COOPER Safety
Fire Systems

EN54

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

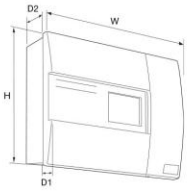
Benefits

- 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

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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.

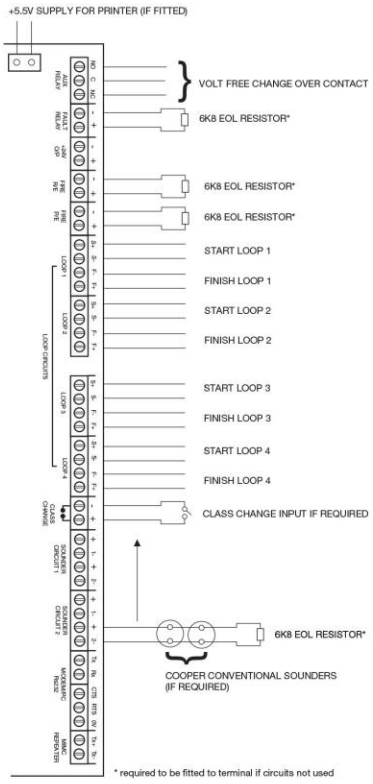
Alarm Capacity

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.

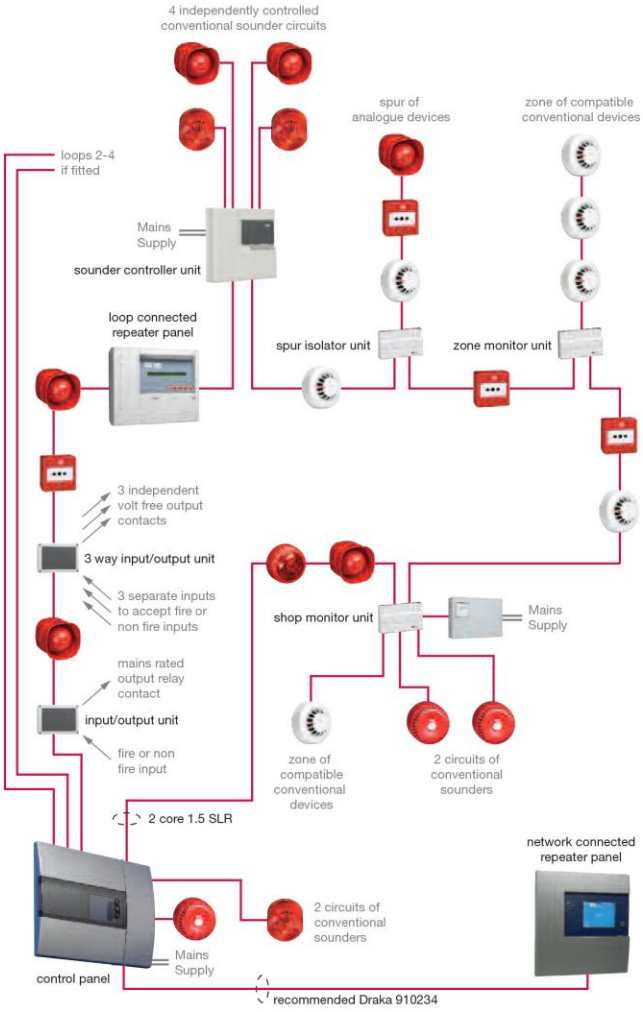
Interface Options

- 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.