COOPER Safety
Fire Systems

EN54

DF6100 Control Panels

DF6100 control panel, interior

DF6100 control panel

Overview

The Menvier DF6100 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.

DF6100 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 Menvier range of DF6000 panels or other DF6100 panels, (additional network card required).

The DF6100 panel has an integral power supply and is supplied with batteries as standard.

An extensive range of compatible intelligent addressable system ancillaries are available to work with the DF6100 all of which incorporate an integral short circuit isolator to provide maximum protection against short circuits on the loop.

Features

- Large versatile touch screen display
- Competitive single or two loop system
- Spur tolerant soft addressing
- Large selection of compatible ancillaries
- Full network capability
- Integral battery and power supply
- 200 address capacity per loop
- Approved to EN54 Pt13 and EN54 Pt2 and Pt4

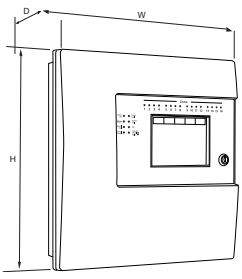
Benefits

- Simple end user interface
- Range of compatible ancillaries
- System protocol allows fast and accurate configuration

Technical Specification

Code	DF6100	DF61002
Description	1 loop control panel	2 loop control panel
Standards	EN54 Pt2 1997 & 2006: A1, EN54 Pt4 1997 & 2002: A1 EN54 Pt13, EN50130-4	EN54 Pt2 1997 & 2006: A1, EN54 Pt4 1997 & 2002: A1 EN54 Pt13, EN50130-4
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	Steel back box	Steel back box
Dimensions (H x W x D)	375mm x 375mm x 95mm	375mm x 375mm 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 127 panels (requires additional network card, per panel)	Fully Networkable up to 127 panels (requires additional network card, per panel)

Dimensions



H (mm)	W (mm)	D (mm)
375	375	95

Product Codes

Code	Description
DF6100	Intelligent addressable 1 loop control panel
DF61002	Intelligent addressable 2 loop control panel
NC	Add to end of product code if network card required
DF61NETKIT	Network kit (retro fit)
DF6000PR	Passive repeater panel
DTPR6000	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 maintenance mode and engineer mode.
2. User maintenance and engineer modes can only be accessed by entering relevant pass codes
3. Maintenance 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. DF6100 is designed to ensure simplicity of future expansion. If an additional device is added after the system has been programmed, the DF6100 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 DF6100 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 DF6100 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. DF6100 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 MPU424 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 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.

System Networking

DF6000 and DF6100 systems can both be networked together. Up to 126 DF6000 panels, DF6100 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.

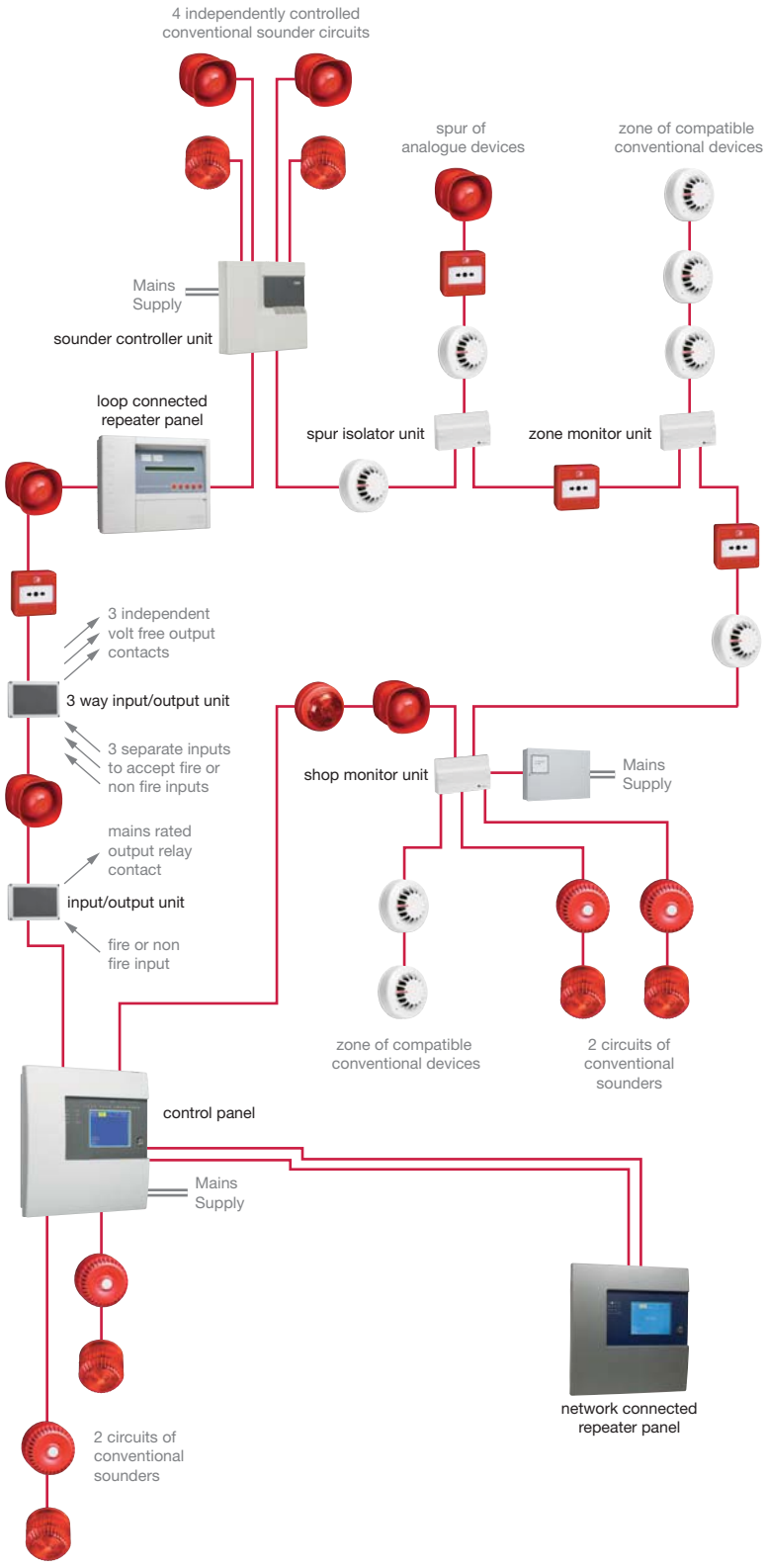
Silencing and resetting of alarms can also be carried out from any panel on a networked system.

Networked panels are connected using a loop topology as illustrated.

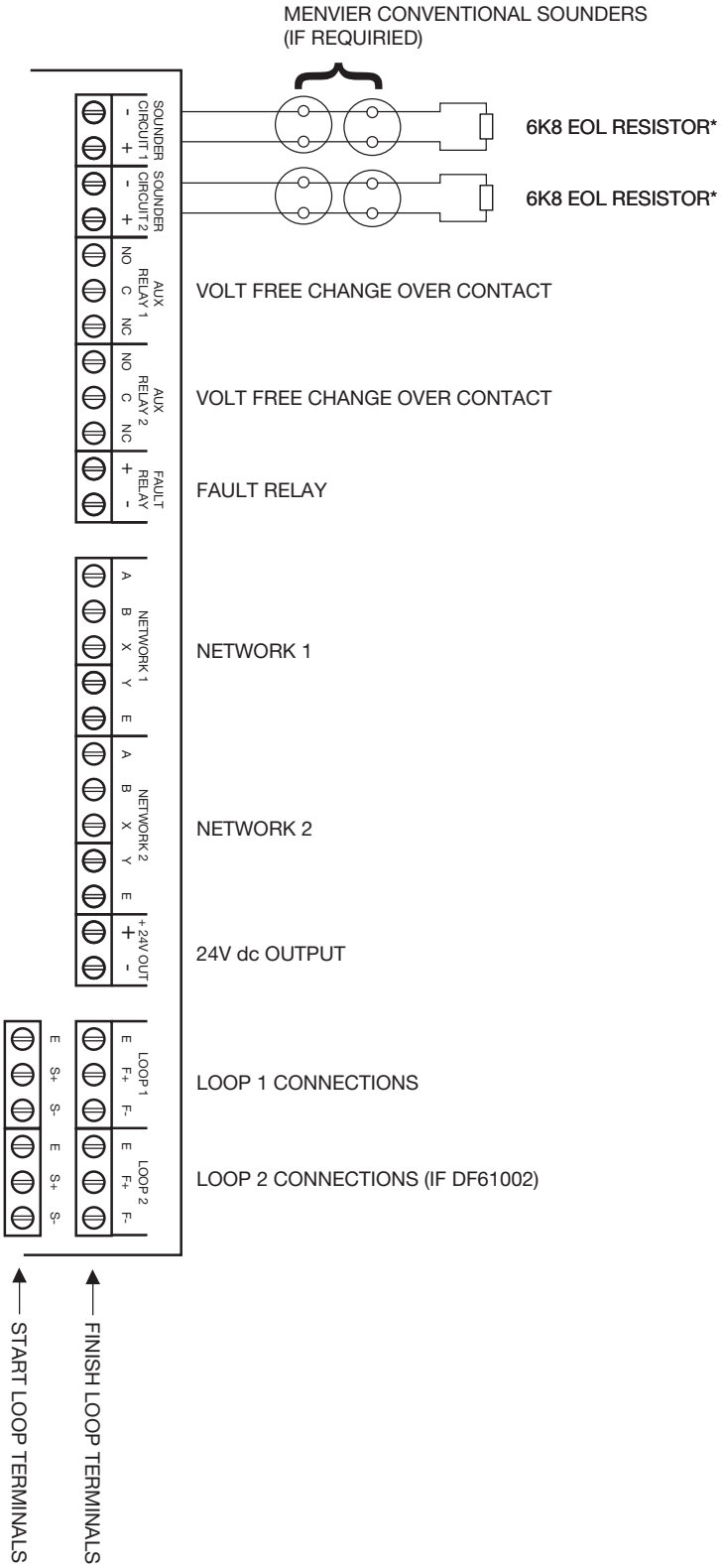
DF6100

DF6000, DF6100 and DTPR6000

Typical System Architecture



Standard Panel Connections



* required to be fitted to terminal if circuits not used