



## *Conventional Fire Alarm Equipment*



**You're safe with C-TEC**

# About C-TEC

**When it comes to cost-effective and reliable fire alarm equipment and top quality service - you're safe with C-TEC.**

All our products are manufactured using state-of-the-art production techniques, allowing us to guarantee excellent product quality and equipment that is consistently fit for its intended purpose.

This commitment to quality is underlined by our ISO 9001 accreditation and our status as corporate members of the British Fire Protection Systems Association (BFPSA).



Reliability and durability are built into our products at all stages - from their conception at our dedicated

R&D laboratory to construction, testing and despatch at our £1m purpose-built manufacturing headquarters.

Ease of installation, maintenance and operation are just three

of the assets we believe make our products the obvious choice for users and installers alike. But its not just our products that set us apart from the competition, its our service too. The level of support offered by our knowledgeable sales and technical staff is second to none with comprehensive, practical advice readily available via phone, fax or email.

Whatever your enquiry, we'll do our best to help, as quickly and efficiently as possible.

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# You're safe with C-TEC

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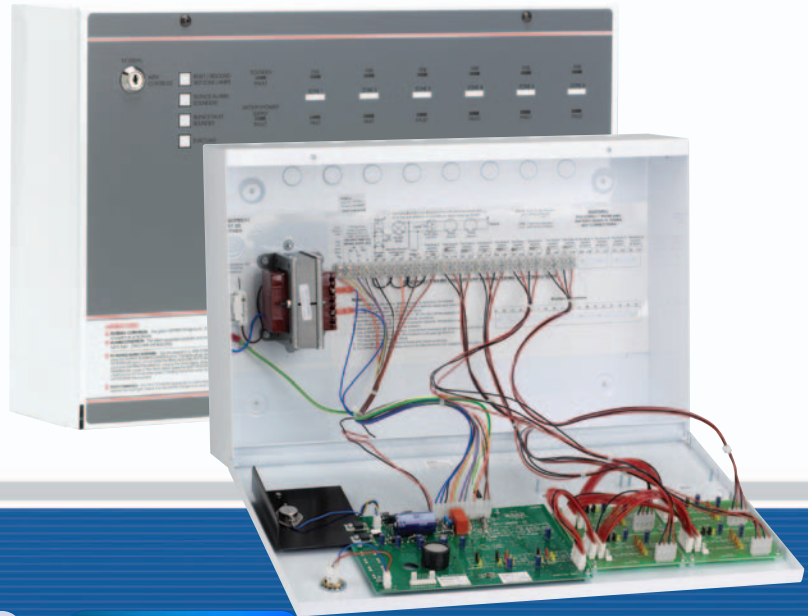
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**C-TEC's FP Range of conventional fire alarm control panels is one of the most robust and cost-effective available.**

Fully compliant with BS 5839 part 4, the range encompasses no less than ten different variants, covering 1 to 14 zones. The size, durability and flexibility of the range makes it ideal for use in all types of commercial and residential property including small shops, factories, schools, warehouses, offices and houses in multiple occupation.

Often referred to as 'the installer's choice', easy-to-follow wiring instructions are printed adjacent to the terminals of all variants and a lift-off lid guarantees an easy first fix and straightforward maintenance. The panel's broad compatibility with virtually all known smoke and heat detector ranges and its ability to interpret a short circuit in any zone(s) as a fire or fault condition make it particularly useful for retro-installations.

An optional head removal facility (which utilises our BF378 range of end-of-line monitoring units) is also available.



## Key features

- ▶ Fully compliant with BS 5839 Part 4
- ▶ Lift-off lid for easy first fix and maintenance
- ▶ Robust metal lid and metal back box with heavy-duty base connections
- ▶ Built-in 24V power supply and battery charger
- ▶ Optional head removal monitoring facility
- ▶ True three wire operation of sounder and detector circuits (Ov is common) for considerable cost savings on installation
- ▶ Separate indicators for open and short circuit fault, sounder fault and battery/power supply fault
- ▶ Non-latching 'class change' sounder input, latching fire and non-latching fault outputs (available via optional expansion loom)
- ▶ Fault buzzer mute facility
- ▶ Space available for the rated capacity of VRLA batteries
- ▶ Short circuit = fire facility (pre-1980 BS, no resistors in call points), selectable on a zone by zone basis - ideal for retro-installations
- ▶ True battery monitoring circuit
- ▶ One man walk test and zone isolate facility (not on EFP1)
- ▶ Ancillary connections for repeater panels and other system add-ons including fault relay modules, fire relay modules, sounder delay relay modules, sounder extender kits, etc (not on EFP1)
- ▶ Multilingual variants available (subject to quantities)

## FP RANGE PANELS

FF380-2	EFP1 single zone fire panel, does not extend
FF382-2	FP 2 zone fire panel, does not extend
FF384-3	FP 4 zone economy fire panel, does not extend
FF384-2	FP 4 zone fire panel, extends to 6 zones
FF386-2	FP 6 zone fire panel, does not extend
FF388-3	FP 8 zone economy fire panel, does not extend
FF388-2	FP 8 zone fire panel, extends to 14 zones
FF390-2	FP 10 zone fire panel, extends to 14 zones
FF392-2	FP 12 zone fire panel, extends to 14 zones
FF394-2	FP 14 zone fire panel, does not extend
FF387Z-2	FP 2 zone extender PCB kit (use to increase number of zones on FP panels)
FF396-2	FP 10 zone repeater panel
FF398-2	FP 20 zone repeater panel

## FP RANGE ANCILLARIES

FF374X	FPX expansion loom (not compatible with EFP1)
FF374FR	FP fault relay module (not compatible with EFP1)
FF374DFR	FP fire relay module (not compatible with EFP1)
FF374DT	FP sounder delay module (not compatible with EFP1)
FF380X	EFPX expansion loom (for use with EFP1 only)
BF378	EMU end of line 'head out' monitoring unit
BF378M	MINIMU miniature end of line 'head out' monitoring unit
BF379	Schottky diodes, 10 pack (BYV1060/SRI60)
FF502P	Four zone monitored sounder circuit extender kit
FF379	Flush bezel for use with FP2 and FP4E panels
FF385	Flush bezel for use with FP4, FP6, FP8E and FP repeater panels
FF387	Flush bezel for use with FP8, FP10, FP12 and FP14 panels

Note: The EFP1 is designed to be surface mounted only

## BATTERY PACKS

BC283/2	24V 1.2 AmpHr battery pack
BC284/2	24V 2.1 AmpHr battery pack
BC285/2	24V 2.8 AmpHr battery pack
BC286/2	24V 7.0 AmpHr battery pack

# FP Fire Panels

## Technical Specifications

### Power Supply Specification

	EFP1	FP2 / FP4E	FP4 / FP6 / FP8E	FP8 / FP10 / FP12 / FP14
Mains supply voltage	230V a.c. ±10% 50/60 Hz	230V a.c. ±10% 50/60 Hz	230V a.c. ±10% 50/60 Hz	230V a.c. ±10% 50/60 Hz
Internal power supply	27V d.c. nominal	27V d.c. nominal	27V d.c. nominal	27V d.c. nominal
Total output current limited to	400mA @ 230 V a.c.	800mA @ 230 V a.c.	1.4A @ 230 V a.c.	3A @ 230 V a.c.
Supply and battery charger monitored for failure	Yes	Yes	Yes	Yes
Batteries monitored for disconnection and failure	Yes	Yes	Yes	Yes

### Detector Circuit Specification

	EFP1	FP2 / FP4E	FP4 / FP6 / FP8E	FP8 / FP10 / FP12 / FP14
Number of circuits	1 (EFP1, non-extendable)	2 (FP2, non-extendable) 4 (FP4E, non-extendable)	4 (FP4, extendable to 6) 6 (FP6, non-extendable) 8 (FP8E, non-extendable)	8 (FP8, extendable to 14) 10 (FP10, extendable to 14) 12 (FP12, extendable to 14) 14 (FP14, non-extendable)
Connector blocks	Heavy duty Niglon-type, largest acceptable conductor size 2.5mm <sup>2</sup>			
Line monitored for open and short circuit faults	Yes	Yes	Yes	Yes
Line monitored for head out/detector removed faults	Yes - if optional BF378 or BF378M End of Line Monitoring unit (not supplied) is fitted in place of end of line resistor			
End of line resistor value (supplied)	6800 Ohm 5% Tol. 0.25W	6800 Ohm 5% Tol. 0.25 W	6800 Ohm 5% Tol. 0.25 W	6800 Ohm 5% Tol. 0.25 W
Detector continuity diodes	Silicon 1N4001 or Schottky type (required if BF378 or BF378M End of Line Monitoring Unit is fitted to show head out faults)			
Call point resistor value (not supplied)	470 - 680 Ohm 0.5 W	470 - 680 Ohm 0.5 W	470 - 680 Ohm 0.5 W	470 - 680 Ohm 0.5 W
Max. number of detectors per zone	20 (max detector current 2mA)	20 (max detector current 2mA)	20 (max detector current 2mA)	20 (max detector current 2mA)
Max. number of manual call points per zone	No limit	No limit	No limit	No limit

### Sounder Circuit Specification

	EFP1	FP2 / FP4E	FP4 / FP6 / FP8E	FP8 / FP10 / FP12 / FP14
Number of circuits	2	2	2	2
Connector blocks	Heavy duty Niglon-type, largest acceptable conductor size 2.5mm <sup>2</sup>			
End of line resistor value	6800 Ohm 5% Tol. 0.25 W	6800 Ohm 5% Tol. 0.25 W	6800 Ohm 5% Tol. 0.25 W	6800 Ohm 5% Tol. 0.25 W
Line monitored for open and short circuit faults	Yes	Yes	Yes	Yes
Outputs fused at	400mA	1A	1A	1.6A
Max. total output current to all outputs	400mA	800mA	1.4A	3A
Max. number of bells at 25mA	16	32	56	120
Max. number of sounders at 20mA	20	40	70	150
Volt free relay contacts (active when sounders active)	n/a	Yes, 1A 30V d.c. max	Yes, 1A 30V d.c. max	Yes, 1A 30V d.c. max

### Auxiliary Inputs / Outputs

Available via optional expansion looms (not supplied)	Class change input, fire output and fault output via EFPX loom	Class change input, zone 1 & zone 2 fire outputs, fault output and reset output via FPX loom. Self-contained fire, fault & sounder delay relay modules are also available (1 per panel instead of FPX loom)
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### Fuses (to IEC - EN60127 Pt2)

Mains terminal block	125mA T 20mm	200mA T 20mm	400mA T 20mm	630mA T 20mm
Sounder outputs	400mA F 20mm (F1, F2)	1A F 20mm (F2, F3)	1A F 20mm (F2, F3)	1.6A F 20mm (F2, F3)
Auxiliary output	n/a	1A F 20mm (F4)	1A F 20mm (F4)	1A F 20mm (F4)
Battery fuse	1A F 20mm (F3)	1.6A F 20mm (F1)	1.6A F 20mm (F1)	3A F 20mm (F1)

### Panel Indicators and Controls

External indicators	Mains On; Zone Fire; Zone Fault; Sounder Fault; Battery/Power Supply Fault	
Internal Indicators	O/C Fault; S/C Fault	O/C Fault; S/C fault; Zone Isolated; Engineer Test Selected
External controls (keyswitch operated)	Reset; Silence Alarm/Fault Sounders; Evacuate	Reset/Resound/Test Zone Lamps; Evacuate; Silence Alarm Sounders; Silence Fault Sounders
Internal controls	Revert to short circuit = fire	Revert to short circuit = fire; One man detector test; Zone isolate

### Dimensions

Approx. dimensions of enclosure (W x H x D)	271 x 200 x 70mm	322 x 267 x 92mm	405 x 267 x 92mm	521 x 334 x 140mm
Weight (without batteries)	2.3 kg	4.3kg	5.0 kg	9.2 kg

### Repeater Specification

Max. number of repeaters	n/a	Three repeaters per main panel. Repeater are available with 10 or 20 zones.
Repeater wiring	n/a	Five control wires plus one extra wire per zone being repeated; Max cable length 200m

### Battery Stand-by Times

	EFP1	FP2	FP4E	FP4	FP6	FP8E	FP8	FP10	FP12	FP14
Quiescent current	25mA	40mA	50mA	50mA	60mA	70mA	70mA	80mA	90m	100mA
Max. load current	0.4A	0.8A	0.8A	1.4A	1.4A	1.4A	3.0A	3.0A	3.0A	3.0A
Stand-by time in hours using 1.2 Ahr batteries	48	-	-	-	-	-	-	-	-	-
Stand-by time in hours using 2.0 Ahr batteries	80	40	32	26	-	-	-	-	-	-
Stand-by time in hours using 2.6 Ahr batteries	-	55	44	38	32	27	-	-	-	-
Stand-by time in hours using 4.0 Ahr batteries	-	90	72	66	55	47	36	31	28	25
Stand-by time in hours using 6.0 Ahr batteries	-	-	-	106	88	75	64	56	50	45
Stand-by time in hours using 10.0 Ahr batteries	-	-	-	-	-	-	121	106	94	85

The quiescent current given is for the following conditions - mains supply failed, fault beeper muted, no aux. output connections, detector and sounder end of line devices fitted, no other loads supplied by the panel. The battery stand-by times are guidelines only based on the above conditions and a full sounder load for 30 minutes.

Additional loads that increase the quiescent current in the normal state must be considered when calculating stand-by time. The fault beeper being active will add 10mA and reduced sounder loads will increase the stand-by time. Batteries in poor condition greatly reduce stand-by time.

C-TEC's MFP Range of conventional fire alarm control panels fills the gap between low cost, low specification fire alarm control panels and high price, high specification equipment.

Expandable from 4 to 28 zones in four zone steps, the MFP's balance of features and competitive pricing makes it ideal for a variety of applications, ranging from new installations to upgrades and extensions of new systems.

Easy to follow wiring instructions are printed adjacent to the terminals of all variants and a lift-off lid guarantees an easy first fix and straightforward maintenance.

Fully compliant with BS 5839 Part 4 and the head removal monitoring requirements of BS 5839 Part 1, a variety of 'add on' boards are also available, converting the MFP into one of the most sophisticated conventional fire panels available.



## Key features

- ▶ Fully compliant with BS 5839 Part 4
- ▶ Robust metal lid and metal back box with heavy-duty base connections
- ▶ Four sounder circuits and head out (detector removed) fault indication provided as standard
- ▶ Expandable from 4 to 28 zones in 4 zone steps
- ▶ Built-in 24V power supply and battery charger
- ▶ End of line units included (one per zone)
- ▶ True three wire operation of sounder and detector circuits (0v is common) for considerable cost savings on installation
- ▶ Separate indication of open circuit, short circuit, head out, sounder and battery/power supply faults
- ▶ Non-latching 'class change' sounder input, latching fire and non-latching fault outputs (available via optional MFPX expansion loom)
- ▶ Fault buzzer mute facility
- ▶ Space available for the rated capacity of VRLA batteries
- ▶ Short circuit = fire facility (pre-1980 BS, no resistors in call points), selectable on a zone by zone basis for retro-installations
- ▶ Non-latching zones facility for cross connection to other panels
- ▶ Wide range of engineer facilities including one man detector test, sounder walk test, sounder isolate, sounder delay and auxiliary isolate
- ▶ Up to eight two-wire repeaters with full external control (except isolate) per system (requires one FF596T Repeater Transmitter PCB fitted at the main panel).
- ▶ Multilingual variants available (subject to quantities).

## MFP RANGE PANELS

FF504	MFP 4 zone microprocessor fire panel, extends to 12 zones
FF508	MFP 8 zone microprocessor fire panel, extends to 12 zones
FF512	MFP 12 zone microprocessor fire panel, does not extend
FF516	MFP 16 zone microprocessor fire panel, extends to 28 zones
FF520	MFP 20 zone microprocessor fire panel, extends to 28 zones
FF524	MFP 24 zone microprocessor fire panel, extends to 28 zones
FF528	MFP 28 zone microprocessor fire panel, does not extend
FF501Z	MFP 4 zone extender pcb kit (use to increase number of zones on MFP master)
FF596	MFP Repeater panel, 8 zones, extends to 28 zones (batteries not required)
FF596R	MFP Repeater, 8 zone extender pcb kit. Use to increase number of zones on MFP Repeater panels
FF596T	MFP Repeater transmitter PCB kit. One required per repeater system (fit at master panel).

## MFP RANGE ANCILLARIES

FF574X	MFPX expansion loom and terminals
FF502P	4 zone monitored sounder circuit extender kit
FF385	Flush bezel for MFP4, MFP8, MFP12 and MFP Repeaters
FF387	Flush bezel for MFP16, MFP20, MFP24 and MFP28

## BATTERY PACKS

BC283/2	24V 1.2 AmpHr battery pack
BC284/2	24V 2.1 AmpHr battery pack
BC285/2	24V 2.8 AmpHr battery pack
BC286/2	24V 7.0 AmpHr battery pack

# MFP Fire Panels

## Technical Specifications

### Power Supply Specification

	MFP4 / MFP8 / MFP12	MFP16 / MFP20 / MFP24 / MFP28
Mains supply voltage	230 Va.c±10% 50/60Hz	230Va.c±10% 50/60Hz
Internal power supply	27Vd.c.	27Vd.c.
Total output current limited to	1.4A @ 240 Va.c.	3A @ 240 Va.c.
Supply and battery charger monitored for failure	Yes	Yes
Batteries monitored for disconnection and failure	Yes	Yes

### Detector Circuit Specification

Number of circuits	4 (MFP4,extendable to 12) 8 (MFP8,extendable to 12) 12 (MFP12,non-extendable)	16 (MFP16,extendable to 28) 20 (MFP20,extendable to 28) 24 (MFP24,extendable to 28) 28 (MFP28,non-extendable)
Line monitored for open and short circuit faults	Yes (short circuits can be disabled for each zone)	Yes (short circuits can be disabled for each zone)
Line monitored for head out/detector removed faults	Yes	Yes
End of line device (provided)	Miniature circuit board	Miniature circuit board
Detector continuity diodes	Silicon 1N4001 or Schottky type	Silicon 1N4001 or Schottky type
Call point resistor value	470 - 680 Ohm 0 .5WW	470 - 680 Ohm 0 .5W
Max.number of smoke detectors per zone	20 (max detector current 2mA)	20 (max detector current 2mA)
Max.number of manual call points per zone	No limit	No limit

### Sounder Circuit Specification

Number of circuits	4	4
End of line resistor value	6800 Ohm 5% Tol.0 .25 W	6800 Ohm 5 % Tol.0.25 W
Line monitored for open and short circuit faults	Yes	Yes
Outputs fused at	1A	1.6A
Maximum total output current to all outputs	1.4A	3A
Maximum number of bells @ 25mA	56	120
Maximum number of electronic sounders @ 20mA	70	150
Auxiliary volt free relay contacts	1A 30 Vd.c max (do not connect mains voltages)	1A 30 Vd.c max (do not connect mains voltages)

### Auxiliary Inputs/Outputs

Available via optional MFPX expansion loom (not supplied)	Class change input;Fire 1,Fire 2 and Fault outputs. These open collector outputs have a max. sink current of 100mA each and are typically used to drive relays (such as C-TEC's BF376) to control ventilation systems, gas valves and door release systems (do not use the panel's power for door release systems as this will drastically reduce battery stand-by time).
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### Fuses (to IEC - EN60127 Pt2)

Mains terminal block	400mA T 20mm	630mA T 20mm
Sounder outputs F1,F2,F3,F4	1A F 20mm	1.6A F 20mm
Auxiliary output F6	1A F 20mm	1A F 20mm
Battery fuse F5	1.6A F 20mm	3A F 20mm

### Panel Indicators and Controls

External indicators	Mains On; General Fire; Zone Fire; Zone Fault (indicates S/C, head out, 0/C & zone disabled); Sounder Fault; Processor Fault; Battery/Power Supply Fault; Aux.Outputs Disabled; Fault Sounder (indicates fault,silenced fire and delayed alarm sounders).
Internal indicators	One Man Detector Test; Sounder Walk Test
External controls (keyswitch operated)	Reset/Test Scroll; Silence Alarm/Fault Sounders; Evacuate; Disable.
Internal controls	One Man Detector Test; Sounder Walk Test; Sounder Isolate; Sounder Delay; Revert to short = fire; Non-latching zones

### Dimensions

Approx.dimensions of enclosure (W x H x D)	405 x 267 x 92mm	521 x 334 x 140mm
Battery volume dimensions (W x H x D)	310 x 110 x 67mm	350 x 110 x 105mm
Weight (without batteries)	5.0 Kg	9.5 Kg

### Repeater Specification

Max.number of repeaters	One repeater transmitter PCB (part no.FF596T) fitted at the main panel allows the connection of up to eight monitored MFP Repeaters.
Repeater wiring	Two wires (power and data).Star or daisy chain wiring.

### Battery Stand-by Times

	MFP4	MFP8	MFP12	MFP16	MFP20	MFP24	MFP28
Quiescent current	45mA	60mA	75mA	90mA	105mA	120mA	135mA
Max.load current	1.4A	1.4A	1.4A	3A	3A	3A	3A
Stand-by time in hours using 2.0 A hr batteries	40	30	25	20	18	16	14
Stand-by time in hours using 2.6 A hr batteries	55	40	35	30	25	22	19
Stand-by time in hours using 6.0 A hr batteries	130	100	80	65	55	50	45
Stand-by time in hours using 10.0 A hr batteries	220	165	130	110	95	80	75
Stand-by time in hours using 12.0 A hr batteries	260	200	160	130	110	100	85

The quiescent currents are given for the following conditions - no mains supply,fault beeper active,no aux.output connections,end of line devices and resistors only fitted to detector and sounder loops.The battery stand-by times are guidelines only based on the above conditions.Additional loads that increase the quiescent current in the normal state and sounder loads must be considered when calculating stand-by time.Batteries in poor condition greatly reduce stand-by time.

Fully compliant with EN54 parts 2 and 4, C-TEC's CFP conventional fire alarm panel offers an array of user and installer friendly features.

Supplied in an attractive flush or surface mountable plastic enclosure, 2, 4 and 8 zone versions are available, each featuring four conventional sounder circuits, class change and alert inputs, two fire outputs, a fault output and a reset output.

A wide range of engineering functions are also provided including (depending on the model purchased) selectable zone delays, coincidence and non-latching zone facilities. Comprehensive test and fault finding facilities are also provided on all variants.



LPCB Ref. 176a  
to BS EN 54 pts 2 & 4

In addition to our standard and economy CFP panels, three LPCB approved versions are available. The LPCB stamp of approval is recognised worldwide and demonstrates that the CFP has been tested and certified as being compliant with EN54 parts 2 and 4 by the Loss Prevention Certification Board.

## Key features

- ▶ Fully compliant with EN54 Parts 2 and 4
- ▶ Standard, Economy and LPCB approved versions available with 2, 4 or 8 zone circuits
- ▶ Installer-friendly design accommodates easy first fix and straightforward maintenance
- ▶ Attractive flush or surface mountable plastic enclosure
- ▶ Four conventional sounder circuits provided on all models
- ▶ Auxiliary remote, auxiliary fire, fault and reset outputs
- ▶ 'Class change' and alert inputs
- ▶ Low quiescent current
- ▶ Intuitive user-friendly interface
- ▶ End of line units included (one per zone)
- ▶ Keypress or push button entry (dependent on model purchased)
- ▶ Integral 1.5A switch mode PSU
- ▶ Detector and sounder circuits share common negative allowing straightforward three-wire retro-installation
- ▶ Ancillary connections provided for up to eight two-wire repeaters (one CFP761 network driver card required per system) and optional CFP relay boards (ancillary connections are not provided on CFP Economy panels)
- ▶ Wide range of engineering functions, as detailed below:-

### Which CFP?

	Zone delay facility	Non-latching zones facility	Coincidence (double-knock) facility	Zone test facility	Fault diagnostic facilities	Ancillary connections for system expansion
CFP STANDARD PANELS	✓	✓	✓	✓	✓	✓
CFP ECONOMY PANELS	X	X	X	✓	✓	X
CFP LPCB APPROVED PANELS	✓	X	X	✓	✓	✓

This chart illustrates the different engineering functions available on the CFP range of fire panels

## CFP STANDARD PANELS & ANCILLARIES

CFP702-4	CFP standard 2 zone panel, code entry version, does not extend
CFP702-4K	CFP standard 2 zone panel, keyswitch version, does not extend
CFP704-4	CFP standard 4 zone panel, code entry version, does not extend
CFP704-4K	CFP standard 4 zone panel, keyswitch version, does not extend
CFP708-4	CFP standard 8 zone panel, code entry version, does not extend
CFP708-4K	CFP standard 8 zone panel, keyswitch version, does not extend
CFP760	CFP 8 zone repeater panel, up to 8 per system, code entry version
CFP760K	CFP 8 zone repeater panel, up to 8 per system, keyswitch version
CFP761	CFP network driver card (one required per repeater system, fit at main)
CFP762	CFP relay output card (provides reset, fault, aux & remote relay outputs)
CFP763	CFP relay output per zone card (as CFP762 plus 8 output per zone)

## CFP ECONOMY PANELS

Include all CFP standard panel features except coincidence, zone delay and non-latching zone facilities. CFP economy panels are not compatible with CFP repeaters or CFP relay output cards

CFP702E-4	CFP economy 2 zone panel, code entry version, does not extend
CFP702E-4K	CFP economy 2 zone panel, keyswitch version, does not extend
CFP704E-4	CFP economy 4 zone panel, code entry version, does not extend
CFP704E-4K	CFP economy 4 zone panel, keyswitch version, does not extend
CFP708E-4	CFP economy 8 zone panel, code entry version, does not extend
CFP708E-4K	CFP economy 8 zone panel, keyswitch version, does not extend

## CFP LPCB APPROVED PANELS

Include all CFP standard panel features except coincidence & non-latching zone facilities.

CFP702-4/LPC	CFP 2 zone panel, LPCB approved to EN54-2/4, code entry version, does not extend
CFP704-4/LPC	CFP 4 zone panel, LPCB approved to EN54-2/4, code entry version, does not extend
CFP708-4/LPC	CFP 8 zone panel, LPCB approved to EN54-2/4, code entry version, does not extend

## BATTERY PACKS

BC283/2	24V 1.2 AmpHr battery pack
BC284/2	24V 2.1 AmpHr battery pack
BC285/2	24V 2.8 AmpHr battery pack
BC287/2	24V 3.3 AmpHr battery pack
BC286/2	24V 7.0 AmpHr battery pack

# CFP Fire Panels

## Technical Specifications

### Power Supply Specification

	CFP STANDARD	CFP ECONOMY	CFP LPCB APPROVED
Mains supply voltage		230V 50/60Hz	
Mains rated current		350mA maximum	
Internal power supply		19V - 28.5V (27V nominal). Ripple 7V maximum (battery fault)	
Total output current limited to		1.5A	
Supply and battery charger monitored for failure		YES (battery charger is also temperature compensated)	
Batteries monitored for disconnection and failure		YES	
Batteries protected against deep discharge		YES (Deep discharge cut off approx. 21 volts)	
Max. battery size and type		2 x 12V 3.3Ahr VRLA (Valve Regulated Lead Acid) connected in series	
Mains fuse		240V 1A HRC ceramic 20mm compliant with IEC (EN60127 PT2)	
Battery fuse		1.6A F 20mm compliant with IEC (EN60127 PT2)	
Current draw from battery (Mains failed)		1.5A maximum	

### Detector Circuit Specification

Number of circuits	2 (CFP702-4 & CFP702-4K) 4 (CFP704-4 & CFP704-4K) 8 (CFP708-4 & CFP708-4K)	2 (CFP702E-4 & CFP702E-4K) 4 (CFP704E-4 & CFP704E-4K) 8 (CFP708E-4 & CFP708E-4K)	2 (CFP702-4/LPC) 4 (CFP704-4/LPC) 8 (CFP708-4/LPC)
Cable type	Fire resistant screened cable, minimum conductor size 1mm <sup>2</sup>		
Connector blocks	Plug-on type, largest acceptable conductor size 1.5mm <sup>2</sup>		
Max cable length per circuit	500 metres		
Line monitored for open circuit and short circuit	YES		
Line monitored for detector removal	YES - end of line monitoring device modules provided		
Maximum allowable impedance (each conductor)	20W		
Maximum cable capacitance	0.27mF		
Call point resistor value	470 to 680 Ohms		
Max. number of smoke/heat detectors per zone	25		
Max. combined number of detectors & manual call points	32 per zone		

### Sounder Circuit Specification

Number of circuits	4
Cable type	Fire resistant screened cable, minimum conductor size 1mm <sup>2</sup>
Connector blocks	Plug-on type, largest acceptable conductor size 1.5mm <sup>2</sup>
Max cable length per circuit	500 metres
End of line resistor value	6800 5% Tol. 0.25W (blue, grey, red, gold)
Each circuit monitored for open and short circuit	YES
Alarm voltage	27V maximum, 20V minimum (final battery voltage)
Sounder circuit fuses (one per circuit)	Resettable type (200mA min. hold current; 400mA max. trip current; 50mA when tripped. Reset when faults removed)
Maximum total sounder output current to all outputs	4 x 200mA = 800mA
Maximum No. of bells @ 25mA	32
Maximum No. of electronic sounders @ 20mA	40 (sounders must be polarised)

### Auxiliary Outputs

Type	Non monitored open collector transistor
Max. sink current	30mA each
Max. open circuit voltage	27Vd.c
Reset output	Active during reset cycle
Remote output	Active during any unsilenced fire condition (provided all relevant delays have expired)
Auxiliary output	Active during any fire condition (provided all relevant delays have expired)
Fault output	Active when no faults are present - failsafe to open circuit
24V aux power output (for use with the above)	Output protected by a resettable fuse (100mA min. hold current). Resets when fault removed

### Auxiliary Inputs

Class Change (makes sounders sound continuously)	Connect to 0V to trigger. Max. input voltage 27V. (Non-latching)
Alert (makes sounders pulse intermittently)	Connect to 0V to trigger. Max. input voltage 27V. (Non-latching)

### User & Engineer Controls

General user controls (access level one)	Mute internal sounder; Override delays; Enter access levels			
Authorised user controls (access level two)	Silence alarm sounders; Activate alarm sounders; Reset the system; Test the lamps; Disable/enable zones Disable/enable fault output; Disable/enable remote output; Disable/enable sounders, Disable/enable auxiliary output; Disable/enable output delays (not available on CFPE).			
Engineer controls (access level three)	<table border="1"> <tr> <td>Program coincidence (double knock) Setup zones for non-latching operation Program delays Invoke one man walk test Enter fault diagnostic facilities</td> <td>Invoke one man walk test Enter fault diagnostic facilities</td> <td>Program delays Invoke one man walk test Enter fault diagnostic facilities</td> </tr> </table>	Program coincidence (double knock) Setup zones for non-latching operation Program delays Invoke one man walk test Enter fault diagnostic facilities	Invoke one man walk test Enter fault diagnostic facilities	Program delays Invoke one man walk test Enter fault diagnostic facilities
Program coincidence (double knock) Setup zones for non-latching operation Program delays Invoke one man walk test Enter fault diagnostic facilities	Invoke one man walk test Enter fault diagnostic facilities	Program delays Invoke one man walk test Enter fault diagnostic facilities		

### Indicators

External indicators	General fire; Zone fire; Zone fault; Zone disabled; Zone test; Supply present; Remote output activated; Remote output status; Test; Accessed; General disablement; Fault output status; General fault; System fault; Repeater fault (not available on CFPE); System status; Sounder status; Power supply fault; Auxiliary output status; Output delays (not available on CFPE).
Internal indicators	System fault (distinguishes between 'watchdog', 'site memory' and 'phase lock loop' faults); Zone fault (distinguishes between open circuit and short circuit faults); Hazardous voltages present; Repeater fault (indicates which repeaters, if fitted, are faulty - not available on CFPE)

### Dimensions

Physical size (WxHxD)	Back box (incl. lip) 380 x 235 x 77mm; depth of hole for flush mounting 367 x 223 x 75mm; Lid 380 x 235 x 16mm
Weight	1.75kg (without batteries)

### Battery Stand-by Times

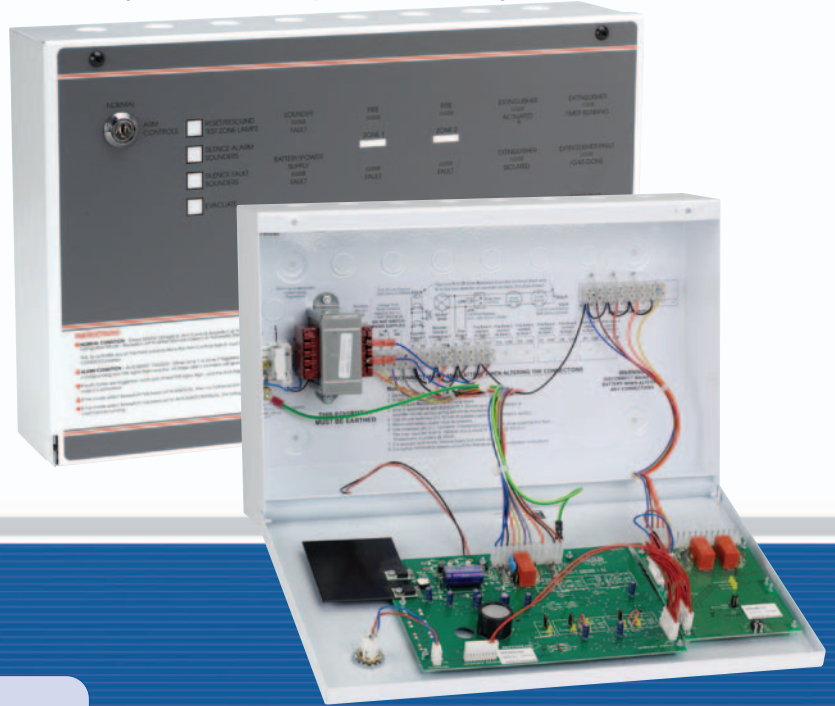
To determine the capacity of batteries required for the CFP for a given stand-by period, the following formula should be used:- Standby Time in Ahr = 1.25 x ((TxA) + H x (P+Z))  
The multiplier 1.25 is present to account for lost capacity over the life of the batteries. H = Number of hours standby required; P = The quiescent current of the Panel = 0.025A  
This figure is with the Mains failed, beeper operative and the Power Supply and General Fault indicators lit. If there are other quiescent drains on the Panel then these must be added in; Z = The total quiescent current of all zone devices. As a guideline, the quiescent current of most modern detectors is typically 0.0005A (50µA), and that of manual call points is zero. To obtain accurate figures consult the device manufacturers' own specifications; A = The total alarm current of the sounders (plus any other devices connected to other alarm outputs); T = The amount of time in hours required for the alarm (most commonly being half an hour).



The FP Automatic Extinguisher panel is based upon C-TEC's well-proven FF382-2 standard two zone conventional fire alarm panel.

Cost-effective and easy-to-install, it can be configured to trigger automatically when both of its detector circuits are in a 'fire' condition or manually via its manual release circuit. An adjustable timer is provided to delay the extinguishant from firing for up to 120 seconds or, alternatively, instantaneous release can be selected via a secure link inside the panel.

A new Environmental Sensor Board, the BF384H, can also be connected to the panel if desired for use in remote monitoring situations where adverse environmental sensing, such as flood alert, is required.



## Key features

- ▶ Lift-off lid for easy first fix and straightforward maintenance
- ▶ Panel LEDs give comprehensive overview of system status
- ▶ Separate manual zone facility
- ▶ Coincidence relay gives changeover voltage free contacts
- ▶ Adjustable time delay
- ▶ Freeze timer function (stops and then resumes timer count)
- ▶ Reset timer function
- ▶ Manual timer override facility
- ▶ Fully isolatable
- ▶ True battery monitoring circuit
- ▶ Keyswitch control changes system status from manual to automatic/manual
- ▶ Comprehensive operation instruction on front lid
- ▶ Multilingual variants available (subject to quantities)

### FP AUTOMATIC EXTINGUISHER PANEL

FF383H-2	FP Automatic Extinguisher Panel
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### FP AUTOMATIC EXTINGUISHER PANEL ANCILLARIES

FF385	Flush bezel for FF383H-2 Automatic Extinguisher Panel
BF372	Yellow extinguishant release surface mounting call point
FF372/E	Multi-purpose environmental sensor board (for optional mounting inside FF383H-2)
FF372/W	Water sensing board (for optional interfacing to FF372/E sensor board)
FF372/M	Mains current sensing board (for optional interfacing to FF372/E sensor board)

### BATTERY PACKS

BC283/2	24V 1.2 AmpHr battery pack
BC284/2	24V 2.1 AmpHr battery pack
BC285/2	24V 2.8 AmpHr battery pack
BC286/2	24V 7.0 AmpHr battery pack

# FP Extinguisher Panels

## Technical Specifications

### Power Supply Specification

Mains supply voltage	205-260 V a.c 50 Hz 1 Ph
Internal power supply	24V d.c Nominal
Total output current limited to	1400mA@240 VAC
Auxiliary power output	27 V d.c Nominal
Mains supply monitored for failure	YES
Battery charger monitored for failure	YES
Batteries monitored for disconnection and failure	YES

### Detector Circuit Specification

Number of circuits	2
Line fault monitored for open circuit	YES
Line fault monitored for short circuit	YES (can be disabled)
End of line resistor (supplied) value	1 6800 Ohm
Call point resistor value	470 Ohm
Maximum number of smoke detectors per circuit	20@100uA

### Sounder Circuit Specification

Number of circuits	2
End of line resistor value	6800 Ohm
Line fault monitored for open circuit	YES
Line fault monitored for short circuit	YES
Outputs fused at	1 Amp
Maximum no of bells @25mA each bell	56
Maximum no of electronic sounders @ 20mA	70
Auxiliary relay contacts	1A 30V d.c max Volt Free (do not connect mains voltages)

### Auxiliary outputs

Voltage free changeover contacts on alarm	Use for first stage fire alert
Auxiliary 24 VDC	May be removed on alarm, 100mA max
Coincidence second stage sounder output	250mA max continuous
Auxiliary manual indicator output	For remote LED indication
Auxiliary automatic indicator output	For remote LED indication
Changeover contacts on start of time delay	Voltage free contacts
Changeover contacts on activation of extinguishant release circuit	Voltage free contacts

### Auxiliary inputs

Low pressure gas gone	For normally open pressure switches on the extinguishant pipework. Open & short circuit fault monitored
Manual release circuit	Open circuit monitored release circuit for manual call points or similar normally open switches
Remote automatic/manual automatic keyswitch	Allows multiple connection of remote keyswitches
Reset timer to zero	For normally open momentary switches. When released the timer starts again
Stop timer	For normally open momentary switches. When released the timer continues from where it was stopped

### Fuses

Mains input	25mm 3.0 Amp
Sounder outputs	20mm 1.0 Amp
Auxiliary outputs	20mm 1.0 Amp
Battery fuse	20mm 1.6 Amp

### Controls

External controls (keyswitch operated)	Reset/Resound/Test Zone Lamps; Silence Alarm Sounders; Silence Fault Sounders; Evacuate (A second keyswitch changes the system from Manual to Automatic/Manual)
Internal controls	Engineer's one man test; Zone Isolate; Revert to short circuit = fire (no resistors in call points); Isolate extinguishant firing circuit; Instant manual extinguishant firing; Timed manual extinguishant firing, adjustable from 7-120 seconds

### Indicators

External indicators	Sounder Fault; Battery/Power Supply Fault; Mains On; Zone Fire; Zone Fault; Extinguisher Activated; Extinguisher Timer Running; Extinguisher Isolated; Extinguisher Fault/Gas Gone; Manually Activated; Manual; Automatic/Manual
Internal indicators	Open circuit zone fault; Short circuit zone fault; Zone isolated; Engineer Test Selected; Manual release circuit; Open circuit fault; Detonator circuit is open circuit or fuse blown; Low pressure and/or gas gone

### Dimensions

Enclosure (width x height x depth)	405 x 267 x 92mm
Weight (without batteries)	5.0 kg

### Battery Stand-by Times

Quiescent drain of system in muted mains fail mode	60mA
Stand-by time with 2.6 AHR batteries	24 Hr*
Stand-by time with 6.0 AHR batteries	72 Hr*

\*the battery stand-by time which will allow half an hour of full alarm load will vary and depends on the system configuration.

**BF370R SURFACE MOUNTING  
CRACK GLASS FIRE CALL POINT, 470Ω**  
**BF370RF FLUSH MOUNTING  
CRACK GLASS FIRE CALL POINT, 470Ω**

Fully approved to the latest EN54-11 standard, our new-look BF370R and BF370RF crack glass manual call points have been specially designed to reduce installation time, accidental damage and costs. Each unit comes with a special terminal block where all initial installation cabling can be made and tested for open circuit, short circuit and earth faults prior to it being connected to the back of the actual call point. This setup means the call point itself does not have to be fitted until the final commissioning stage, reducing the likelihood of damage from other trades. Supplied with a 470 Ohm resistor, both versions have a combined test, reset and lid-release mechanism meaning only one tool (part no. BF370KRK) is required for maintenance purposes. To help preserve the overall integrity of the system, illegal removal of the call point's lid will result in the call point operating and the system going into alarm. Spare crack glass elements (part no. BF371) and hinged plastic protective covers (part no. BF370MC) are also available.



**BF370/R SURFACE MOUNTING  
IP55 RAINPROOF CRACK GLASS  
FIRE CALL POINT**

A surface mounting crack glass fire alarm call point specifically designed for outdoor use within intrinsically safe (I.S.) systems using suitable Zener barriers. Offering IP55 rainproof ingress protection, the BF370/R has been designed so it can protect against other hazards, as defined in paragraph 1.2.7 of annex II of the ATEX Directive 94/9/EC.



**SPECIFICATION**

Cable termination:	0.5-2.5mm <sup>2</sup>
IP rating:	IP55
Maximum voltage:	30Vd.c
Current rating:	0.5A
Operating temperature range:	-30°C to +70°C.
Weight & Dimensions (WxHxD):	450g; 121x118x80mm
Colour:	Red

**SPECIFICATION**

Cable termination:	0.5-2.5mm <sup>2</sup>
Maximum voltage:	30Vd.c
Current rating:	2 Amps
IP rating:	IP24D
Material:	PC/ABS
Weight:	160g (BF370R); 110g (BF370RF)
Dimensions (WxHxD):	89x93x59mm (BF370R); 89x93x27mm (BF370RF)
Colour:	Red, RAL3001

**BF370MR SURFACE MOUNTING  
NO BREAK FIRE CALL POINT, 470Ω**  
**BF370MFR FLUSH MOUNTING  
NO BREAK FIRE CALL POINT, 470Ω**

The BF370MR and BF370MFR are 'no break' resettable versions of the crack glass call points described above. Instead of a 'crack glass' element, they feature a plastic resettable element, making them ideal for use in applications where there are high levels of nuisance calls/vandalism.



**BF370/W SURFACE MOUNTING  
IP67 WATERPROOF CRACK GLASS  
FIRE CALL POINT**

Our BF370/W waterproof call point is similar to our BF370/R rainproof call point but is supplied in a different housing that offers IP67 waterproof ingress protection.



**SPECIFICATION**

Cable termination:	0.5-2.5mm <sup>2</sup>
IP rating:	IP67
Maximum voltage:	30Vd.c
Current rating:	0.5A
Operating temperature range:	-30°C to +70°C.
Weight & Dimensions (WxHxD):	485g; 124x124x58mm
Colour:	Red

**SPECIFICATION**

Cable termination:	0.5-2.5mm <sup>2</sup>
Maximum voltage:	30Vd.c
Current rating:	2 Amps
IP rating:	IP24D
Material:	PC/ABS
Weight:	160g (BF370MR); 110g (BF370MFR)
Dimensions (WxHxD):	89x93x59mm (BF370MR); 89x93x27mm (BF370MFR)
Colour:	Red, RAL3001

**BF370FR SURFACE MOUNTING  
CRACK GLASS FIRE CALL POINT, 470Ω**  
**BF370FFR FLUSH MOUNTING  
CRACK GLASS FIRE CALL POINT, 470Ω**

Our BF370FR surface and BF370FFR flush mounting manual call points have been engineered to fully comply with EN54-11. They feature a crack glass element and a 470 Ohm resistor. Spare crack glass elements (part no. BF371F/CX), test keys (part no. BF370FRK) and optional protective covers (part no. BF370FC) are also available.



**BF372 SURFACE MOUNTING  
YELLOW EXTINGUISHANT RELEASE  
CALL POINT**

Our BF372 surface mounting extinguishant release call point is ideal for use with our FF383H-2 automatic extinguisher panel. Finished in yellow ABS with a polycarbonate crack glass window and hinged protective cover, it is based on our popular BF370R standard red crack glass call point. It can be set to operate as a normally open or a normally closed call point by connecting the terminal block to the required connection on the back of the call point. If required, single pole changeover switching can be achieved with the use of two terminal blocks.



**SPECIFICATION**

Cable termination:	0.5-2.5mm <sup>2</sup>
Maximum voltage:	30Vd.c
Current rating:	2 Amps
IP rating:	IP24D
Material:	PC/ABS
Weight & Dimensions (WxHxD):	160g; 89x93x59mm (without cover)
Colour:	Yellow, RAL1006

**SMOKE & HEAT DETECTORS**

Please contact our sales desk for information on our wide and varied range of conventional smoke and heat detectors.

**SPECIFICATION**

Cable termination:	0.28-2.5mm <sup>2</sup>
Voltage rating:	24V systems
Configuration:	470 Series (NO)
IP rating:	IP42
Material:	ABS plastic
Weight:	180g (BF370FR); 100g (BF370FFR)
Dimensions (WxHxD):	87x87x53mm (BF370FR); 87x87x36mm (BF370FFR)
Colour:	Red

# Fire Alarm Accessories

Bells • Sounders • Sirens • Beacons • Door Retainers

## BF336

### 24V RED POLARISED FIRE BELL

With its highly efficient motorised movement, the BF336 fire bell comes with a multi-fixing base and is fitted with a series diode to facilitate fault monitoring. With a sound output of 93dB, the unit is extremely easy to install with terminals provided for 2.5mm<sup>2</sup> cable. A weatherproof version (the BF336W) is also available on request.



#### SPECIFICATION

Sound Output:	93dB
Current consumption @ 24Vdc:	25mA
Nominal voltage:	24Vdc
Dimensions:	152 diameter x 63mm deep
Weight:	1.05Kg
IP Rating	IP42

## BF336C

### 24V RED POLARISED FIRE BELL

Our low-profile BF336C polarised fire bell offers maximum performance and rapid installation. Designed for installation directly onto a wall or by the use of any standard mounting box, it includes an easily accessible terminal block for system wiring and is ideal for most fire alarm and class change signalling applications.



#### SPECIFICATION

Sound Output @ 1 metre:	96dBa
Current Consumption @ 24Vdc:	c. 25mA
Voltage Range:	18Vdc - 28Vdc
Number of Tones:	1
Temperature Range:	-10°C to +55°C
Weight (per unit packed):	527g
Approx. dimensions	150mm diameter x 54mm deep
IP Rating:	IP42

## BF334C/4103R

### VIPER 4-TONE SPATIAL SOUNDER

Designed for applications where low current consumption relative to sound output is required, our Viper spatial sounder requires only 11mA @ 24V d.c to provide an output of 103 dBa @ 1 metre. With an operating frequency of 800 to 1000Hz, it provides sound within the frequency range specified by BS5839. Tones are available by selecting either warble, sweep or pips via the jumper fitted to the sounder's PCB. By using three wires, a second stage alarm may be switched so that the continuous tone overrides the selected tone.



#### SPECIFICATION

Output @ 1 metre 24Vdc:	103dBa
Current @ 24V dc:	c. 11mA
Voltage Range:	8-35V dc
Number of Tones:	4
Volume control:	-30dBa
IP Rating:	IP65
Temperature Range:	-20°C to +70°C
Weight (per unit unpacked):	200g
Approx. dimensions	105mm diameter x 85mm deep

## BF330CSR / BF330CDR

### RED 32 TONE

#### VANTAGE SPATIAL SOUNDER

Our 32-tone Vantage sounder offers a wide range of operating frequencies from 440Hz to 2900Hz. Its 32 synchronised tones have been selected to comply with the latest sound patterns from across the world. Three volume settings and a suitable BS5839 compliant tone can be selected at the DIL switch provided, and the use of a third wire enables a second stage alarm to be switched in to override the selected tone. Quick fit installation is achieved by the sounder's bayonet fixing arrangement which is available on both versions, the IP43 rated shallow base sounder (part no BF330CSR) or the IP65 rated deep base sounder (part no BF330CDR).



#### SPECIFICATION

Sound Output @ 1 metre (Tone 1):	Low = 86dBa; Med = 101dBa; High = 106dBa
Current Consumption @ 24Vdc:	Low = ≤9mA; Med = ≤18mA; High = ≤36mA
Voltage Range:	15-35Vdc
Number of Tones:	32
Operating Frequency:	440 Hz to 2900 Hz
IP Rating:	IP43 (BF330CSR); IP65 (BF330CDR)
Temperature Range:	-20°C to +70°C
Weight (per unit packed):	220g (BF330CSR); 250g (BF330CDR)
Approx. dimensions:	93mm diameter x 84mm deep (BF330CSR); 93mm diameter x 101mm deep (BF330CDR)

## BF330SR / BF330DR

### RED 32 TONE POLARISED FIRE SIREN

With their 32 selectable tones, high sound output, low power consumption and rugged construction, the BF330SR shallow and BF330DR deep base sounders are ideal for fire, intruder and other hazard warning systems. Attractively designed and easy to install, each sounder has a diameter of just 93mm.



#### SPECIFICATION

Sound output @ 1 metre:	64-111dB (tone dependent)
Current consumption @ 24V:	6-33mA (tone dependent)
Nominal voltage:	12/24Vdc
Dimensions:	93mm diameter x 75mm (BF330SR); 93mm diameter x 105mm (BF330DR)
Weight:	290g (BF330SR); 311g (BF330DR).

## BF332C VECTOR WHITE PLATFORM SOUNDER

The Vector platform sounder is compatible with most makes of commercial grade fire detector. With an overall height of only 25mm, it offers a high, clear sound output and rapid installation via its spacious rising clamp terminals. Each sounder operates within the frequency range of 800 - 1000Hz and offers four tones. A second stage alarm is available if a third wire is fitted. A white cover plate (the BF332C/LIDW) is also available, transforming the Vector into a useful spatial sounder.



#### SPECIFICATION

Output @ 1 metre 24Vdc (with detector):	91dBa
Output @ 1 metre 24Vdc (with cover plate):	94dBa
Current @ 24Vdc:	c. 11mA
Voltage Range:	8-35Vdc
Operating Frequency:	800 - 1000 Hz
Number of Tones:	4
Volume Control:	-30dBa
IP Rating:	IP42
Temperature Range:	-20 to +70 °C
Colour:	White
Weight (per unit packed):	121g
Dimensions:	106mm diameter x 25mm deep

## BF333CSR / BF333CDR RED 32 TONE VANTAGE-COMBI SPATIAL SOUNDER/BEACON

Our 32-tone Vantage-Combi sounder/beacon combines a high output light source, produced via an efficient LED cluster, with the high performance sound of our Vantage sounder, the result being a unit of unrivalled efficiency and flexibility. Its wide range of fully synchronised operating frequencies and LED beacon makes it ideal for many applications, in particular, those where compliance with disability rights legislation is required. Tone and volume are selected via DIL switches on the PCB. If required, the use of a third wire enables a second stage alarm to be switched in to override the selected tone.



### SPECIFICATION

Sound Output @ 1 metre (Tone 1):	Low: 88dBa; Med: 103dBa; High: 109dBa
Current Consumption @ 24Vdc (Tone 1):	Low: < 11mA Med: < 19mA High: < 37mA
Voltage Range:	18-35Vdc
Number of Tones:	32
Operating Frequency:	440 Hz to 2900 Hz
IP Rating:	IP43 (BF333CSR); IP65 (BF333CDR)
Temperature Range:	-20°C to +70°C
Weight (per unit packed):	233g (BF333CSR); 258g (BF333CDR)
Approx. dimensions	93mm diameter x 89mm (BF333CSR) 93mm diameter x 106mm (BF333CDR)

## BF340C/1; BF340C/2; BF340C/5 1, 2 & 5 WATT XENON BEACONS

When an eye-catching visual indicator is required, our Xenon beacon range meets the most stringent requirements. Each beacon's low profile design is complimented by a surface mount adaptor enabling rapid installation either directly to the ceiling, wall or via a standard back box. All units incorporate a fresnel lens arrangement designed to give maximum light output and utilise a specially reduced inrush current to minimize the possibility of overloading sounder zones on activation.



### SPECIFICATION

Current @ 24Vdc:	42mA (BF340C/1); 84mA (BF340C/2); 210mA (BF340C/5)
Voltage:	24Vdc
Flash Rate:	1Hz
IP Rating:	IP65
Temperature Range:	-30 to +70°C
Power Output:	1W (BF340C/1); 2W (BF340C/2); 5W (BF340C/5)
Dimensions:	75mm diameter x 68mm deep (BF340C/1 & BF340C/2) 75mm diameter x 111mm deep (BF340C/5)

## BF331CR RED VARA ROOM SOUNDER BF331CW WHITE VARA ROOM SOUNDER

Our Vara room sounders are ideal for applications where discrete, low profile sounders are required. Utilising a nose cone that reflects sound back onto the front plate for improved sound dispersion, they offer a choice of four tones - continuous, sweep, warble or alert (alert requires 3 wires).



### SPECIFICATION

Output @ 1 metre 24Vdc:	97dBa
Current @ 24Vdc:	c. 11mA
Voltage:	8-35Vdc
Operating Frequency:	800-1000Hz
Number Of Tones	4
Volume Control:	-50 dBa
IP Rating:	IP43
Temperature Range:	-20 to +70°C
Weight (per unit packet):	103g
Dimensions (WxHxD):	87x87x50mm

## BF335C1R / BF335C2R VOCALARM RED VOICE ENHANCED SOUNDER

The VOCALARM voice enhanced sounder brings a new dimension to evacuation systems. With improved human response time, rapid exit from buildings is now achievable at a cost-effective price.

For two stage alarms, a continuous tone is fitted to the BF335C1R. Separate alert and evacuation messages may be selected for the BF335C2R. With a growing choice of messages for a wide variety of applications including evacuation, security and factory automation, the VOCALARM gives increased flexibility and helps facilitate faster human response in an emergency situation. Bespoke messages are also available in English and other languages. Each message is preceded by a 6 second sweep tone as standard.



### SPECIFICATION

Output @ 1 metre 24Vdc:	100dBa
Message Output @ 1 metre 24v dc:	97dBa
Current @ 24Vdc:	c. 29mA
Voltage Range:	15 - 30Vdc
Operating Frequency:	800 - 1000Hz
Number of Messages:	1 (BF335C1R); 2 (BF335C2R)
Volume Control:	-25dBa
IP Rating:	IP65
Temperature Range:	-20 to +70 °C
Weight (per unit packed):	215g
Dimensions:	105mm diameter x 85mm deep

## BF345C/24/200; BF345C/230/200; BF345C/24/500

### LOW PROFILE DOOR RETAINERS

Designed to comply with the latest requirements of EN61000-3-2, EN50081-1, EN60950 and EN1155, our BF345C door retainer range combines good looks with high performance. Their flame retardant, low profile plastic bodies, make them ideal for use in high profile applications. Installation is simple with knockouts provided for the entry of surface mount conduit and ample room to connect external wiring to the 4mm terminals. Each door retainer is fitted with a spring loaded release pin mounted centrally within the electro-magnet. On power off, the release pin ensures the fire door is pushed away from the electro-magnet.



### SPECIFICATION

Voltage	24Vdc (BF345C/24/200) 24Vdc (BF345C/24/500) 230Vac (BF345C/230/200)
Current Consumption	45mA (BF345C/24/200) 47mA (BF345C/24/500) 12mA (BF345C/230/200)
Minimum Rated Holding Force	200N / 20.4kg (BF345C/24/200) 200N / 20.4kg (BF345C/230/200) 500N / 51kg (BF345C/24/500)
Maximum Holding Force	250N / 25.5kg (BF345C/24/200) 250N / 25.5kg (BF345C/230/200) 750N / 76kg (BF345C/24/500)
Residual Holding	Zero (all variants)
Voltage Tolerance	+/- 10% (all variants)
Release Switch	Yes (all variants)
Protection	IP51 (all variants)
Keeper Adjustment	+/- -30° (all variants)
Dimensions (WxHxD) / Weight	87x101x45mm / 400g (650g for BF345C/24/500)
Door Closer Power Size:	3-6

# Fire Alarm Ancillaries

Remote LEDs • Relays • Isolators • Sounder Extenders

## BF318 REMOTE INDICATOR

A high quality LED indicator specifically designed for use in fire alarm systems. Incorporating a red LED that is clearly visible when active, its primary use is to indicate the activation of an out-of-sight smoke or heat detector or a fire alarm sounder circuit. Three inputs are provided 'OV', '+30V d.c.' and 'LED only'. If connecting to a current limited source (such as a detector) use the OV and LED only inputs. If connecting to a non-current limited source (such as a fire alarm sounder circuit) use the OV and +30V d.c. inputs. Can be mounted on a 16mm flush or surface UK single gang back box.



### SPECIFICATION

Current rating using 'OV' & 'LED only':	Depends on the type/make of detector
Current rating using 'OV' & '+30V Max':	10mA @ 30V d.c. (Max); 1.3mA @ 6V d.c. (Min)
Dimensions (WxHxD) / Weight	86 x 86 x 19mm / 72g (packed)

## BF376 24V 5A RELAY ON A PLATE

The BF376 is a general purpose, double-pole, polarised 24V 5A relay designed for use in 24V fire alarm systems. Incorporating a red LED which illuminates when the relay is active, it may be connected to a suitable control panel relay output or a standard polarised fire alarm sounder circuit to operate door retaining magnets, rollershutter doors, etc. Note, if connecting to a sounder circuit, the relay will return to its normal state when the fire condition is cleared or silenced. Always check with the approving authority that the proposed arrangement is acceptable before installation. Can be mounted on a 25mm flush or surface UK single gang back box.



### SPECIFICATION

Contact configuration:	Double pole changeover
Input coil voltage range:	18 - 30 V d.c.
Current consumption:	typically 30mA @ 24V d.c.
Contact rating @ 24V d.c.:	5A (resistive) 2A (inductive)
Contact rating @ 240V a.c.:	5A (resistive) 2A (inductive)
Contact material:	Silver Nickel.
Dimensions (WxHxD) / Weight:	86 x 86 x 28mm / 101g (packed)

## BF367 AUXILIARY DEVICE ISOLATOR

The BF367 allows a +24V d.c. output from a fire panel to be remotely isolated to prevent external equipment (such as autodiallers, rollershutter doors, etc) from operating - a particularly useful function during routine maintenance as it safeguards against the inadvertent triggering of auxiliary equipment. The unit incorporates an isolating keyswitch and amber LED. The switch circuit has been designed so that if monitoring is used on the +24V d.c. output being controlled, a fault condition will show at the fire panel when the BF367's keyswitch is 'ISOLATED'. Can be mounted on a 25mm flush or surface UK single gang back box.



### SPECIFICATION

Required current for fault LED	10mA @ 27.6V d.c.
Switch ratings	Non-switching current rating 5A Max. Switching Resistive load 3A @ 30V d.c. Switching Inductive load 1.5A @ 30V d.c.
Switch material	Silver plated brass.
Dimensions (WxHxD) / Weight	86 x 86 x 38mm / 109g (packed)

## BF366 24V 5A ISOLATABLE RELAY

The BF366 combines the functions of the BF376 relay and BF367 device isolator in one unit. It is a double-pole 24V 5A polarised relay with a keyswitch isolation facility allowing its relay operation to be temporarily disabled from the fire alarm signal during routine test and maintenance (to prevent autodiallers, water sprinklers, etc., from activating). Mountable on a 25mm flush or surface UK single gang back box, the relay is triggerable via a control panel's open collector output or a standard polarised sounder circuit. If connecting to a sounder circuit, the relay will return to its normal state when the fire condition is cleared or silenced. Check with the approving authority that the proposed arrangement is acceptable prior to installation.



### SPECIFICATION

Contact configuration:	Double pole changeover
Input coil voltage range:	17 - 30 V d.c.
Current consumption:	typically 30mA @ 24V d.c. (relay activated)
Contact rating @ 24V d.c.:	5A (resistive) 2A (inductive);
Contact rating @ 240V a.c.:	5A (resistive) 2A (inductive)
Dimensions (WxHxD) / Weight	86 x 86 x 38mm / 138g (packed)

## FF502P UNIVERSAL 4 ZONE SOUNDER CIRCUIT EXTENDER

Supplied on a double gang plate and compatible with most fire alarm control panels, the FF502P provides four extra sounder circuits with open and short circuit fault monitoring, two external trigger inputs and one fault output trigger. Connection to C-TEC manufactured panels requires just 3 wires: 24V d.c., 0V & Sounder +Ve. The four sounder circuits may be configured as two pairs. Each pair can be triggered separately if required by switching one of two inputs to 0V. This can be useful for (a) separate 'zonal' fire outputs; (b) use as a monitored relay circuit to interface with a remote communicator or plant shutdown equipment, or (c) 'class change' facilities. A low current 'pull down' fault output trigger is also provided for driving external indicators or switching a relay via a transistor.



### SPECIFICATION

Supply voltage range:	15-30V d.c.
Quiescent drain @ 27V	<5mA (including monitor current)
Sounder Circuits:	4 sounder circuits each rated at 400mA
End of Line Resistors:	4 x 6k8 0.25 Watt
A/B & C/D Trigger inputs:	Pull down to 0V
Fault output:	Pulls down to 0V rated 5mA 2-30V
Dimensions (WxHxD):	146 x 86 x 20mm / 174g (packed)

### BF375P 250mA UNREGULATED DOOR RELEASE PSU

Supplied on a compact double gang plate, the BF375P provides a continuous output of 24V 250mA d.c. and is ideal for locating alongside doors which require door retaining magnets. Three trigger methods are available, 'trigger' and 'hold off' (both of which require a signal voltage of 5-27V d.c. 10mA) and manual button release. Once triggered, the PSU's output voltage is removed causing any door release magnets connected to it to de-energise. The BF375P is designed specifically for use as a door release PSU and is not suitable for battery charging or any other use. It is also available as part of the BF375PK door retainer and PSU kit.



#### SPECIFICATION

Mains supply voltage:	230V a.c. ±10% 50/60 Hz
Supply out:	21-28V d.c.; 250mA
Max. no. of retainers:	5 rated @ 50mA or 8 rated @ 30mA
Approx dimensions (WxHxD):	147 x 87 x 39mm (24mm protrusion depth in back box).

### BF375M 1A REGULATED GENERAL PURPOSE PSU

The BF375M is a general purpose mains to regulated 24V d.c. power supply unit complete with on-board relay. It has three indicators (mains on, battery/power supply fault and output triggered) and two inputs (trigger and hold off). Both inputs require a signal voltage of 5-27V d.c. 1mA and can be used to control the PSU's internal relay to switch its output voltage on or off. This and the PSU's sophisticated fault monitoring function (battery faults, mains faults and ruptured fuse faults are all reported) makes the BF375M one of the most versatile 1A power supplies available. Optional back-up batteries can be fitted to maintain the PSU's output and the unit's very low current consumption makes it ideal for large installations where multiple units can be connected to one system without compromising the battery stand-by time of the host panel. Siting each PSU locally to its load can provide considerable cost savings on wiring, reduce the risk of voltage drop, increase flexibility and lessen the risk of total system failure.



#### SPECIFICATION

Mains supply voltage:	230V a.c. ±10% 50/60 Hz
Supply out:	27.6V d.c., 1A
Approx dimensions (WxHxD)	271 x 200 x 70mm;
Weight:	2.3Kg (without batteries)

### BF377 2A UNREGULATED DOOR RELEASE PSU

The BF377 is designed to provide continuous d.c. power for a 24V door release magnet system controllable from a fire alarm control panel. For automatic release, the power supply requires a signal voltage of 18-30V d.c. 30mA. Manual release can also be achieved via a set of contacts using, for example via an external timer, in order to shut the doors automatically at a predetermined time. The BF377 does not have a battery back-up facility.



#### SPECIFICATION

Mains supply voltage:	230Va.c. ±10% 50/60Hz
Supply out:	22-29Vd.c., 2A
Max. no. of retainers:	40 rated @ 50mA or 66 rated @ 30mA
Approx dimensions (WxHxD) & Weight:	405 x 267 x 92mm; 4.0Kg

### BF368EN 3A REGULATED EN54-4 PSU

Supplied in a light grey metal back box with plastic lid, the BF368EN's efficient switch mode design allows it to provide a continuous output of 3A at 185-265 V a.c. Ideal for a variety of applications (door release systems, plant shutdown, sounder extender systems, etc), it offers very low current consumption (allowing in excess of 72 hours standby dependent on battery capacity and load) and is capable of charging 2 to 10 AHR batteries in line with the requirements of EN54. Its very low opto-isolated external hold off allows multiple units to be failsafe connected to a single fire panel without compromising the panel's stand by time. Other features include a local switch input and a fault output via a normally energized relay SPCO (fault monitoring includes battery fault, mains supply fault and ruptured fuse). Battery monitoring may be disabled when not required.



#### SPECIFICATION

Mains supply voltage:	230Va.c. ±10% 50/60Hz
Supply out:	27.6V d.c.; 3A (reduce to 2.5A if batteries are fitted)
Approx dimensions (WxHxD)	Back Box 412 x 250 x 80mm; Lid: 439 x 274 x 7mm;
Weight:	2.95Kg (without batteries)

## Also Available From C-TEC

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