

OPERATION

In its normal state (with no alarm conditions anywhere in the building), power is applied to the Hush Button's detector circuit, its detector and sounder circuits are continually monitored for faults, and its Supply Present LED is lit. In the event of a local alarm condition (when a fire detector within the flat or apartment has triggered), the Hush Button's local sounder circuit will activate and any output devices connected to it will sound.

If there is no one in the apartment to intervene during a local alarm condition (i.e. if the 'Hush' button is NOT pressed): The local alarm sounders will sound for a period of two minutes. If the local alarm clears within these two minutes, the Hush Button will return to its normal state. If the local alarm is still present after two minutes, the alarm will be signalled to the host analogue fire panel and a general alarm condition will be annunciated around the building as programmed.

If the 'Hush' button is pressed DURING a local alarm condition: A hushed period of two minutes will commence starting from when the Hush button is pressed. If the local alarm is cleared within these two minutes, the Hush Button will return to its normal state. If the alarm doesn't clear, 15 seconds before the hushed period is about to expire, a beeper will sound to inform the occupant that the alarm is about to be signalled to the host fire panel. If the 'Hush' button is pressed again during this 15 second period, another two minute hushed period will commence.

If the 'Hush' button is pressed when there are no alarms present: A hushed period of fifteen minutes will commence. During this period, power is cut to the local zone so no alarm signals from detectors will be detected (however a manual call point with a suitable resistor, less than 400 ohms, will trigger a full alarm if activated). If the 'Hush' button is pressed again during this 15 minute period, power is re-applied to the local zone allowing normal signal processing to resume. 15 seconds before the 15 minute hushed period is about to expire, a beeper will sound to inform the occupant that the local zone is about to be re-powered. If the 'Hush' button is pressed again during this 15 second period, another 15 minute hushed period will commence.

Manual call points

If a manual call point is connected to the Hush Button's detector circuit, provided its resistance when operated is less than 400 ohms, its operation will immediately trigger the Hush Button's sounder circuit and signal a general alarm condition to the host fire panel.

General fire conditions

If, at any time, the host analogue panel enters a general fire condition, it overrides any hushed state at the Hush Button and turns on its local sounders. Pressing the 'Hush' button in a general fire alarm condition WILL NOT silence the local alarm sounders and the dwelling should be evacuated as per the designated fire management plan.

XFP508X TECHNICAL SPECIFICATION

| | |
|---|--|
| Compatible protocols: | Apollo XP95/Discovery/Xplorer |
| Max. no of hush buttons per analogue loop: | 20 (dependent on output current of host panel and hush button) |
| Onboard loop isolator: | Yes |
| Max. conventional detectors per hush button: | 10 |
| Max. manual call points per hush button: | 10 (must be fitted with a resistor of less than 400 Ohms) |
| Max. sounder circuit load per hush button: | 30mA |
| Operating voltage: | 22-40Vdc |
| Quiescent current: | 5mA |
| Max. length of detector and sounder circuits: | 100m |
| User indicators: | Green 'Supply present' LED: Lit steady when the unit is powered up Red 'Local alarm' LED: Lit steady when a detector is in alarm Yellow 'Hushed' LED: Lit steady when the unit is in the Hushed state. Flashes during the last 15 seconds of any Hushed period. Beeper: Gives audible feedback when the Hush button is pressed and also sounds during the last 15 seconds of any Hushed period. |
| Engineer Indicators: | Fault LED (yellow): Lit steady when there is an open or short on the detector or sounder circuit. |
| User controls: | 1 x Hush button - see 'Operation' section for details |
| Engineer controls: | PLK2: Output current selector, 12.5mA; 20mA or 30mA (link adjustable) |
| Dimensions: | 144mm x 84mm x 37mm. Mounts on a 25mm UK double gang back box |

XFP508X BS5839-6 HUSH BUTTON CE

Installation Guide

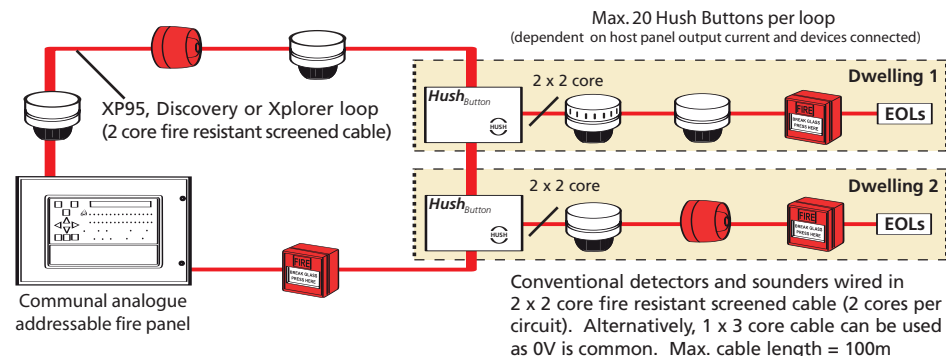
WARNING: To work correctly this device requires TWO addresses - please refer to the section 'SETTING THE HUSH BUTTONS ADDRESSES' on page 3.

The XFP508X Hush Button has been specifically designed to reduce the incidence of false alarms in houses of multiple occupation by providing reliable, fully monitored fire detection, alarm and silencing facilities INSIDE each individual flat or apartment.

It can be looked upon as a miniature loop-powered single zone fire alarm controller that sits and is addressed on an XP95, Discovery or Xplorer analogue loop (see schematic below) with the ability to communicate its status back to the host panel.

Typically one Hush Button is fitted in each dwelling complete with conventional detectors and conventional sounders to provide occupants with a simple means of invoking two types of 'hushed' period - as described on page 4.

By providing occupants with this level of control over their fire alarm systems, it helps reduce false alarms and prevent unnecessary building evacuations, system vandalism and the likelihood of a true alarm signal being ignored.



KEY FEATURES

- Fully monitored for open and short circuit faults (logging facilities at the host panel give full traceability of any problems)
- Failsafe operation - a general fire condition at the host panel will override any silenced/isolated state at the hush button and immediately turn on its local sounders
- Operation of a manual call point fitted with a resistor of less than 400 ohm will immediately trigger the host panel (a 330 Ohm resistor is supplied - see inside for wiring details)
- Common OV line allows sounders and detectors to be wired in three core cable
- Upgrades the level of protection offered in a flat or apartment from the Grade D minimum (mains/battery smoke alarms) to Grade A or B
- Provides each individual dwelling with a 2 minute silence facility and 15 minute isolate facility to BS 5839 pt 6 clause 12.2
- Can be operated by building occupants whilst standing at floor level
- Includes a built-in loop isolator, conventional sounder circuit, conventional detector circuit and three status LEDs

SYSTEM DESIGN

Fire alarm system design is beyond the scope of this document. We recommend you read BS 5839 pt 6: 2004 (fire detection and fire alarm systems in dwellings), copies of which are available at your local reference library or from the BSI (www.bsi-global.com)

HUSH BUTTON WIRING

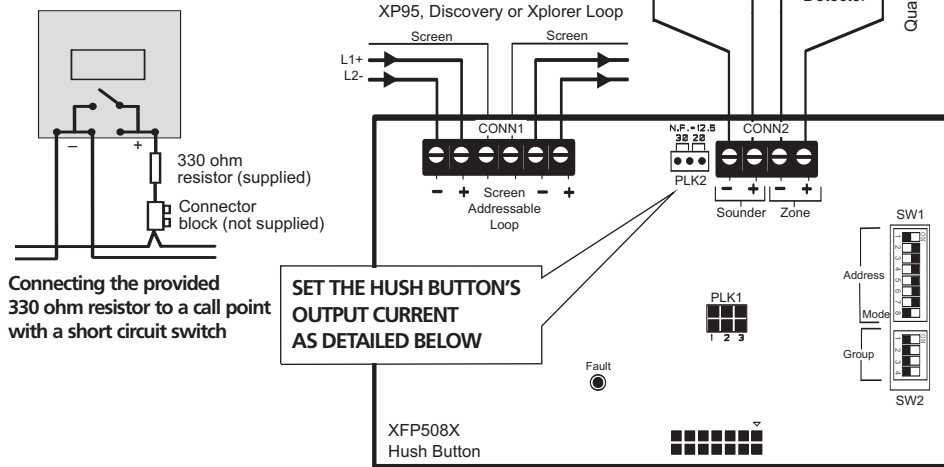
All wiring should be installed to meet the relevant requirements of BS 5839: Pt1: 2002, BS 5839: Pt6: 2004 and BS 7671 (Wiring Regulations).

For the Hush Button's conventional sounder and detector (zone) circuits, we recommend the use of 2 x two core fire resistant screened cable as shown, right. Alternatively, as 0V is common, three core fire resistant screened cable can be used.

It is possible that a risk assessment and/or consultation with the relevant authorities may conclude that PVC cable is adequate for the detector and sounder circuits within the flat or apartment.

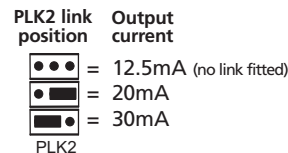
The host panel's analogue loop should always be wired in fire resistant screened cable.

All wiring terminals will accept cables up to 1.5mm²



SETTING THE HUSH BUTTON'S OUTPUT CURRENT

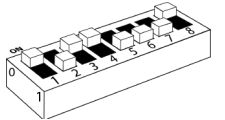
The Hush Button's output current should be set to 12.5mA, 20mA or 30mA to accommodate the total alarm current of all devices connected to its conventional sounder circuit. This is done by putting the PLK2 link in the appropriate position (see right). Always round the current up - for example, if two 7mA sounders are used, set the current to 20mA instead of 12.5mA.



SETTING THE HUSH BUTTON'S ADDRESSES

To communicate with the host fire panel, the Hush Button requires 2 addresses. The first allows it to be recognised as a Zone Monitor, the second as a Sounder Control Unit.

Its 'Zone Monitor' address is set using the first seven segments of the 8-way DIL switch (SW1). A full list of addresses is shown below - set the switch to '0' or '1' as appropriate using a small screwdriver.



When segment 8 is in the default '0' position, the next sequential address to that selected via the first seven segments will be used for the 'Sounder Control Unit' address. For example, if address 83 is selected for the 'Zone Monitor' address, then address 84 will be selected for the 'Sounder Control Unit' address and cannot be used for any other device on that loop.



If the host fire alarm system is heavily populated, it is possible to allocate the Hush Button just one primary address (for its zone monitor function) by setting segment 8 of the DIL switch to the '1' position. In such circumstances, Apollo's Group addressing function MUST be used for triggering the Hush Button's sounder circuit. However, in this mode of operation, the fault monitoring of the Hush Button's sounders will be inhibited and their operation will not be confirmed. As such, this method should only be used with the approval of the relevant authority.

| addr | DIL position | addr | DIL position | addr | DIL position | addr | DIL position |
|------|--------------|------|--------------|------|--------------|------|--------------|
| 1 | 1000000 | 32 | 0000010 | 63 | 1111110 | 94 | 0111101 |
| 2 | 0100000 | 33 | 1000010 | 64 | 0000001 | 95 | 1111101 |
| 3 | 1100000 | 34 | 0100010 | 65 | 1000001 | 96 | 0000011 |
| 4 | 0010000 | 35 | 1100010 | 66 | 0100001 | 97 | 1000011 |
| 5 | 1010000 | 36 | 0010010 | 67 | 1100001 | 98 | 0100011 |
| 6 | 0110000 | 37 | 1010010 | 68 | 0010001 | 99 | 1100011 |
| 7 | 1110000 | 38 | 0110010 | 69 | 1010001 | 100 | 0010011 |
| 8 | 0001000 | 39 | 1110010 | 70 | 0110001 | 101 | 1010011 |
| 9 | 1001000 | 40 | 0001010 | 71 | 1110001 | 102 | 0110011 |
| 10 | 0101000 | 41 | 1001010 | 72 | 0001001 | 103 | 1110011 |
| 11 | 1101000 | 42 | 0101010 | 73 | 1001001 | 104 | 0001011 |
| 12 | 0011000 | 43 | 1101010 | 74 | 0101001 | 105 | 1001011 |
| 13 | 1011000 | 44 | 0011010 | 75 | 1101001 | 106 | 0101011 |
| 14 | 0111000 | 45 | 1011010 | 76 | 0011001 | 107 | 1101011 |
| 15 | 1111000 | 46 | 0111010 | 77 | 1011001 | 108 | 0011011 |
| 16 | 0000100 | 47 | 1111010 | 78 | 0111001 | 109 | 1011011 |
| 17 | 1000100 | 48 | 0000110 | 79 | 1111001 | 110 | 0111011 |
| 18 | 0100100 | 49 | 1000110 | 80 | 0000101 | 111 | 1111011 |
| 19 | 1100100 | 50 | 0100110 | 81 | 1000101 | 112 | 0000111 |
| 20 | 0010100 | 51 | 1100110 | 82 | 0001011 | 113 | 1000111 |
| 21 | 1010100 | 52 | 0010110 | 83 | 1100101 | 114 | 0100111 |
| 22 | 0110100 | 53 | 1010110 | 84 | 0010101 | 115 | 1100111 |
| 23 | 1110100 | 54 | 0110110 | 85 | 1010101 | 116 | 0010111 |
| 24 | 0001100 | 55 | 1110110 | 86 | 0110101 | 117 | 1010111 |
| 25 | 1001100 | 56 | 0001110 | 87 | 1110101 | 118 | 0110111 |
| 26 | 0101100 | 57 | 1001110 | 88 | 0001101 | 119 | 1110111 |
| 27 | 1101100 | 58 | 0101110 | 89 | 1001101 | 120 | 0001111 |
| 28 | 0011100 | 59 | 1101110 | 90 | 0101101 | 121 | 1001111 |
| 29 | 1011100 | 60 | 0011110 | 91 | 1101101 | 122 | 0101111 |
| 30 | 0111100 | 61 | 1011110 | 92 | 0011101 | 123 | 1101111 |
| 31 | 1111100 | 62 | 0111110 | 93 | 1011101 | 124 | 0011111 |
| | | | | | | 125 | 1011111 |
| | | | | | | 126 | 0111111 |

Optional group addressing

The Hush Button can be allocated an optional group address using the four-way DIL switch (SW2). The Apollo protocol's 'Group Mode' function is used to activate groups of sounders or sounder control units, simultaneously. The Hush Button will continue to respond to its two 'master' addresses and report back its status as appropriate. A group address can be any spare address between 112-126 inclusive, as detailed (right).

| addr | DIL position | addr | DIL position |
|------|--------------|------|--------------|
| 112 | 1234 | 120 | 1110 |
| 113 | 1111 | 121 | 0110 |
| 114 | 1011 | 122 | 1010 |
| 115 | 0011 | 123 | 0010 |
| 116 | 1101 | 124 | 1100 |
| 117 | 0101 | 125 | 0100 |
| 118 | 1001 | 126 | 1000 |
| 119 | 0001 | OFF | 0000 |