintenance free poly switch protection.
4. Conduit entries are provided on the top of the housing for zone, alarm and output cables. Blanking plugs are supplied for un-used entry holes
5. Rear entry apertures are also provided for back entry.
6. Standby batteries connected via push-on terminal connectors.
7. End of line (EOL) devices are supplied with the panel and must be fitted at the end of each detector and alarm circuit wiring.
8. Front cover is screw fixed. System logbook is stored behind hinged door.
9. Walk test feature permits single person testing for fast and efficient commissioning prior to handover.

System Functionality

1. Normal and supervisor mode facility. Supervisor mode protected by 4 digit security code to prevent unauthorised use.
2. Supervisor mode provides access to test mode, where a "one-shot" test facility can be initiated by the user. When in operation, the user has a period of time in which to put a call point into fire condition, after which the system automatically resets and returns to normal mode.
3. Commissioning walk test feature permits the system to be easily tested after installation and prior to handover. The panel automatically resets and returns to normal operation after a detection device has been tested. Each device can then be tested in turn via the same procedure.
4. Supervisor mode also provides facility to disable the following for maintenance or other purposes
   - each detection zone independently
   - the alarm circuits
5. Non-latching zone facility can be specified on custom configured versions (except 1 zone panel). Enables the direct interconnection of panels in a simple network.
6. An alarm line delay feature can be specified on custom configured versions (except single zone panel). Preset delays of 30 seconds to 2 minutes can be programmed at the factory. Zone LED flashes when fire signal is received and delay is in operation.

User Interface

1. Stylish and robust compact panel with simple 5 button keypad control of all functions.
2. Simple "one-shot" weekly user test with auto-reset facility.
3. Comprehensive power, fire and fault LED indicators and integral piezo buzzer for on-board fire or fault indication.
4. Battery high/low voltage alarm facility.
5. Neat log book storage facility behind hinged door.

Interface Options

1. Class change input facility. Terminals provided for switching of alarm circuits to indicate school/college class change.
2. Programmable 5A 24V dc relay for remote signalling of fire or fault conditions. Selectable by jumper link.
3. Auxiliary 24V dc output power supply provided as standard on 8 zone panel and 2 and 4 zone configured panels.

Detection Capacity

1. Up to 32 detectors per zone. End of line monitoring devices must be fitted and are supplied as standard.
2. Detector circuits are monitored for open circuit, short circuit and detector removal.

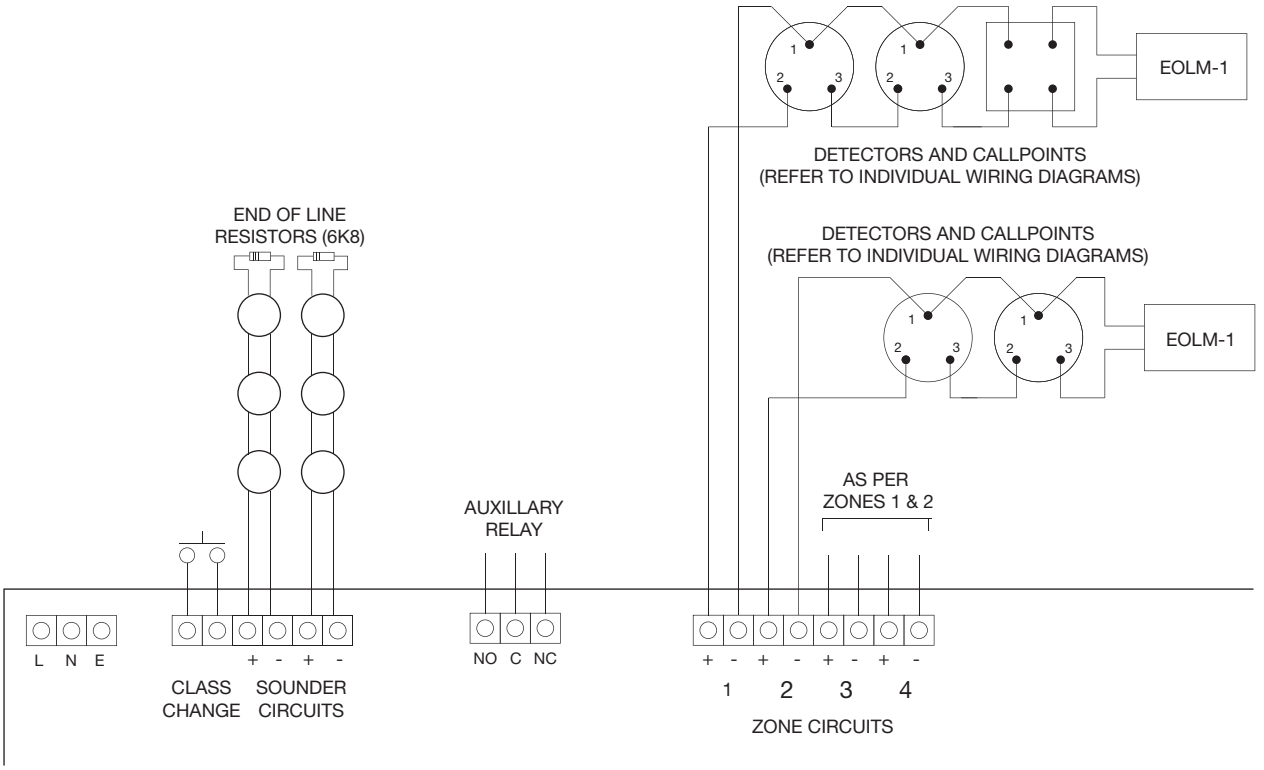
Alarm Capacity

1. 2 separate alarm lines on 1, 2 and 4 zone panels. Maximum rated load of 150mA (1 and 2 zone) or 400mA (4 zone) per line.
2. 4 separate alarm lines on 8 zone panel. 500mA maximum load per line.
3. Alarm lines are monitored for open circuit and short circuit faults.
4. Additional alarm line facilities on custom 2 and 4 zone configured panels.

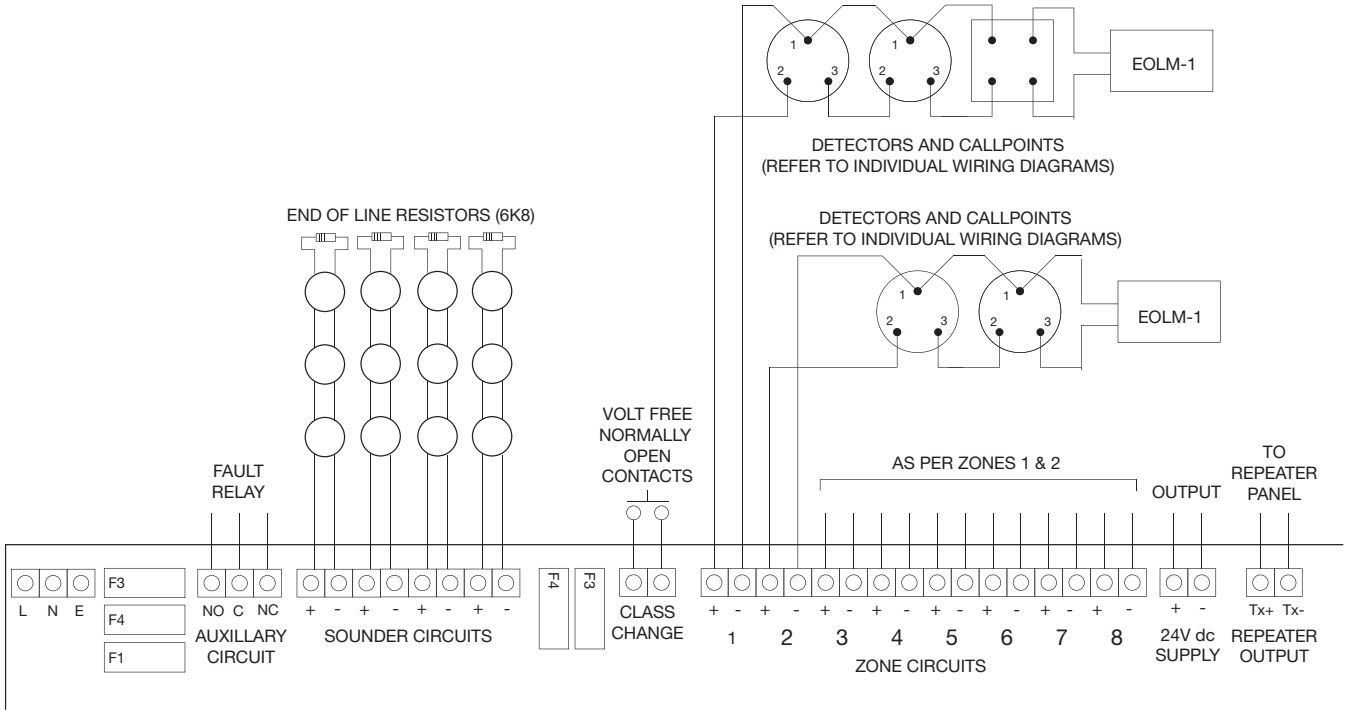
Repeater Panel

1. Repeater matches the style and appearance of main control panels.
2. Facility for signalling to repeater panel provided as standard on 8 zone panel.
3. Specially configured versions of 2 and 4 zone panels available for use with a repeater panel.
4. Displays essential information at other key locations in a large building/site
   - Zone fire and fault conditions
   - Test mode in operation
   - Zones or alarm lines in disabled mode
5. Repeater panel requires only a single pair of wires to receive signals from main control panel, plus local mains power supply, reducing cost of installation.

Standard Panel Connections - FX2201CF / FX2202CF / FX2204CF



Standard Panel Connections - FX2208CF



Repeater Panel

FXRP2200CF - Repeater Panel

Overview

To complement the FX2200CF range a repeater panel is available for connection to the 4 and 8 zone control panels.

This repeater panel (FXRP2200CF) has been specifically designed for ease of installation requiring only 2 interconnecting wires from the main panel this compared with up to 16 wires on many conventional panels represents a large cost saving both on material and labour.

Further repeater panels can be cascaded, again only using 2 wires. Standby time is not effected by the number of repeaters connected to each panel as each repeater has its own main supply and stand by battery.

The repeater is suitable for up to 8 zones and displays all the same functions as the main panel, but with the addition of a indicator test facility.

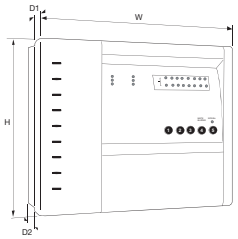
Features

- Facility for signalling to repeater panel provided as standard on 8 zone panel
- Surface or semi-flush mounting
- Displays essential information at other key locations in a large building/site
- Displays zone fire and fault conditions

Benefits

- Repeater matches the style and appearance of the control panel
- Requires only a single pair of wires to receive signals from control panel reducing cost of installation

Dimensions



H (mm)	W (mm)	D1 (mm)	D2 (mm)
260	212	45	77

Technical Specification

Code	FXRP2200CF
Description	Repeater Panel
Specification	
Distance	2km
Mains Input Voltage	230V ac -15%, +10%
Standby Duration	24 hours
Battery	1 x 12V 1.2Ah
Recharge Period	24 hours
Environmental	
Operating Temperature	-5°C to +40°C
Humidity (Non Condensing)	75% max
Physical	
Construction	PC
Dimensions (H x W x D)	260mm x 212mm x 122mm
Weight	3.6kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Installation

1. Wall mounted by means of 4 fixing screws.
2. Cable entry at back.
3. 12 top entry gland holes with push out blanking plugs.
4. 4 separate rear access cable entry facilities.
5. Local mains supply required and must be routed via the designated 20mm conduit entry in the top or the rear of the housing.

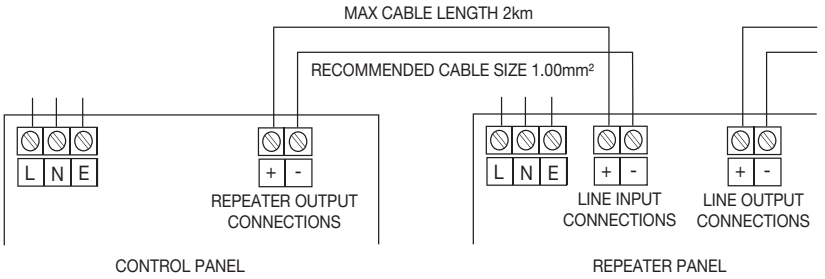
Device Overview

1. Supplied with integral power supply and standby battery.

System Functionality

1. Supplied with integrated power supply and stand by battery.
2. Provides local indication of essential information e.g fire, fault and disablement.

Standard Connection



Product Codes

Code	Description
FXRP2200CF	Conventional Repeater Panel

Detectors

Innovative light pipe technology allows LED to

Optical Detector / Photo-Thermal Detector / Heat Detector

Overview

This range of conventional detectors have been specifically designed to operate with Cooper control panels.

The optical detector (CPD321) is suitable for most applications giving the fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.

The photo-thermal detector (CPT341) will respond quickly to fast clean burning fires yet maintain the advantage of optical detectors when detecting smouldering fires. The thermal enhancement of this detector allows a higher alarm threshold which provides a greater rejection of false alarms. The detector will also raise an alarm at temperatures exceeding 60ºC.

The fixed heat detectors (CMT360) and (CHT390) will detect temperatures above 77ºC and 92ºC. The rate of rise heat detector (CFR330) is used to detect rapid increases in temperature with a maximum threshold of 60ºC. These detectors are designed to be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.

Features

- Two wire connection
- 360° visibility LED using lightpipe technology
- Wide range of detector types
- Drift compensation
- Removable detector chamber
- Aesthetically pleasing

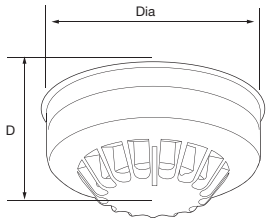
Benefits

- Quick and simple to install
- Wide viewing angle for increased LED visibility
- Common mounting base
- Positive "lock" indication
- Discreet design for incorporation in to any decor
- Easy to maintain/service

Technical Specification

Code	CPD321	CPT341	CFR330	CMT360	CHT390
Description	Optical Smoke Detector	Photo-Thermal Detector	Rate Of Rise Detector	Fixed Heat Detector (77°C)	Fixed Heat Detector (92°C)
Standards	EN54 Pt7 2000, A1 2002	EN54 Pt5 & Pt7 2000, A1 2002	EN54 Pt5 2000, A1 2002	EN54 Pt5 2000, A1 2002	EN54 Pt5 2000, A1 2002
Supply Ratings					
Operating Voltage	15V dc to 30V dc	15V dc to 30V dc	15V dc to 30V dc	15V dc to 30V dc	15V dc to 30V dc
Standby Current	30µA (max)	30µA (max)	30µA (max)	30µA (max)	30µA (max)
Startup Current	340µA (max)	340µA (max)	N/A	N/A	N/A
Alarm Current	25mA (max)	25mA (max)	25mA (max)	25mA (max)	25mA (max)
Fixing Information					
Mounting Position	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas
Mounting Options	Surface mount with CDBB300 base	Surface mount with CDBB300 base	Surface mount with CDBB300 base	Surface mount with CDBB300 base	Surface mount with CDBB300 base
Area Coverage	100m² (subject to local standards)	100m² (subject to local standards)	50m² (subject to local standards)	50m² (subject to local standards)	50m² (subject to local standards)
System Wiring	2 Core	2 Core	2 Core	2 Core	2 Core
Operation					
Detection Mode	Light scatter principle	Light scatter principle &	Heat sensitive element Heat sensitive element	Heat sensitive element	Heat sensitive element
Heat Class	N/A	A2S	A2R	BS	CS
Alarm Temperature	N/A	60°C	60°C	77°C	92°C
Indication	360° visible LED	360° visible LED	360° visible LED	360° visible LED	360° visible LED
Environmental					
Operating Temperature	-20°C to 60°C	-20°C to 45°C	-20°C to 45°C	-20°C to 60°C	-20°C to 75°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH	0 to 93% RH	0 to 93% RH	0 to 93% RH
Physical					
Construction	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Colour	White	White	White	White	White
Dimensions Excl Base (Dia x H)	101mm x 33mm	101mm x 43mm	100mm x 43mm	101mm x 43mm	101mm x 43mm
Dimensions Incl Base (Dia x H)	101mm x 45mm	101mm x 55mm	100mm x 55mm	101mm x 55mm	101mm x 55mm
Ingress Protection	IP40	IP40	IP40	IP40	IP40
EMC	CE Marked	CE Marked	CE Marked	CE Marked	CE Marked
Compatibility					
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Dimensions



Description	Dia (mm)	D (mm) (excl base)	D (mm) (incl base)
Optical	101	33	45
Photo-Thermal	101	43	55
Heat	101	43	55

Installation

1. Detectors are fixed and wired via common mounting base.
2. Cable entry into base can be rear or side.
3. A locking facility is provided which can be activated if required to prevent unauthorised detector removal without the use of a special tool.
4. Positive click mechanism incorporated to provide clear indication when detector is correctly located in base.

Note: For wiring information please see CDBB300 Base.

User Interface

1. Red LED to indicate alarm condition.
2. Amber LED to indicate chamber fault/drift compensation limit (enhanced versions only).
3. All wiring connections are via a common mounting base (supplied separately).

Product Codes

Code	Description
CPD321	Conventional Optical Smoke Detector
CPT341	Conventional Photo-Thermal Detector
CFR330	Conventional Rate of Rise Heat Detector
CMT360	Conventional Fixed Heat Detector (77°C)
CHT390	Conventional Fixed Heat Detector (92°C)
CDBB300	Conventional Standard Base
MDP201	Duct Probe (requires detector and base)

Standard Base

CPD321 - Optical Detector

CPT341 - Photo-Thermal Detector

CFR330 / CMT360 / CHT390 - Heat Detector

CDBB300 - Standard Base

Overview

The conventional standard base (CDBB300) has been designed for flexibility, simplicity and speed of installation.

The (CDBB300) is compatible with the Cooper range of conventional detectors and fire systems.

This conventional standard base incorporates devices to provide fault warning if a detector is removed, whilst maintaining full zone wiring integrity.

This device has a schotty diode in series with the negative terminals to enable fault monitoring and allow the circuit to continue if a detector is removed.

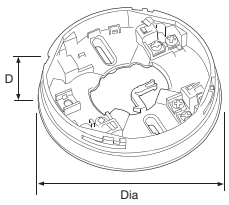
Features

- Two wire connection
- Separate zone in and zone out terminals
- Stand off fixing feature
- Accepts side entry cables
- Selectable detector locking feature

Benefits

- Quick and simple to install
- Common mounting base for Cooper conventional detectors
- Positive "lock" indication
- multiple cable entry points
- Easy to maintain/service

Dimensions



Dia (mm)	D (mm)
104	22

Technical Specification

Code	CDBB300
Description	Standard Base
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	104mm x 22mm
Compatibility	
Suitable for use with	Cooper Conventional Detectors

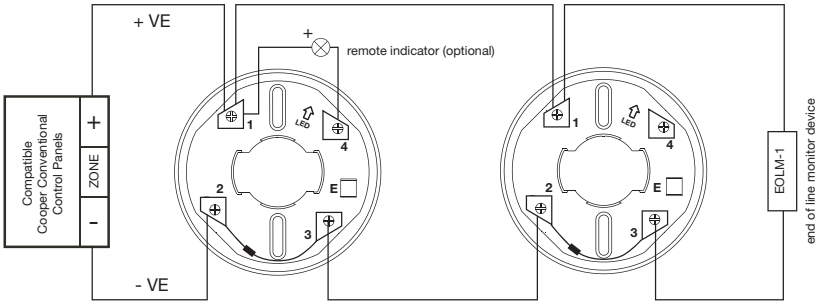
Installation

1. Base incorporates a retaining clip to provide positive feedback when detector is correctly fitted.
2. Separate terminals are provided for zone in and zone out connections.
3. Each terminal can accept up to 2 x 2.5mm cables.
4. Base incorporates a substantial cable entry aperture in the rear of the base.
5. Breakouts are provided to enable the detector base to sit neatly over surface cables and then enter via the rear entry aperture.
6. Base mounting incorporates a stand off feature to help prevent distortion when mounted on an uneven surface.
7. Fixings are suitable for standard BESA box or direct fixing to suitable surface
8. Optional locking devices (supplied with base) to prevent unauthorised detector removal.

Interface Options

1. These conventional detectors and bases support the use of a remote LED (optional extra CIR301).

Standard Connection



Product Codes

Code	Description
CDBB300	Conventional Standard Base
CIR301	Conventional Remote Indicator

Relay Base

CPD321 - Optical Detector

FXN520R - Relay Base

CPT341 - Photo-Thermal Detector

CFR330 / CMT360 / CHT390 - Heat Detector

Overview

The conventional relay base (FXN520R) has been designed for flexibility, simplicity and speed of installation.

The (FXN520R) is compatible with the Cooper range of conventional detectors and fire systems.

This conventional relay base provides a local relay signal in the event of its host detector being triggered, making it ideal for instigating a local response.

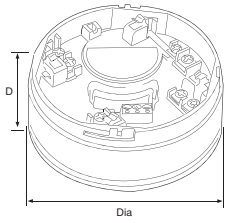
Features

- Integral sensor mounting base
- First fix mounting plate
- Provides remote signal for external interfacing
- 24V dc changeover relay (no/c/nc)

Benefits

- Quick and simple to install
- Relay base for Cooper conventional detectors
- Detector latching indication
- Local control output from host detector
- Easy to maintain/service

Dimensions



Dia (mm)	D (mm)
102	40

Technical Specification

Code	FXN520R
Description	Relay Base
Specification	
Relay Contact Rating	1A at 24V dc
Relay Trigger Source	Detector remote LED output
Detector Locking Facility	Supplied as standard
Physical	
Construction	PC/ABS
Colour	White
Dimensions (Dia x D)	102mm x 40mm
Compatibility	
Suitable for use with	Cooper Conventional Detectors

Installation

1. Relay base is supplied with a first fix fixing plate.
2. Fixing plate has a central cable aperture.
3. Cable entry is from rear.
4. Main body is then clipped into place on base, body locks into place when pressed into position.

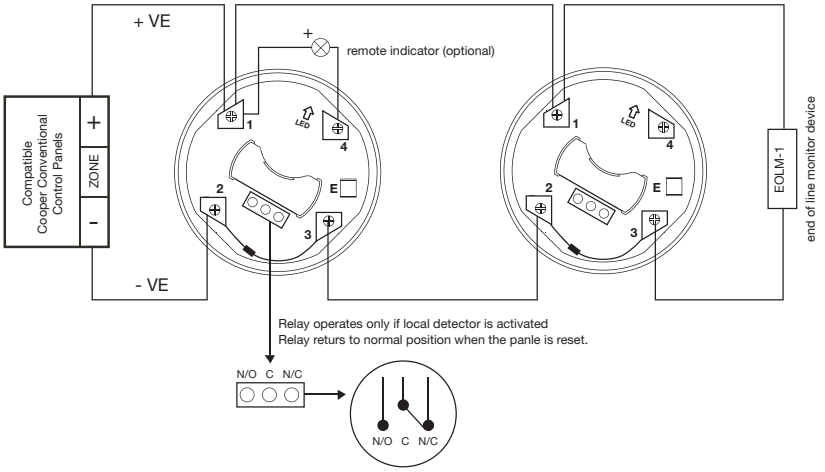
Interface Options

1. These conventional detectors and bases support the use of a remote LED (optional extra CIR301).

System Functionality

1. Relay is controlled by status of host detector.
2. If host detector is triggered relay activates.

Standard Connection



Product Codes

Code	Description
FXN520R	Conventional Relay Base
CIR301	Conventional Remote Indicator

Remote Indicator

CIR301 - Remote Indicator

Overview

The conventional remote indicator (CIR301) is designed to provide discreet remote indication.

The (CIR301) is compatible with the Cooper range of conventional detectors and fire systems.

This conventional 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.

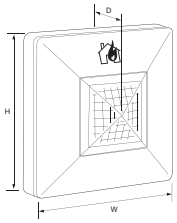
Features

- High visibility LED
- Fits on to a standard single gang back box
- Aesthetically pleasing

Benefits

- Quick and simple to install
- Wide viewing angle for increased visibility
- Discreet design for incorporation in to any decor
- Easy to maintain/service

Dimensions



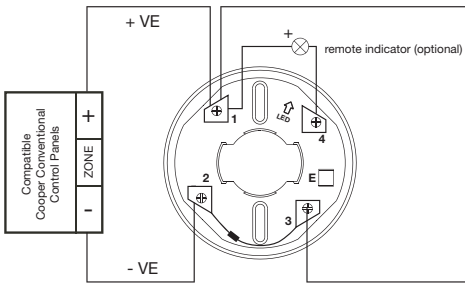
H (mm)	W (mm)	D (mm)
87	87	30

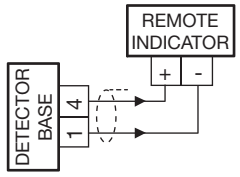
Technical Specification

Code	CIR301
Description	Remote Indicator
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	ABS
Colour	White
Lens Colour	Red
Dimensions (H x W x D)	87mm x 87mm x 30mm
Weight	0.28kg
Ingress Protection	IP30
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Standard Connection

CIR301





WARNING:
Do NOT use high voltage testers if ANY equipment is

Installation

1. Mounting plate fixes to single gang back box or can be direct fixed to wall or ceiling.
2. Cable entry is normally from rear but breakouts are provided in side of base plate.
3. Cables connect to terminals on PCB within base plate.
4. Front cover is pushed onto base plate and locks in place.

System Functionality

1. CIR301 is connected to an individual detector.
2. CIR301 activates if detector is triggered.
3. LED cancels when detector is reset.
4. Low current consumption.

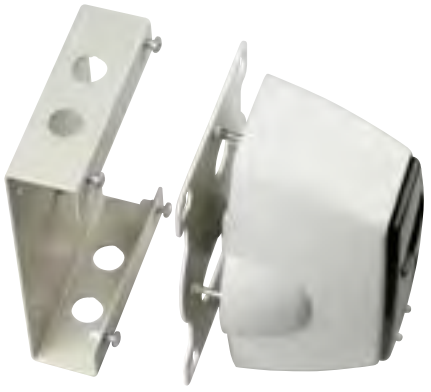
Product Codes

Code	Description
CIR301	Conventional Remote Indicator
MIR195B	Conventional Remote Indicator (with buzzer)

COOPER Safety
Fire Systems

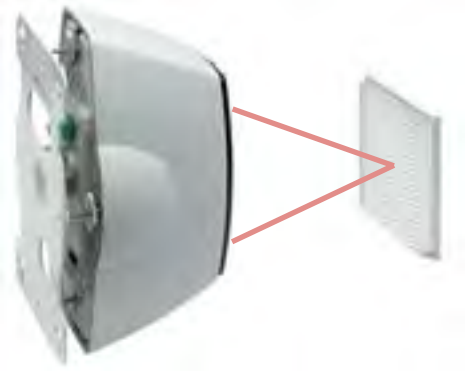
VdS

Reflective Beam Detectors



Optional Mounting Bracket with cable clamp

MBD50R / MBD100R - Reflective Beam Detectors



Combined transmitter and receiver for ease of

MAB50R / MAB100R - Reflective Beam Detector

Overview

Two versions of the conventional zone powered reflective beam detectors are available in this range, the (MBD50R) with a range of up to 50 metres and the (MBD100R) with a range of 50 to 100 meters.

Both the (MBD50R) and the (MBD100R) are compatible with the Cooper range of conventional fire systems.

These conventional zone powered reflective beam detectors are extremely simple to install, they require no separate power supply, operate on a reflective principle and have a simple set up mode to enable easy and quick alignment during installation.

These units are designed to replace individual point detectors in large open areas such as warehouses.

Fire and fault conditions are signalled to panel using standard zone wiring so no additional interconnection is required.

In normal operation only one beam detector may be connected per zone, however special versions are available to work with external power supply if multiple beam detectors are required to be connected to a single zone.

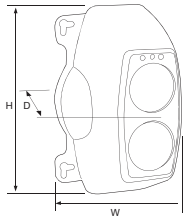
Features

- Zone connected
- Simple two wire connection
- Reflective beam detection
- No power supply required
- Two ranges available
  - up to 50m
  - 50m to 100m

Benefits

- Quick and simple to setup
- Saves on both time and installation costs
- Single device to install instead of numerous point detectors
- Single point of maintenance
- Wall mounted for ease of maintenance, especially in warehouses with racking

Dimensions



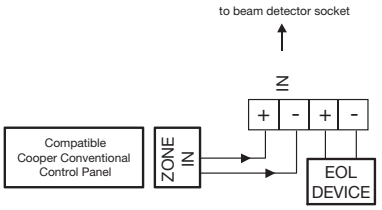
H (mm)	W (mm)	D (mm)
210	130	120

Technical Specification

Code	MBD50R	MBD100R
Description	Reflective Beam Detector	Reflective Beam Detector
Standards	EN54 Pt12 2002	EN54 Pt12 2002
Specification		
Operating Voltage	18V dc to 30V dc	18V dc to 30V dc
Quiescent Current	< 5mA (no LED's illuminated)	< 5mA (no LED's illuminated)
Alarm Current	< 9mA	< 9mA
Alignment Current	< 18mA	< 18mA
Power up Time	20 seconds (approx)	20 seconds (approx)
Operating Range	5 to 50 metres	50 to 100 metres
Tolerance to Beam Misalignment at 35%	Detector ± 0.8°, Prism ± 5.0°	Detector ± 0.8°, Prism ± 5.0°
Fire Alarm Thresholds	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)	2.50dB (25%) 3.74dB (35%) 6.02dB (50%)
Optical Wavelength	880nm	880nm
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	White	White
Dimensions (H x W x D)	210mm 130mm x 120mm	210mm 130mm x 120mm
Weight	0.8kg	0.8kg
Ingress Protection	IP40	IP40
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

MBD50R / MBD100R



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of zone.

Installation

1. Must be fixed to solid structure.
2. Recommended mounting height is 0.3 to 0.6 metres below the ceiling.
3. Only 1 conventional reflective beam allowed per control panel zone, if multiple beams per zone required, special externally powered version available.
4. Cables can be terminated into separate termination box (not supplied) or use purpose designed mounting bracket (MRBFP) ordered separately.
5. Mounting bracket has facilities for glanding of incoming cables plus simple fixing of beam detector.
6. Test filter is supplied with detector to simulate required smoke obscuration level and confirm correct operation.

System Functionality

1. Beam detectors have 3 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**

User Interface

1. Beam detector status LEDs
   - **Red LED** constantly illuminated indicates fire condition.
   - **Flashing amber LED** indicates fault condition.

Interface Options

1. Conventional beam detectors are connected directly to the

Product Codes

Code	Description
MBD50R	Conventional Reflective Beam Detector (50m range)
MBD100R	Conventional Reflective Beam Detector (100m range)
MRBFP	Mounting Bracket

Callpoints

CX201 - Callpoint and Accessories

Overview

Two versions of conventional callpoints are available in this range, the (CX201) which can be either surface or flush mounted and the (CX203) which is a weatherproof version.

Both the (CX201) and the (CX203) are compatible with the Cooper range of conventional fire systems.

These conventional callpoints are attractively designed, simple to install and are supplied as standard with a frangible glass element and a test key for ease of maintenance.

A comprehensive range of accessories are available to maximise the functionality of the callpoint for particular applications.

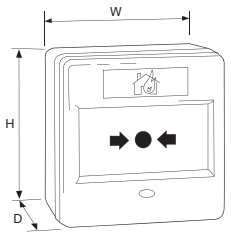
Features

- Fast fit clip on front cover
- High visibility status LED
- Wide range of accessories
- Heavy duty terminals
- Two models available
  - Internal
  - Weatherproof

Benefits

- Quick and simple to install
- Single tool for test and access
- Robust construction
- IP65 version available
- Easy to maintain/service

Dimensions



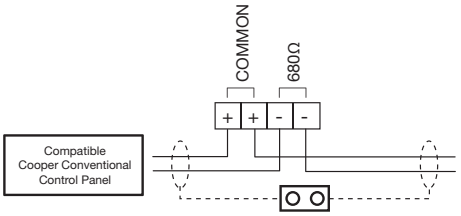
Description	H (mm)	W (mm)	D (mm)
Flush Mounted	87	87	36
Surface Mounted	87	87	57
Weatherproof	87	87	59

Technical Specification

Code	CX201	CX203
Description	Surface/Flush Mount Callpoint	Weatherproof Callpoint
Standards	EN54 Pt11	EN54 Pt11
Specification		
Operating Voltage	18V dc to 30V dc	18V dc to 30V dc
Environmental		
Operating Temperature	-10°C to +55°C	-25°C to +70°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	Red
Dimensions (H x W x D)	87mm x 87mm x 57mm (36mm flush)	87mm x 87mm x 59mm
Weight	0.2kg	0.2kg
Ingress Protection	IP24D	IP65
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

CX201 / CX203



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable

Installation

1. Surface callpoint has standard rear BESA fixing facilities. In addition, back box can accept top or bottom surface entry cables. Surface callpoint can also be flush mounted.
2. Callpoint has test facility via special test key to prevent unauthorised operation.
3. Insertion of test key for test purposes and for cover removal is at bottom of callpoint to facilitate ease of access when mounted next to door architrave.
4. Test key is dual function, used to test callpoint operation by simulating activation and also to allow removal of clip on cover to gain access to element.
5. Element is held in place by clip on self locking cover which can only be removed by use of a special tool (callpoint test key).
6. Separate zone in and zone out terminals are provided for all connections.
7. Surface/flush callpoints are IP24D, weatherproof is IP65.

User Interface

1. To enable quick and simple installation, callpoints use a fast fit self locking clip on front cover which is very simple to fit, but once in place, can only be removed by use of a special key (supplied).
2. Callpoint is triggered by pressing against the element.

Accessories

- Semi recess bezel
- Spacer plates
- Hinged clear cover
- Resettable plastic element
- Replacement test key
- Replacement glass elements
- Earth continuity links

Product Codes

Code	Description
CX201	Conventional Surface/Flush Callpoint
CX203	Conventional Weatherproof Callpoint
CXPC	Protective Hinged Cover
MBGSP	Spacer Plates (pack of 10)
MBGBEZ	Recessing Bezels (pack of 10)
MBGREKIT	Resettable Element Kit (pack of 10)
UBSG	Spare Break Glasses (pack of 5)
MBG119	Earth Continuity Links (pack of 5)
MFBGKEY3	Callpoint Keys (pack of 10)

COOPER Safety
Fire Systems

Bell

CFB6D24 - Bell

Overview

The conventional bell (CFB6D24) incorporates highly efficient rotary centrifugal movements combining high sound output with low current consumption.

The (CFB6D24) is compatible with the Cooper range of conventional fire systems.

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.

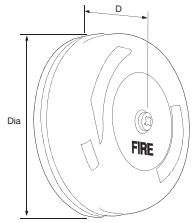
Features

- High sound output
- Low current consumption
- Multi-fixing base plate
- IP42 rated

Benefits

- Quick and simple to install
- Can be used for non fire applications
- Easy to maintain/service

Dimensions



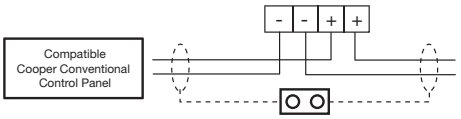
Dia (mm)	D (mm)
152	63

Technical Specification

Code	CFB6D24
Description	Internal 6 Inch Bell
Standards	EN54 Pt3
Specification	
Operating Voltage	24V dc
Current Consumption	25mA at 24V dc
Sound Output	93-95dB(A) at 24V dc
Environmental	
Operating Temperature	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH
Physical	
Construction	Gong-Steel/Base-Polycarbonate
Colour	Red
Dimensions (Dia x D)	152mm x 63mm
Weight	0.85kg
Ingress Protection	IP21C
Cable Entry	Rear
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Standard Connection

CFB6D24



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable

Installation

1. Multiple rear fixing options, can be fixed direct to wall or mounted on suitable BESA box.
2. Cable entry into bell is from rear.
3. Incorporates heavy duty terminals suitable for 2.5mm cables.

Device Functionality

1. Sound output is fixed and determined by size of the bell.
2. Operation is driven by an internal motor and striker arrangement.
3. Bells are polarised and suppressed.

Product Codes

Code	Description
CFB6D24	Conventional Internal 6 Inch Bell

Flush Sounders

FX003 / FX003W - Flush Sounders

Overview

Two versions of the conventional flush sounders are available in this range, the red (FX003) and the white (FX003W).

Both the (FX003) and the (FX003W) are compatible with the Cooper range of conventional fire systems.

These conventional flush sounders provide an excellent combination of high sound output and discreet appearance. Ideal for retail, hotel and residential applications such as sheltered housing.

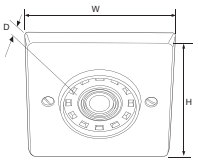
Features

- Choice of colours
- Separate volume control
- Choice of tone is determined by selection of appropriate terminal for negative connection

Benefits

- Quick and simple to install
- Discreet low profile design
- Easy to maintain/service

Dimensions



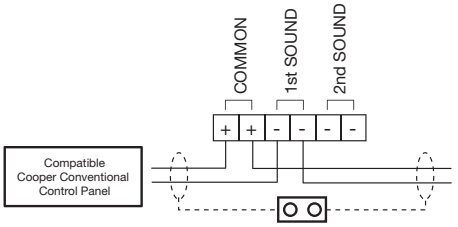
H (mm)	W (mm)	D (mm)
86	86	36

Technical Specification

Code	FX003	FX003W
Description	Flush Sounder	Flush Sounder
Standards	EN54 Pt3	EN54 Pt3
Specification		
Operating Voltage	6V dc to 28V dc	6V dc to 28V dc
Current Consumption	20mA at 24V dc	20mA at 24V dc
Sound Output	98dB(a) (+/- 2), at 1 Metre	98dB(a) (+/- 2), at 1 Metre
Environmental		
Operating Temperature	-25°C to +55°C	-25°C to +55°C
Humidity (Non Condensing)	0 to 95% RH	0 to 95% RH
Physical		
Construction	ABS	ABS
Colour	Red	White
Dimensions (H x W x D)	86mm x 86mm x 36mm	86mm x 86mm x 36mm
Weight	0.3kg	0.3kg
Ingress Protection	IP20	IP20
Cable Entry	Via separate back box	Via separate back box
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

FX003 / FX003W



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable.

NOTE:
Diagram shown with 1st sound connected, if 2nd sound is required connect both negative in and negative out to the second sound terminal.

Installation

1. Sounder fixes to a single gang deep back box.
2. Fixing screws included.
3. Connections are to main sounder body.
4. Separate alarm line in and alarm line out terminals are provided.
5. For surface mount applications a separate red single gang box can be ordered separately.

Interface Options

1. Operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Product Codes

Code	Description
FX003	Conventional Flush Sounder (red)
FX003W	Conventional Flush Sounder (white)

COOPER Safety
Fire Systems

Base Mountable Sounder & Sounder Beacon

MDS824 - Base Mountable Sounder / MDS824B - Base Mountable Sounder Beacon

Overview

The conventional base mountable sounder (MDS824) and the conventional base mountable sounder beacon (MDS824B) have a slim and aesthetically pleasing design and can be installed as either as a discreet stand alone sounder/sounder beacon or ceiling mounted with a detector and base.

Both the (MDS824) and the (MDS824B) are compatible with the Cooper range of conventional detectors and fire systems.

Mounting with a detector and base simplifies the installation of the system by enabling a detector and sounder to be fixed at a single common point.

When used as a stand alone sounder or sounder beacon the device can be either wall or ceiling mounted and completed with an optional cover plate (MDS824COV).

These conventional base mountable sounders and sounder beacons are ideal for applications such as hotel bedrooms where a detector sounder sounder/beacon is required.

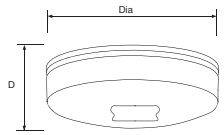
Features

- Discreet appearance
- Can be used with a detector as a sounder/ sounder beacon base or stand alone as a sounder/sounder beacon
- Cover plate (optional)

Benefits

- Quick and simple to install
- Discreet low profile design
- Single installation point
- Can be wired as a stand alone unit
- Easy to maintain/service

Dimensions



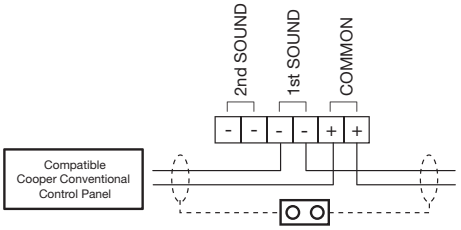
Dia (mm)	D (mm)
111	26

Technical Specification

Code	MDS824	MDS824B
Description	Base Mountable Sounder	Base Mountable Sounder Beacon
Standards	EN54 Pt3	EN54 Pt3
Specification		
Operating Voltage	10V dc to 28V dc	10V dc to 28V dc
Current Consumption	5mA (low) 7 ma (high) at 24V	7mA (low) 10 ma (high) at 24V
Sound Output	80/90dB(a) (+/-3), at 1 Metre	80/90dB(a) (+/-3), at 1 Metre
Light Output	> 1cd	> 1cd
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	ABS	ABS
Colour	White	White
Dimensions (Dia x D)	111mm x 26mm	111mm x 26mm
Weight	0.4kg	0.4kg
Ingress Protection	IP30	IP30
Cable Entry	Rear	Rear
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

MDS824 / MDS824B



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable

NOTE:
Diagram shown with 1st sound connected, if 2nd sound is required connect both negative in and negative out to the second sound terminal.

Installation

1. Sounder/beacon fixes to mounting surface.
2. Cables pass through the middle of the sounder.
3. Sounder/beacon wiring terminates at the sounder terminals.
4. Detector wiring terminates at normal connections on detector base.
5. If no detector is to be fitted, a blanking plate can be fitted instead.

Interface Options

1. Operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Product Codes

Code	Description
MDS824	Conventional Base Mountable Sounder
MDS824B	Conventional Base Mountable Sounder Beacon
MDS824COV	Blanking Plate (pack of 5)

Low Profile Surface Sounders

FX002 / FX002W - Low Profile Surface Sounder

Overview

Two versions of the conventional low profile surface sounder are available in this range, the red (FX002) and the white (FX002W).

Both the (FX002) and the (FX002W) are compatible with the Cooper range of conventional fire systems.

These conventional low profile surface sounders have 32 different alarm tone selections and adjustable volume levels via the internal volume controller.

Depending on the selected tone, sound levels of up to 105dB(A) can be achieved.

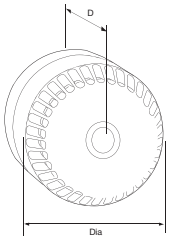
Features

- Unobtrusive low profile design
- Pre drilled cable entries
- Choice of colour
- 32 selectable tones

Benefits

- Quick and simple to install
- Low current, high sound output
- Suitable for a wide range of applications
- Automatic synchronisation

Dimensions



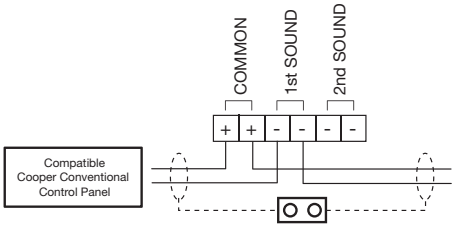
Dia (mm)	D (mm)
93	63

Technical Specification

Code	FX002	FX002W
Description	Low Profile Surface Sounder	Low Profile Surface Sounder
Standards	EN54 Pt3	EN54 Pt3
Specification		
Operating Voltage	9V dc to 28V dc	9V dc to 28V dc
Current Consumption	16mA at 24V dc	16mA at 24V dc
Sound Output	105dB(a) max (+/-2) at 24V dc, at 1 meter	105dB(a) max (+/-2) at 24V dc, at 1 meter
Number of Tones	32	32
Environmental		
Operating Temperature	-25°C to +70°C	-25°C to +70°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	White
Dimensions (Dia x D)	93mm x 63mm	93mm x 63mm
Weight	0.24kg	0.24kg
Ingress Protection	IP54	IP54
Cable Entry	Rear	Rear
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

FX002 / FX002W



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable.

NOTE:
Diagram shown with 1st sound connected, if 2nd sound is required connect both negative in and negative out to the second sound terminal.

Installation

1. Supplied with simple to install first fix mounting base.
2. Fixing and cable entry holes are pre-drilled.
3. Cable entry is from rear.
4. Connections are to main sounder body.
5. Separate in and out terminals are provided.
6. Main body is pushed into sounder base and then twisted to lock into place.

Interface Options

1. Operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Options

1. Choice of tone setting (set via DIP switches can be altered at any time).

Product Codes

Code	Description
FX002	Conventional Low Profile Surface Sounder (red)
FX002W	Conventional Low Profile Surface Sounder (white)
FX000WP	Weatherproof Deep Base (IP65 - red)
FX000WWP	Weatherproof Deep Base (IP65 - white)

COOPER Safety
Fire Systems

High Output Wall Sounder

FX007 - High Output Wall Sounder

Overview

The conventional high output wall sounder (FX007) has a maximum output of 120dB(a) making it ideal for use in areas with high ambient noise levels.

The (FX007) is compatible with the Cooper range of conventional fire systems.

This conventional high output wall sounder is simple to install and uses a first fix back plate onto which the main body attaches with a self locking press fix assembly.

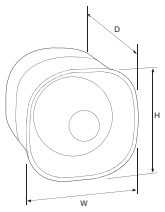
Features

- High output sounder
- Choice of tones
- Variable volume setting

Benefits

- Quick and simple to install
- Ideal for areas with high ambient noise

Dimensions



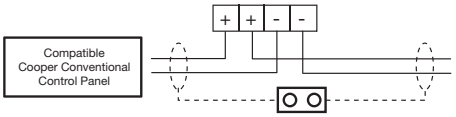
H (mm)	W (mm)	D (mm)
105	105	95

Technical Specification

Code	FX007
Description	High Output Wall Sounder
Standards	EN54 Pt3
Specification	
Operating Voltage	18V dc to 30V dc
Current Consumption	210mA to 260mA
Sound Output	120dB(A) (+/- 2) Max at 1 Meter (tone 5) 114dB(A) (+/- 2) Max at 1 Meter (tone 3)
Environmental	
Operating Temperature	-25°C to +70°C
Humidity (Non Condensing)	0 to 95% RH
Physical	
Construction	ABS
Colour	Red
Dimensions (Dia x D)	105mm x 105mm x 95mm
Weight	0.28kg
Ingress Protection	IP42
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Standard Connection

FX007



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable.

Installation

1. First fix mounting plate is fixed to wall.
2. Cable entry is from rear, or top/bottom.
3. Connections are to main sounder body.
4. Separate alarm line in and alarm line out terminals are provided.

Interface Options

1. Sounder operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Product Codes

Code	Description
FX007	Conventional High Output Wall Sounder

Low Profile Xenon Beacons

FX004R / FX004B - Low Profile Xenon Beacon

Overview

Two versions of the conventional low profile xenon beacon are available in this range, the red lensed (FX004R) and blue lensed (FX004B).

The (FX004R) and the (FX004B) are all compatible with the Cooper range of conventional fire systems.

These conventional low profile xenon beacons are available to complement purely audible alarms for use in areas either where people may be present who have impaired hearing or areas with high ambient noise levels.

These units feature a high performance light source to maximise the attention attracting potential of the device.

Due to predrilled fixing and cable entry holes they are simple to install.

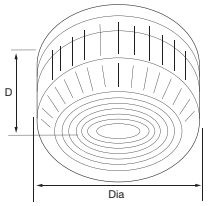
Features

- Unobtrusive low profile design
- High output xenon beacon
- Pre drilled cable entries

Benefits

- Quick and simple to install
- First fix base
- Choice of lens colour

Dimensions



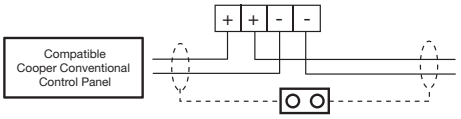
Dia (mm)	D (mm)
93	72

Technical Specification

Code	FX004R / FX004B
Description	Low Profile Xenon Beacon
Standards	EN54 Pt3
Specification	
Operating Voltage	24V dc
Current Consumption	45mA at 24V dc
Operation	Continuous
Flash Energy	0.7J
Flash Frequency	60 per minute
Light Output	2.5cd
Environmental	
Operating Temperature	-20°C to +55°C
Humidity (Non Condensing)	0 to 93% RH
Physical	
Construction	PC/ABS
Colour	Red / White
Lens Colour	Red / Blue
Dimensions (Dia x D)	93mm x 72mm
Weight	0.2kg
Ingress Protection	IP54
Cable Entry	Rear
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Standard Connection

FX004R / FX004B



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable

Installation

1. Supplied with simple to install first fix mounting base.
2. Fixing and cable entry holes are pre-drilled.
3. Cable entry is from rear.
4. Connections are to main beacon body.
5. Separate alarm line in / out terminals are provided.
6. Main body is pushed into sounder base and then twisted to lock into place.

Interface Options

1. Operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Product Codes

Code	Description
FX004R	Conventional Low Profile Xenon Beacon (red lens)
FX004B	Conventional Low Profile Xenon Beacon (blue lens)

COOPER Safety
Fire Systems

Xenon Sounder Beacon

FX002CR - Xenon Sounder Beacon

Overview

The conventional xenon sounder beacon (FX002CR) is available to complement purely audible alarms for use in areas either where people may be present who have impaired hearing or areas with high ambient noise levels.

The (FX002CR) is compatible with the Cooper range of conventional fire systems.

This conventional xenon sounder beacon has a high light output and adjustable volume control to maximise the attention attracting potential of the device.

The key benefit of this device is that an audible and a visual alarm are combined together and require only a single installation point. This greatly reduces installation time and cost and is much less obtrusive than two separate devices.

Due to predrilled fixing and cable entry holes they are simple to install.

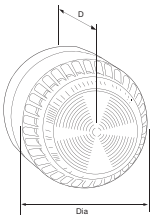
Features

- Unobtrusive low profile design
- High output xenon beacon
- Pre drilled cable entries
- Sounder and beacon with a single installation point
- 32 selectable tones

Benefits

- Quick and simple to install
- Combined audio/visual unit
- Single installation point

Dimensions



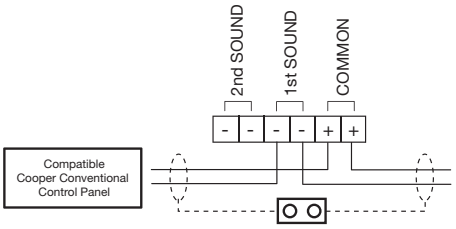
Dia (mm)	D (mm)
93	92

Technical Specification

Code	FX002CR
Description	Xenon Sounder Beacon
Standards	EN54 Pt3
Specification	
Operating Voltage	18V dc to 30V dc
Current Consumption	68mA (av) 73mA (peak)
Operation	Continuous
Flash Energy	0.7J
Flash Frequency	60 per minute
Sound Output	101dB(a) max (+/-3) at 24V dc, at 1 Meter
Number of Tones	32
Environmental	
Operating Temperature	-20°C to +55°C
Humidity (Non Condensing)	0 to 93% RH
Physical	
Construction	PC/ABS
Colour	Red
Lens Colour	Red
Dimensions (Dia x D)	93mm x 92mm
Weight	0.25kg
Ingress Protection	IP54
Cable Entry	Rear
Compatibility	
Suitable for use with	Cooper Conventional Fire Systems

Standard Connection

FX002CR



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of cable.

NOTE:
Diagram shown with 1st sound connected, if 2nd sound is required connect both negative in and negative out to the second sound terminal.

Installation

1. Supplied with simple to install first fix mounting base.
2. Fixing and cable entry holes are pre-drilled.
3. Cable entry is from rear.
4. Connections are to main sounder beacon body.
5. Separate alarm line in / out terminals are provided.
6. Main body is pushed into sounder base and then twisted to lock into place.
7. Supply is common for sounder and beacon as it is a single unit.

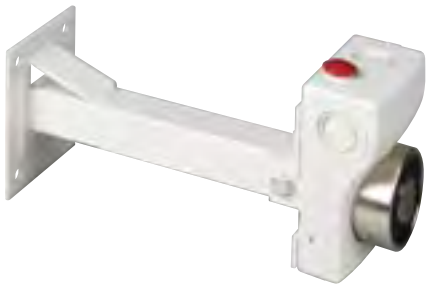
Interface Options

1. Operates from nominal 24V dc supply and can be connected to any suitably rated conventional sounder circuit.

Product Codes

Code	Description
FX002CR	Conventional Xenon Sounder Beacon
FX000WP	Weatherproof Deep Base (IP65 - red)
FX000WWP	Weatherproof Deep Base (IP65 - white)

Compact Door Retainer



Floor / Wall Mounting Bracket

Door Striker Plate

Compact Door Retainer showing release switch

FX021240LC / FX02124VLC - Compact Door Retainer

Overview

Two versions of the conventional compact door retainers are available in this range, the mains powered (FX021240LC) and the 24V dc (FX02124VLC).

Both the (FX021240LC) and the (FX02124VLC) are compatible with Cooper conventional fire systems.

These conventional compact door retainers are competitively priced, simple to install and discreetly styled. They are ideal for a wide range of applications, such as nursing homes, hospitals and busy corridors.

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

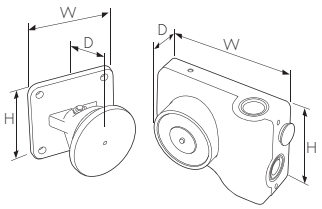
Features

- Mains and 24V dc versions available
- Manual release facility
- Floor mounting bracket (optional)

Benefits

- Quick and simple to install
- Wide range of applications
- Slim profile unit

Dimensions



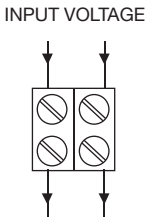
Description	H (mm)	W (mm)	D (mm)
Magnet	71	108	44
Striker Plate	65	65	48

Technical Specification

Code	FX021240LC	FX02124VLC
Description	Mains Powered Compact Door Retainer	24V dc Powered Compact Door Retainer
Specification		
Operating Voltage	230 V ac to 240 V ac	24V dc
Power Consumption	1.2 VA	40mA
Holding Force	45 kg	40 kg
Environmental		
Operating Temperature	-5°C to +54°C	-5°C to +40°C
Humidity (Non Condensing)	0 to 93 %RH	0 to 93 %RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	White	White
Dimensions (H x W x D)		
Magnet	71mm x 108mm 44mm	71mm x 108mm 44mm
Striker Plate	65mm x 65mm x 48mm	65mm x 65mm x 48mm
Weight	1.0 kg	1.0 kg
Ingress Protection	IP42	IP40
Compatibility		
Suitable for use with	Cooper Conventional Fire Systems	Cooper Conventional Fire Systems

Standard Connection

FX021240LC / FX02124VLC



WARNING:
Do NOT use high voltage testers if ANY equipment is connected to the system.

Installation

1. Door retainer unit and striker plate should be fixed to a smooth surface.
2. 16mm & 20mm cable entry facilities are provided at the top and both sides.
3. 10mm cable entry is provided at the rear
4. Fixings should be able to support at least double the holding force of the magnet.

System Functionality

1. Designed to operate only with self closing doors.
2. Door retainer is fitted to wall or floor using floor bracket.
3. Striker plate is fitted to door.
4. Door retainer is fed with a constant supply via an external control device.
5. Supply energises an electromagnet, which holds the striker plate securely against the magnet.
6. If supply to magnet is interrupted, magnet de-energises.
7. Door closes under control of its own self closing device.

Product Codes

Code	Description
FX021240LC	Conventional Mains Powered Compact Door Retainer
FX02124VLC	Conventional 24V dc Compact Door Retainer
FX021LCFB	Floor Mounting Bracket for Compact Door Retainer
FASP0429	24V dc Power Supply

Manufacturing and Standards

UK fire manufacturing is concentrated at the Cooper Safety Fire Systems Doncaster site. The same site is also the centre for all other fire activity including research and development, system design, quotations, telesales, technical support, service, commissioning and maintenance.

The policy of concentrating all activity at a single location, provides complete integration between all disciplines resulting in comprehensive customer support, from system design right through to ongoing routine maintenance after the project is completed.

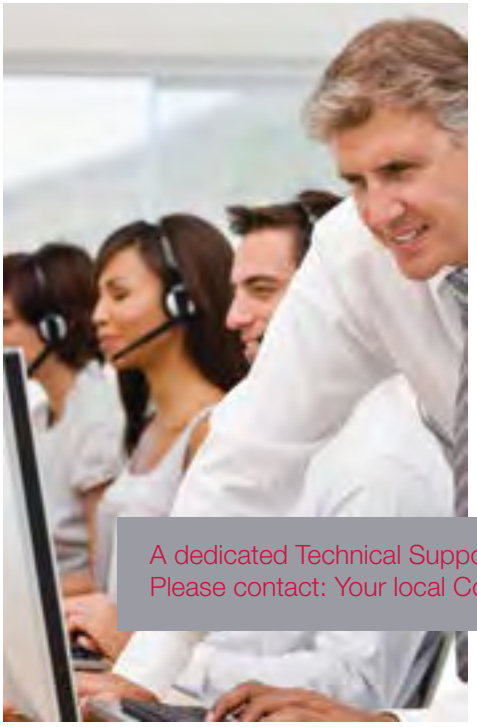
The Cooper Safety Fire System Doncaster site is fully approved to BS EN ISO 9001:2001 quality standard and many products manufactured at the sites already have or are currently undergoing independent third party approvals.

Cooper industries is highly committed to a policy of environmental responsibility, and in line with this, the Doncaster site gained formal certification to ISO14001 environmental standard.

To ensure the safety of protected buildings, it is absolutely essential that system components such as detectors and control panels function correctly at all times. A substantial proportion of the Cooper Safety Fire Systems product range already carries independent third party approvals, to demonstrate complete compliance with relevant product standards.

This huge investment in products standards and facilities coupled with a philosophy and culture of continuous improvement ensures the company is perfectly positioned to serve customers to the highest level. Cooper Safety Fire Systems are members of the British Fire Protection Systems Association. The British Fire Protection Systems Association is The Trade Association of manufacturers and installers of fire alarm and fixed extinguishing systems. It is recognised as the co-ordinating body for the UK fire systems industry and is the leading trade association in its field in Europe.

Technical Support



Technical Department

Cooper Safety Fire Systems has a dedicated Technical Support team, staffed by fully qualified engineers who are able to offer customers advice and guidance on a wide variety of technical matters via telephone or e-mail.

For most technical queries, a process of systematic questioning will enable us to diagnose the problem and advise you of the appropriate solution. Sometimes more detailed troubleshooting and analysis methods may be used to determine the root cause of the problem and the best way of resolving it. If necessary, the Technical Support team can also call on the knowledge and expertise of our product marketing, R&D and design departments to help resolve the issue.

The Technical Support team are also the first port of call if you need assistance with product information, installation and operating instructions, options for replacement fire systems, or the requirements of fire standards.

A dedicated Technical Support team are ready and waiting to assist with any enquiry.
Please contact: Your local Cooper office or dial +44 1302 303350 (international) - 01302 303350 (UK)

Training Courses

Training Department

To help our customers achieve a greater understanding of modern fire technology, Cooper Safety Fire Systems offer a range of training courses geared towards electrical contractors and specialist installers.

With the introduction of the Regulatory Reform (Fire Safety) Order and the changes to the British Standards, there is now a requirement for both companies and personnel working within the fire industry to be not only competent, but also to be able to prove this competence through training and certification.

Cooper Safety Fire Systems are able to provide a comprehensive range of fire product focused courses as well as a range of internally certified courses, based around sections of the British Standards, i.e. BS5839: Pt1.

This training will ensure that you are competent to carry out the testing and maintenance of your fire system in accordance with the latest legislation.

BAFE

Product Code	Description	Page
1UPLATE	1 Unit Blanking Plate	11
2UPLATE	2 Unit Blanking Plate	11
39UECRACK	19 Inch Floor Rack Unit	11
3UPLATE	3 Unit Blanking Plate	11
6UPLATE	6 Unit Blanking Plate	11
CAB300	Intelligent Addressable Standard Base	25
CAH330	Intelligent Addressable Multi-Mode Heat Sensor	23
CAP320	Intelligent Addressable Optical Smoke Sensor	23
CAPT340	Intelligent Addressable Photo/Thermal Sensor	23
CAS380	Intelligent Addressable Sounder Base	27
CAS381 / CAS381WP	Intelligent Addressable Sounder	37
CAB382	Intelligent Addressable Loop Connected LED Beacon	41
CASB383 / CASB383WP	Intelligent Addressable Sounder Beacon	39
CASBB384	Intelligent Addressable Sounder Beacon Base	29
CASC	Sounder Cover Plates (pack of 5)	27 / 29
CBG370S / CBG370WP	Intelligent Addressable Callpoint	35
CDBB300	Conventional Detector Base	129
CF1000VDS	Intelligent Addressable Control Panel	13
CF2000GCPD	Intelligent Addressable Control Panel	17
CF3000	Intelligent Addressable Control Panel	7
CF3000PRG	Passive Repeater Panel	13
CF3000PRG / CF3000PRGNC	Intelligent Addressable Passive Repeater Panel	21
CF800PROG	Addressable Device Programmer	96
CFB6D24	Conventional Internal 6 Inch Bell	139
CFC301	Technical I/O Unit	55
CFR330	Conventional Rate of Rise Heat Detector	127
CFSFL01	Single Mode Lon to Fibre Optic Adaptor	79
CFSFL02	Multi Mode Lon to Fibre Optic Adaptor	81
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CHT390	Conventional Fixed Heat Detector (92°C)	127
CIO351 / CIO351S	3 Channel I/O Unit	51
CIOP4 / CIOP8	Mimic Relay Board	59
CIR301	Conventional Remote Indicator	133
CMIO353	230V ac Relay Unit	53
CMT360	Conventional Fixed Heat Detector (77°C)	127
CPD321	Conventional Optical Smoke Detector	127
CPT341	Conventional Photo-Thermal Detector	127
CSC354	4 Way Sounder Controller Unit	43
CSI350	Spur Isolator Unit	49
CSUM355	Shop Monitor Unit	47
CTPR3000	Intelligent Addressable Touch-Screen Repeater Panel	19
CW500	Wireless Survey Kit	107
CW9000	Wireless Control Panel	101
CWB9500	Wireless Booster Panel	103
CWC950	Wireless Callpoint	111
CWD910	Wireless Sensor	109
CWDB920	Wireless Sensor Sounder Beacon	109
CWEXA	Wireless Dual External Aerials	117
CWH9600	Wireless Hybrid Panel (addressable)	105
CWH9601	Wireless Hybrid Panel (zonal)	105
CWIF930	Wireless I/O Unit	115
CWSB980	Wireless Sounder Beacon	113
CX201 / CX203	Conventional Callpoint	137
CXPC	Protective Hinged Cover	35 / 137
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Product Code	Description	Page
DF61NETKIT	Network Kit (retro fit)	13
EC0232 / EC0232PAVA / EC0232PAVA3D	Lon to RS232 Adapter	69
EC200 / EC200H / EC200S	Dual-channel LonWorks BMS Interface	67
EC400	TCP/IP Interface	71
EC540	Lon Network Booster	73
EC650	BACnet Gateway	75
EC700	Modbus Gateway	77
ECRACKPACK43	Pack of 4 Fixings (1 required per blanking plate)	11
FASP0429 / FX1A	24V dc Power Supply Unit	87
FC18 / FC6 / FC6-AU	Fan Controller Unit	57
FX000WP / FX000WWP	Weatherproof Deep Base	145 / 151
FX002 / FX002W	Conventional Low Profile Surface Sounder	145
FX002CR	Conventional Xenon Sounder Beacon	151
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FX004B / FX004R	Conventional Low Profile Xenon Beacon	149
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FX021240LC / FX02124VLC	Conventional Compact Door Retainer	153
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ZPCB2252MML / ZPCB2252MSL	Mimic PCB	84

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