

XFP

range

NOW WITH
AN IMPROVED USER INTERFACE
& COMBINED KEYPAD/KEYSWITCH
ENTRY AS STANDARD



1 or 2 loop EN54
networkable analogue
addressable fire panels



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



You're safe with



1 or 2 loop EN54 networkable analogue addressable fire alarm panels

XFP range



XFP single loop 16 zone panel



XFP 1 or 2 loop 32 zone panel



Stainless steel enclosure

| Panel Sounder 1 belongs to Sounder Group | Panel Sounder 2 belongs to Sounder Group | Triggers Sounder Groups | | | | | | | | | | | | | | | |
|------------------------------------------|------------------------------------------|-------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Zone 1 | | | | | | | | | | | | | | | | | |
| Zone 2 | | | | | | | | | | | | | | | | | |
| Zone 3 | | | | | | | | | | | | | | | | | |
| Zone 4 | | | | | | | | | | | | | | | | | |
| Zone 5 | | | | | | | | | | | | | | | | | |
| Zone 6 | | | | | | | | | | | | | | | | | |
| Zone 7 | | | | | | | | | | | | | | | | | |
| Zone 8 | | | | | | | | | | | | | | | | | |
| Zone 9 | | | | | | | | | | | | | | | | | |
| Zone 10 | | | | | | | | | | | | | | | | | |
| Zone 11 | | | | | | | | | | | | | | | | | |

Sophisticated sounder group mapping (above) and complex cause and effect scenarios can be easily implemented using the XFP's intuitive upload-download programming software.

C-TEC's XFP range of networkable analogue addressable fire panels offer high performance at a competitive price.

Certified to the latest versions of EN54 parts 2 & 4 by the Loss Prevention Certification Board, two versions are available - a cost-effective single loop 16 zone panel in a plastic enclosure and a robust 1 or 2 loop 32 zone metal panel.



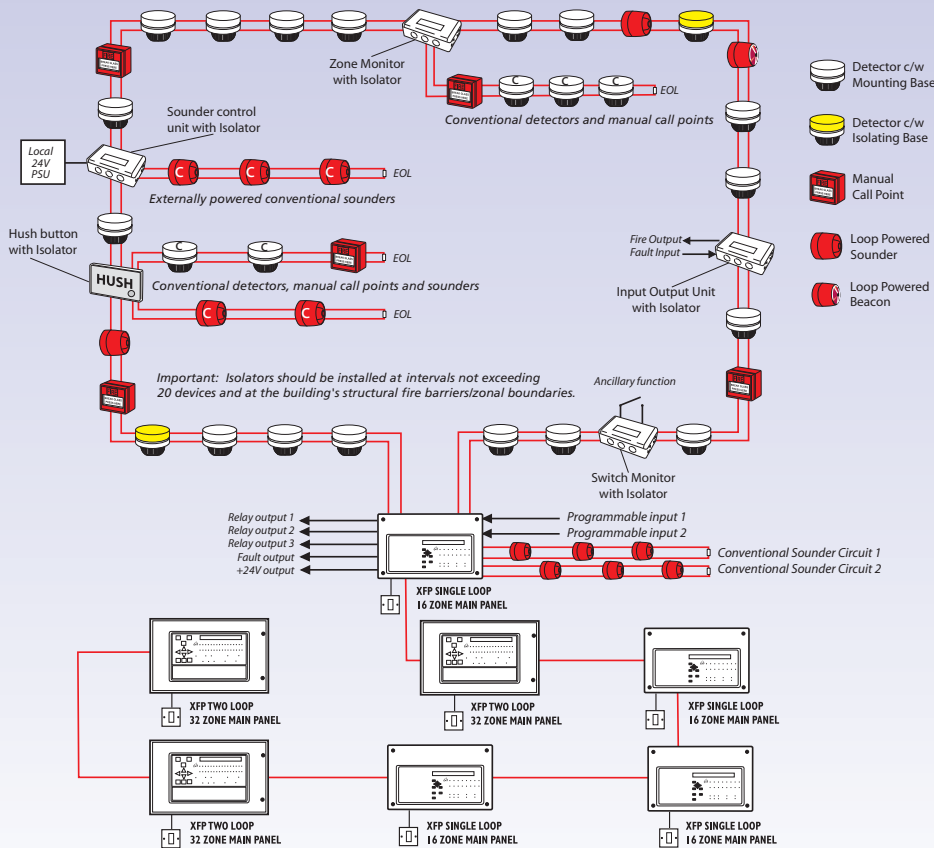
Ideal for use in office blocks, shopping complexes and big industrial sites as well as smaller stand-alone applications, both versions offer an array of user and installer-friendly features, including:-

- ▶ Full compatibility with Apollo's XP95/Discovery and Hochiki's ESP protocols
- ▶ The ability to interconnect up to eight XFP main panels (any variant) onto a two wire RS485 network. Alternatively, up to eight XFP repeaters can be connected to a non-networked XFP main panel
- ▶ Combined keypad / keyswitch entry to Access Levels 2 & 3
- ▶ Two independently programmable conventional sounder circuits
- ▶ Two programmable inputs
- ▶ A fault output relay and three programmable relay outputs with voltage free changeover contacts
- ▶ Three zone dependency functions (A, B & C to EN54-2 Clause 7.12)
- ▶ A day/night (building occupied/unoccupied) function
- ▶ An investigation delay period function
- ▶ Individual sensitivity settings for each device
- ▶ A phased evacuation and delays to outputs facility (to EN54-2 Clause 7.11)
- ▶ An alarm counter that records the number of times the panel has been in an alarm state (to EN54-2 Clause 7.13)
- ▶ Powerful short circuit protected loop drivers, capable of supporting up to 40 loop powered 10mA sounders per loop
- ▶ An integral EN54-4/A2 switch mode PSU rated @ 185-260V a.c. 50/60Hz (1.4A on a 16 zone panel, 3A on a 32 zone panel)
- ▶ Earth fault monitoring
- ▶ An easy to read, 80 character back-lit display
- ▶ 40 characters of custom text per device
- ▶ 999 event monitoring
- ▶ Comprehensive test facilities (to EN54-2 Clause 10) and a wide range of maintenance & commissioning functions including auto-learn loops, monitor a point, test outputs, one man walk test and loop continuity test
- ▶ An intuitive Windows based upload-download PC program that allows the system to be programmed quickly and easily
- ▶ Full compatibility with C-TEC's Hush Button fire alarm solution for houses of multiple occupation
- ▶ Optional flush-mounting stainless steel enclosures available (for 32 zone XFP panels only)

TYPICAL WIRING

Below is a diagram of a typical XFP analogue addressable loop fitted with a selection of detectors, loop powered sounders, modules and isolators, all connected to an XFP single loop 16 zone panel.

The diagram also illustrates how a series of XFP main panels can be networked using the range's powerful RS485 network.



This diagram is provided for illustration purposes only and you should always refer to the relevant XFP panel/device instructions as appropriate before installation. Note that the descriptions and availability of the devices shown may not be applicable to all manufacturer's protocols.

KEY FEATURES OF THE XFP'S NETWORK PROTOCOL

The XFP's network protocol allows the interconnection of up to eight XFP main panels (any mix) over a two-wire RS485 network. Alternatively, the network can be used to connect up to eight XFP repeaters to one XFP main panel. It is not possible to mix XFP main panels and repeaters on the same network.

Key features of the XFP's network protocol when used for interconnecting XFP main panels:

- ▶ Allows the interconnection of up to eight XFP main panels (any mix of single loop 16 zone XFPs and 1 and 2 loop 32 zone XFPs).
- ▶ Up to 1 km of cable may be fitted to an XFP main panel network.
- ▶ Each networked XFP main panel can be programmed to accept Fires, Faults and Control actions such as Silence Alarm Sounders and Control Panel Reset from other main panels. They will also Accept Disablement commands for zones, sounders and output sets from other main panels.
- ▶ All panels monitor all other panels for network wiring faults.
- ▶ Fires on remote panels are displayed on local panels including the point description of the alarm's origin.
- ▶ Faults on remote panels are displayed on local panels including the point description of detectors.
- ▶ Cause and effects can be programmed into local panels dependent on which remote panel is in alarm.
- ▶ The network supports the programming of site data into remote panels from a PC at a local panel.
- ▶ Time and date is common to all panels throughout the network.
- ▶ All networked main panels require a network communication card.

Key features of the XFP's network protocol when used for connecting XFP repeaters

- ▶ Allows the connection of up to eight XFP repeaters to one non-networked main panel. The XFP main panel must have a network communication card fitted.
- ▶ Up to 500m of cable may be fitted to an XFP repeater network.
- ▶ Each XFP repeater offers all the functions and controls of an XFP main panel.

XFP ORDER CODES

XFP SINGLE LOOP 16 ZONE FIRE PANELS - LPCB approved to EN54-2/4

| | |
|-----------|--------------------------------------------------------------------------------------------------------------------|
| XFP501E/X | XFP Networkable single loop 16 zone panel (XP95/Discovery) Keypad/keyswitch entry, c/w 1.4A psu, plastic enclosure |
| XFP501E/H | XFP Networkable single loop 16 zone panel (Hochiki ESP) Keypad/keyswitch entry, c/w 1.4A psu, plastic enclosure |

XFP 1 LOOP 32 ZONE FIRE PANELS - LPCB approved to EN54-2/4

| | |
|----------|-------------------------------------------------------------------------------------------------------------|
| XFP501/X | XFP Networkable one loop 32 zone panel (XP95/Discovery) Keypad/keyswitch entry, c/w 3A psu, metal enclosure |
| XFP501/H | XFP Networkable one loop 32 zone panel (Hochiki ESP) Keypad/keyswitch entry, c/w 3A psu, metal enclosure |

XFP 2 LOOP 32 ZONE FIRE PANELS - LPCB approved to EN54-2/4

| | |
|----------|-------------------------------------------------------------------------------------------------------------|
| XFP502/X | XFP Networkable two loop 32 zone panel (XP95/Discovery) Keypad/keyswitch entry, c/w 3A psu, metal enclosure |
| XFP502/H | XFP Networkable two loop 32 zone panel (Hochiki ESP) Keypad/keyswitch entry, c/w 3A psu, metal enclosure |

XFP REPEATERS*

| | |
|-----------|-------------------------------------------------------------------------------------------------------------|
| XFP510-16 | XFP Networkable repeater panel, 16 zones (all protocols) Keypad/keyswitch entry, c/w psu, plastic enclosure |
| XFP510-32 | XFP Networkable repeater panel, 32 zones (all protocols) Keypad/keyswitch entry, c/w psu, metal enclosure |

XFP BEZELS/ENCLOSURES* for XFP 32 zone main & repeater panels only

| | |
|-----------|----------------------------------------------------------------|
| AFP385 | Flush mount bezel (for XFP 32 zone main & repeater panels) |
| BF359/3S | Stainless steel glazed enclosure (for XFP 32 zone panels only) |
| BF359/3CL | Cam lock kit for BF359/3S enclosure |
| BF359/3SL | Electromagnetic solenoid lock kit for BF359/3S enclosure |

Note that XFP 16 zone panels have been designed so they can be surface or semi-flush mounted without the need for an additional bezel

XFP NETWORK COMMUNICATION CARDS*

| | |
|--------|------------------------------------------------------------|
| CFP761 | XFP network communication card for XFP 16 zone main panels |
| AFP711 | XFP network communication card for XFP 32 zone main panels |

(One network communication card is required per networked main panel. Note that repeater panels are supplied with a network communication card already fitted).

XFP PROGRAMMING SOFTWARE*

| | |
|------------|--------------------------------------------------------------------------------------------------|
| XFP507 | XFP Upload download software kit (all protocols) Windows 98, 2000, XP. Includes programming lead |
| SAF7070000 | 2m Programming lead ONLY |

XFP PRINTER KITS*

| | |
|--------|---------------------------|
| AFP709 | XFP off-board printer kit |
|--------|---------------------------|

* Repeaters, bezels / enclosures, network communication cards, programming software and printer kits are not included within the scope of the XFP's LPCB approval

WHY LPCB?



The LPCB stamp of approval is recognised worldwide and demonstrates that the XFP has been tested and certified as being compliant with EN54 parts 2 and 4 by the Loss Prevention Certification Board.

You're safe with



XFP Technical Specifications

SINGLE LOOP 16 ZONE XFP PANELS XFP501E/X; XFP501E/H

ONE OR TWO LOOP 32 ZONE XFP PANELS XFP501/X; XFP501/H; XFP502/X; XFP502/H

Power Supply Specification

| | | |
|---------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------|
| Mains supply | 230V a.c. ± 10% 50/60Hz. Max current 350mA | 230V a.c. ± 10% 50/60Hz. Max current 680mA |
| Internal power supply | 27V d.c Nominal | 27V d.c Nominal |
| Total output current limited to | 1.4A @ 230V a.c. | 3A @ 230 V a.c. |
| Power rating | I _{max. a} = 210mA; I _{min.} = 40mA | I _{max. a} = 250mA (1 loop) 270mA (2 loop); I _{min.} = 70mA |
| Maximum internal resistance | R _i max. - 1.1Ω | R _i max. - 1.1Ω |
| Supply and battery charger monitored for failure | Yes | Yes |
| Batteries monitored for disconnection and failure | Yes | Yes |
| Batteries protected against deep discharge | Yes | Yes |
| Max. battery size and type | 3.2 Ahr VRLA | 7.0 Ahr VRLA |
| Specified batteries for LPCB approved systems | 2 x Yuasa NP3.2-12 | 2 x Yuasa NP7-12 |
| Quiescent current drain | < 50mA (1 loop unloaded) | < 80mA (1 loop unloaded); <100mA (2 loops unloaded) |
| Earth fault monitoring | Yes (any conductor) | Yes (any conductor) |
| Temperature compensated charging | Yes | Yes |

Loop Driver Specification

| | | |
|--------------------------------------------------------|-----------------------------------|-------------------------------------------------|
| Number of loop drivers | 1 | 1 (XFP501/X ; XFP501/H); 2 (XFP502/X, XFP502/H) |
| Line monitored for open and short circuit faults | Yes | Yes |
| Onboard loop isolators with LED indication when active | Yes | Yes |
| Auto-polling from each loop end | Yes | Yes |
| Max. loop output current | 500mA (Voltage: 25V min, 34V max) | 500mA (Voltage: 25V min, 34V max) |
| Max. number of addressable devices per loop | 126 | 126 |
| Max. number of loop powered sounders per loop @ 10mA | 40 | 40 |
| Number of programmable sounder groups | 16 | 16 |
| Number of programmable output sets | 16 | 16 |

Conventional Sounder Circuit Specification

| | | |
|--------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Number of programmable circuits | 2 | 2 |
| End of line resistor value | 6800 Ω 5% Tol. 0.25 W | 6800 Ω 5% Tol. 0.25 W |
| Line monitored for open and short circuit faults | Yes | Yes |
| Outputs fused at | 400mA. Protected by resettable overload circuit | 400mA. Protected by resettable overload circuit |
| Output voltage | 19.5V minimum; 28V maximum | 19.5V minimum; 28V maximum |
| Max. number of sounders @ 20mA | 40 | 80 |

Auxiliary Outputs

| | | |
|----------------------------|---------------------------------------------------------------------------------|--|
| Type | Relay voltage free single pole changeover | |
| Max switching current | 1A | |
| Max switching voltage | 30 V d.c | |
| Relay 1/ Relay 2 / Relay 3 | Programmed from cause and effect | |
| Fault | Active when no faults are present | |
| '24V' Aux Power Output | 19.5V min, 28V max. Max current 100mA. Protected by resettable overload circuit | |

Auxiliary Inputs

| | |
|---------|----------------------------------------------------------------------------------------------------------|
| Input 1 | Connect to 0V to trigger. Max input voltage 27V d.c. (non-latching). Programmable from cause and effect. |
| Input 2 | Connect to 0V to trigger. Max input voltage 27V d.c. (non-latching). Programmable from cause and effect. |

Fuses (to IEC - EN60127 Pt2)

| | | |
|----------------------------------------------------------|---------------------|---------------------|
| Mains Fuse | 1A HRC Ceramic 20mm | 1A HRC Ceramic 20mm |
| Battery Fuse - limits the current drawn from the battery | 1.6A F 20mm | 3.15A F 20mm |

Panel Indicators and Controls

| | | |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Keypad | Plastic key operated | Metal key operated |
| Control buttons | Silence, Reset, Resound, Investigate; More Information; Menu | |
| Event scrolling and menu access buttons | Up (1); Down (2); Accept (3); Abort (4) | |
| Liquid Crystal Display | Two lines x 40 characters, backlight | |
| Number of Zonal LED indicators | 16 | 32 |
| Other LED indicators | General Fire, System Energised; Pre-Alarm; Remote Output Activated; Menus Accessed; Disablement; Test; Remote Output Disabled; Silenced; General Fault; System Fault; | |

Physical Dimensions

| | | |
|--------------------------------------------|---------------------------------------------|--------------------------|
| Approx. dimensions of back box (W x H x D) | 380 x 235 x 77mm (plastic). Includes 'lip'. | 410 x 250 x 80mm (metal) |
| Approx. dimensions of lid (W x H x D) | 380 x 235 x 16mm (plastic) | 439 x 274 x 7mm (metal) |
| Approx. weight (without batteries) | 1.8Kg | 4.5kg |

Cabling Requirements

| | | |
|------------------------------------------------|--------------------------------------------------------------------|--|
| Type of cable | Fire resistant screened cable, minimum size 1mm ² | |
| Max. cable length per loop | 1km | |
| Connector blocks | Plug-on type, largest acceptable conductor size 1.5mm ² | |
| Max. allowable loop impedance (each conductor) | 20 Ω | |
| Max. cable capacitance | .27μF | |

Network Specification

| | | |
|----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Connection | Via CFP761 network driver card fitted at main panel | Via AFP711 network driver card fitted at main panel |
| Max. no. of main panels per network | 8 | 8 |
| Max. no. of repeaters per non-networked main panel | 8 | 8 |
| Max. cable length per network | 1km (main panel network); 500m (repeater network) | 1km (main panel network); 500m (repeater network) |

PC/Printer Interface

| | | |
|--------------------|---------------------------------------------------------------------------------------------|---------------------------------------|
| PC connection | Via main panel RS232 molex connector (lead supplied in XFP507 upload/download software kit) | |
| Printer connection | Not applicable | Via main panel RS232 connector block. |

Operating conditions

The components are selected to operate within their specification when the environmental conditions outside the enclosure comply with class 3k5 of IEC 721-3-3 : 1978.
Temperature range:-5 to +40°C. Maximum relative humidity: 95%



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