

Advanced Intelligent Fire Alarm Panel

FCE2000

Overview

- Modular concept
- 10000 events history
- Wide LCD Display(4x40 characters)
- Up to 10km Loop Length (max. 1μ F, 2KΩ)
- Fully controlled with Alpha-numeric Keypad
- Unlimited network capability by FCENet
- Directly connection to any 3rd party via MODBUS or TCP/IP
- Enhanced module function combinations • Easy to install, network, configure, maintain
- Approved by EN54-2:1997+A1:2006 and EN54-4:1997+A1:2002+A2:2006



0068-CPR-035/2011

Description

The FCE2000 is an intelligent analogue addressable fire alarm control panel. It has been designed and is constructed around proven and reliable microprocessor technology. This simple approach has produced a modular, scaleable fire alarm platform suitable for protecting all types of premises.

The FCE2000 control panel supports a total of five industry leading protocols, allowing fire detection devices to be independently selected based on performance or aesthetic appeal. The FCE series control panels seamlessly integrates with System Sensor detection device protocols activity.

Designed for maximum flexibility, the FCE2000 control panel is supported by a complete suite of peripherals and software tools. Information on the location of fires, faults and system status can easily be displayed or printed in multiple locations. Integration to Voice Evacuation Systems, paging systems and third party control systems is supported through a range of peripheral interface units.

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System

The FCE2000 control panel forms the heart of the fire detection system. A steel enclosure contains all the required components - microprocessor, power supply plus a clear LCD (Liquid Crystal Display), system status indicators and the control buttons that are the user interface.

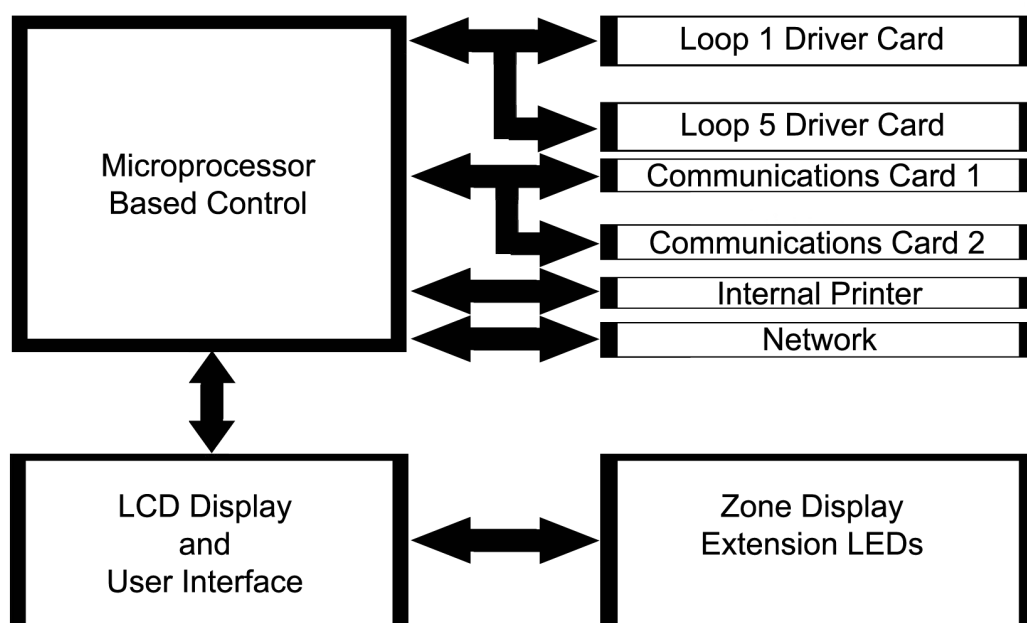
A quick glance enables users to assess the condition of the fire alarm system. Alarm and Fault conditions are highlighted by LEDs and supported by enhanced text descriptions on the LCD display. Clearly labeled buttons allow users to quickly manipulate the system providing both audible and tactile feedback of successful operations.

Accidental operation is prevented by user passcodes that are required to gain access to functions. Basic functions (Evacuate, Reset, Mute, Accept, Silence) are available at one access level whilst more advanced operations are protected by a secondary level passcode. Individual device isolations, test modes and configuration data are all protected by these secondary access levels.

Inside each control panel the microprocessor maintains a log of the events or actions occurring on the system. Fires, Faults, tested devices and diagnostics are all electronically logged for future reference. Remote (or local) printers can easily be connected to provide a paper copy of events as and when they occur or provide a historical record.

The control panel can be configured to support any one of the five detection protocols by installing the correct loop driver cards in the control panel. For each loop the control panel will support a total up to a maximum of 99 sensors and 99 modules (call points, monitor, control, conventional zone modules and addressable sounders) using the System Sensor protocols.

The flexibility of the FCE2000 design allows the control panel to be connected to a wide variety of peripheral devices. From display repeaters to custom mimic displays, printers, serial data interfaces and switching relay interfaces.



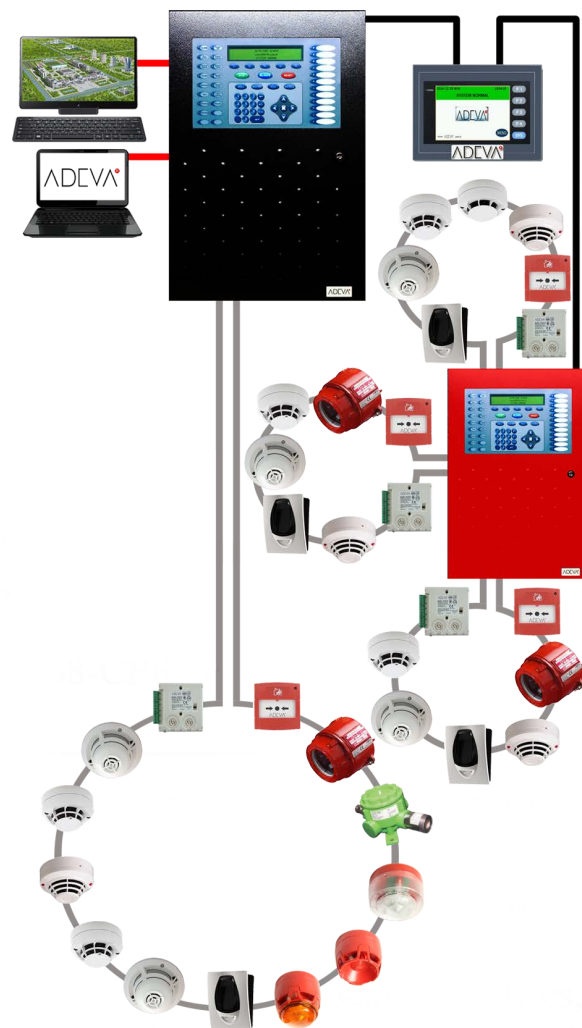
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Installation

The initial installation of the system is aided by sophisticated features like AUTOLEARN. An internal routine that will automatically detect all the devices on the detection and peripheral loops saving the time of entering all the devices individually.

Basic programming is also configured during the Autolearn process resulting in only fine tuning of the system being required to complete the system configuration.

An off-line Windows™ configuration tool is available to further enhance the process, making text entry and specific device programming easier. Complex cause and effects programming is simplified through clearly designed user interfaces. Once completed the configuration of the panel can be saved for future reference. Enhanced features allow the complete archiving of the control panel history log and a Virtual Panel Interface enables all control commands to be entered using the computer.



Maintenance

The FCE2000 intelligent fire alarm control panel has been designed to help with the normal operation of a fire detection system. Standard weekly testing is available through a simple menu structure allowing selection of the zones to be tested and the optional activation of the outputs or ringing of the sounders.

The status of individual devices can be analysed to determine whether cleaning or replacement is required. This information can either be viewed directly on the LCD or printed for reference.

As the installation grows the FCE2000 can expand with the installation, adding additional devices, loop cards, printers, display repeaters or interface devices. If the installation becomes too big for a FCE2000, additional FCE2000R R/G control panels can simply be added by networking using two or more control panels together.

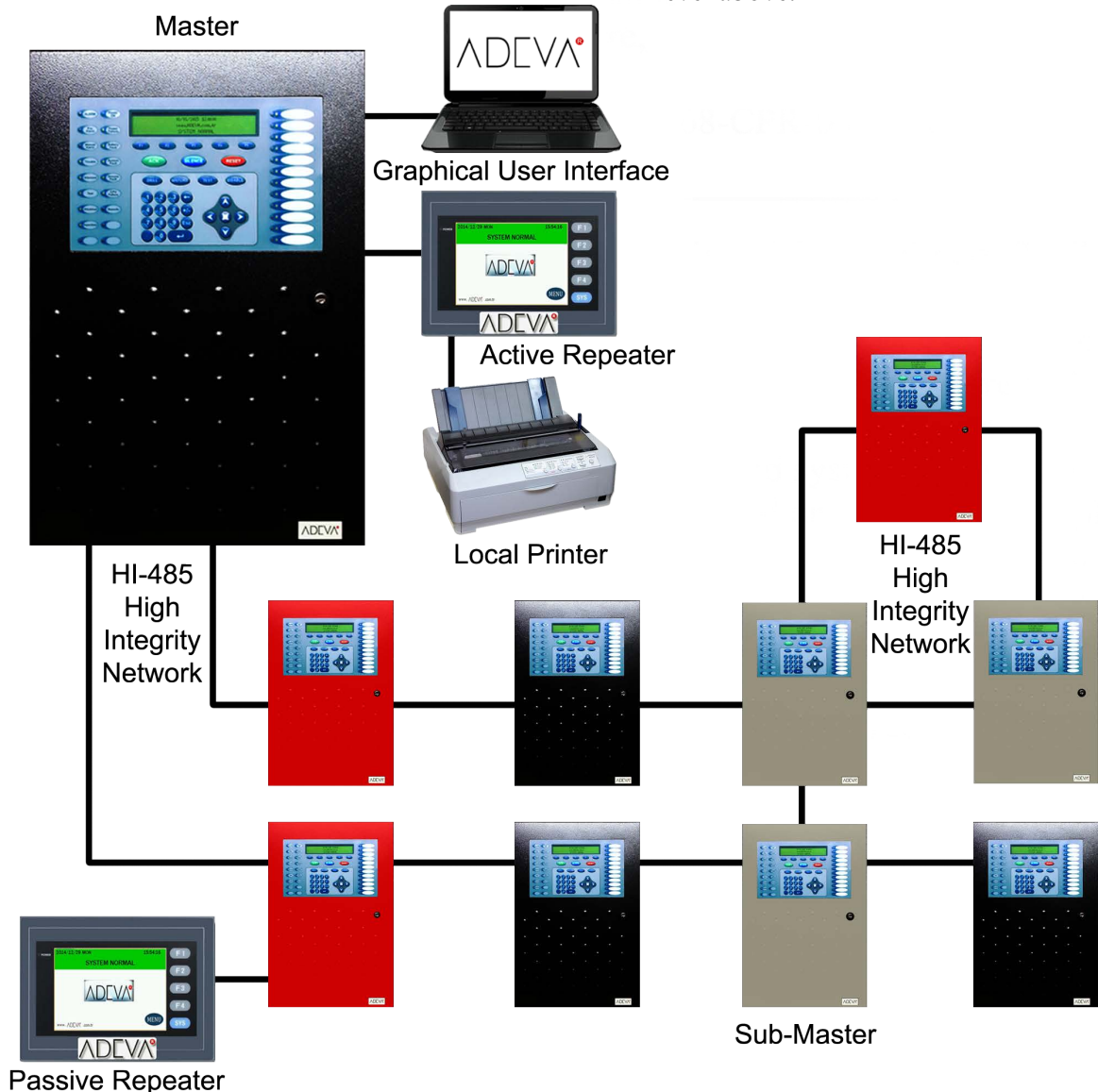
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Networking

ADVNet™ network is unique. A clever protocol allows for the propagation and distribution of all messages and control signalling. A robust protocol that can be used over long distances, even on MICC, mineral based fire resistant cabling. The FCE2000 can networked with other FCE series control panels using Master/Slave architecture. Unlimited number of control panels can be networked together using the standard control panel operating system. The network can be configured in two ways:

For single sites or large buildings the networking is normally configured as one large system. Each networked control panel shares information. Alarms and communications are reported to each individual display.

If the fire alarm system is to provide cover for multiple buildings or multiple sites it is normally configured to operate in a report and control mode. The fire alarm panels act individually or as sub-systems only reporting information to the master on the level above.



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Specification

Operating Voltage:	230V 50/60Hz AC (+20%, -30% voltage tolerance)
Max , PSU Rating:	100VA total
Battery Charger:	1 Amper
Internal & External Loadas:	
General System Load:	2.25A @ 24V nominal
Loop Load	2.50A
Standby Batteries:	24V sealed lead acid batteries
Minimum Capacity:	2x 12V 7Ah (Internally fitted)
Maximum Capacity:	2x 12V 24Ah (Out fitted)
Dimensions (mm) :	600 x 400 x 155 (H x w x D)
Weight:	12kg (without batteries)
Environmental Operating Limits:	
Temperature:	0° C to +40° C
Humidity:	85% non-condensing (maximum)
Construction:	Sheet steel painted,sealed to IP32
Cable Entry:	16 x 22,5mm (PG16) knock-outs in top of cabinet 1 x 22,5mm (PG16) knock-outs in bottom of cabinet
Loop Capacity :	1 to 5 loops expandable 1,5A per loop maximum
System Sensor Protocols:	a. Max. 99 sensor and 99 module addresses per loop for Intelligent protocol b. Max. 159 sensor and 159 module addresses per loop for Advanced Intelligent protocol
Note:Multiple sensor protocols cannot be use in the panal simultaneously.	
Zones:	Up to 20 zone with individual LED Indicators. Expandable to 40 or 80 individual LED indicators. A maximum 200 can be programmed with up to 900 software zones with no LED indication.
Internal Sounder:	Intermittent buzzer (fault condition) High-pitched continuous buzzer (fire condition)
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External Outputs:	
Sounder Outputs:	4 Programmable outputs. Open and short circuit monitoring.1A maximum per output.
Auxiliary Relays:	EN54 format at 1 fault relay and 3 programmable relay voltage free, changeover outputs Contacts rated at 24V AC/DC, 1A, maximum.
User Controls:	MUTE, ACCEPT,SILENCE/RESOUND, SOUND ALARMS&RESET
Programming Controls:	Alphanumeric multi-level keypad with 5 short cut keys and three control keys: ACK, SILENCE, RESET
LED type general panel status indicators:	FIRE,FAULT,ACCEPTED, DISABLEMENT,TEST,SOUNDER FAULT,DELAYED MODE,RELAYS DISABLED,EARTH FAULT,SYSTEM /CPU FAULT,SOUNDERS DISABLED, ALARMS SILENCED,POWER SUPPLY FAULT,AC POWER.

LED type zone Indicators (for 20 zones):	FIRE, FAULT/TEST/DISABLED
Display:	4x40-character LCD alphanumeric display with back-light.
Serial Interface:	3 serial ports with connections for optional RS485 or RS232 plug-in communication cards.
Networking:	Maximum 99 panels can be networked using a Master Network and connected Sub-Networks.

Part Numbers

(c/w CPU, I/O, display cards, LCD display and Power Supply unit)
(Please notice that FCE2000E comply with EN, FCE2000U comply with UL)

FCE2000E GN	Basic Control Panel (Grey, Networkable)
FCE2000E GN	Basic Control Panel (Red, Networkable)
FCE2000E GA	Basic Control Panel (Grey, Not networkable)
FCE2000E GA	Basic Control Panel (Red, Not networkable)

FCE2000U GN	Basic Control Panel (Grey, Networkable)
FCE2000U GN	Basic Control Panel (Red, Networkable)
FCE2000U GA	Basic Control Panel (Grey, Not networkable)
FCE2000U GA	Basic Control Panel (Red, Not networkable)

FCE20001	One loop driven card
FCE20002	Two loops driven card

FCE2000R R/G	LCD Repeater Panel (Full Control Function) (Red or Grey box)
FCE2000RS R/GLCD	Repeater Panel (Limited Function) (Red or Grey box)
FCE2000PDS	Serial Printer Driver
FCE2000PDP	Paralel Printer Driver
FCE2000TP	Thermal printer

Accessories

Equipment	
IM10	Loop driven 10 dry contact input card
SC6	Loop driven 6 supervised output card
CZ6	Loop driven 6 conventional zone input card
CR6	Loop driven 6 relay output card

BB12-7	12VDC- 7Ah Battery
BB12-12	12VDC- 12Ah Battery
BB12-24	12VDC- 24Ah Battery

Softwares	
FCE2000 UDS	Upload-Download Software
FCE2000 RCS	Remote Control Software (on-line)
FCE2000 GS	Graphic Display Software

Manuals	
FCE2000 MI	Installation Manual
FCE2000 MC	Start-up and Commissioning Manual
FCE2000 MP	Programing Manual
FCE2000 MR	Remote Control Software User Manual
FCE2000 MG	Graphic Display Software User Manual

Spare Parts	
FCE2000 LCD	LCD Display
FCE2000 DDC	Display Driver Card
FCE2000 CPU	Main Control Card
FCE2000 PS	Power Supply Unit
FCE2000 IOC	Input/Outout Card
FCE2000 LEX	Keypad for FCE2000
FCE2000 BBR	Red Back Box for FCE2000
FCE2000 BBG	Grey Back Box for FCE2000
FCE2000 BDR	Red Fron Door for FCE2000
FCE2000 BDG	Grey Fron Door for FCE2000

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