## Specifications

| | |
|---|---|
| **Part Number** | 7254-FBD-5825 |
| **Compatibility identifier** | 7254-FBD-5825 |
| **Type** | Sounder control module |
| **Style** | Face plate with screw terminals |
| **Dimensions** | 4½" x 4½" x 1" |
| **Temperature range** | 32ºF to 120ºF (0ºC to 49ºC) |
| **Humidity** | 10 to 93% RH Non-condensing |
| **Wiring size** | 24AWG - 14AWG |
| **Signal line circuit (SLC)** | Supervised power limited |
| Working voltage | 17-28 VDC |

| | | |
|---|---|---|
| | Modulation voltage | 5-9V (peak to peak) |
| | Supervisory current | 1.3mA |
| | Surge current | 7.5mA |
| | Maximum operating current | 4mA |
| Functional states | Analog level (Normal) | 16 |
| | Analog level (Trouble) | 4* |

*\* Local supply failure, notification appliance circuit short/open circuit or group address conflict.*

**Notification appliance circuit (NAC)**

| | |
|---|---|
| Wiring styles | Supervised power limited outputs Class A and Class B End-of-line supervisory resistor: 47KΩ, 0.5W (Class B only) |
| External supply | Connected between vext + and vext– Monitored input (DC voltage supplies only) |
| Max (NAC) | Regulated 24VDC, 1A. Use a regulated DC supply that is listed for fire protection applications. The maximum number of connected devices must be within the output rating. |
| Max NAC Line Loss | Maximum line loss when using a NAC supply from a control panel - refer to panel manufactures documentation regarding total allowable line losses.<br>Maximum line loss when using a regulated supply (including wiring from regulated supply to module) - 4VDC when a 24VDC regulated power supply is used.<br>Refer to fire control panel literature for details on how to achieve audio and visual synchronization. |
| Max (Speakers) | 70.7 V rms, 500mA, with wire supervision capability as per NFPA requirements. The speakers used must be listed for fire protection applications. |
| End-of-Line Resistors | 47KΩ (A UL listed end-of-line resistor is available from FireBus and can be ordered under part number 2110-FBD-0901. |

### Functional Test Data

| Output Bit | Function | Input Bit | Function |
|---|---|---|---|
| 2 | Group Address Control<br>1 = Group<br>0 = Individual | 2 | Group Address Confirmation<br>1 = Group<br>0 = Individual |
| 1 | Not used | 1 | Indicates Class Wiring<br>1 = Class B<br>0 = Class A |
| 0 | Sounder Control<br>1 = On<br>0 = Off | 0 | Sounder Status<br>1 = On<br>0 = Off |

# FB-AP Series®

# FB-AP Series Sounder Control Module Installation Instructions

## General
The FB-AP Series Sounder Control Module, part no 7254-FBD-5825, monitors and controls a circuit of alarm notification appliances or speakers. It is mounted on a plastic face plate for use with a 4" square or 2 gang electrical box (minimum depth 2⅛"). The module requires a separate 24V dc supply to power notification appliances.

In addition to individual Sounder Control Module operation, multiple modules can be controlled simultaneously as a group.

A red LED flashes in synchronization with the current pulse reply from the device.

Note: the FB-AP Series Sounder Control Module is designed for indoor use only.

## Control Panel Compatibility
The module has been listed by Underwriters Laboratories Inc. for details of compatible control panels contact FireBus. Please check fire control panel literature for compatible FireBus devices.

## Installation
These products must be installed in accordance with the applicable NFPA standards, local codes and the authority having jurisdiction. Failure to follow these instructions may result in failure of devices to report an alarm condition. FireBus is not responsible for devices which are improperly installed, maintained and tested.

Before installing these products, check the continuity, polarity and resistance of all wiring. Check that the application is in accordance with the fire system drawings and conforms to all applicable code requirements.

1. Mount the electrical box as required and install all cables for termination. Ensure that cable shield/earth continuity is maintained.
2. Drill holes in the face plate corresponding to the holes on the mounting box selected (Fig 1).
3. Terminate all cables in compliance with local codes and regulations.
4. Set the address of the module as shown on page 3.
5. Gently push the completed assembly towards the mounting box and align the mounting holes. Secure the unit with the screws provided. **Do not overtighten the screws.**
6. Commission the module.

## Speakers
If the Sounder Control Module is to be used to drive speakers, the jumper J1 (Fig 2) should be set as indicated. The external supply should be replaced by an audio amplifier with a maximum of 70.7 V rms with supervision capability as per NFPA 72. The speakers connected must be listed for fire protection applications.

# Notes

1. Any power supply connected to the Vext I/P should be independent, regulated 24V dc and listed for fire protection with battery back-up capability.

2. All circuits are power limited except when used as a speaker circuit, if used remove the lower portion of the power limited label along the kiss cut. Use only limited energy cable types FPL, FPLR or FPLP on power limited circuits.
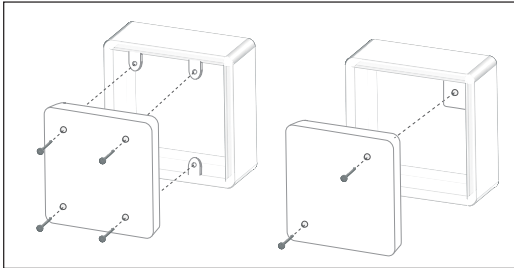


**Fig 1.** Mounting the Sounder Control Module
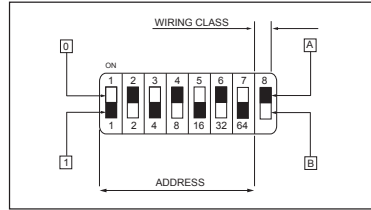


**Fig 3**. DIP Switch, S1
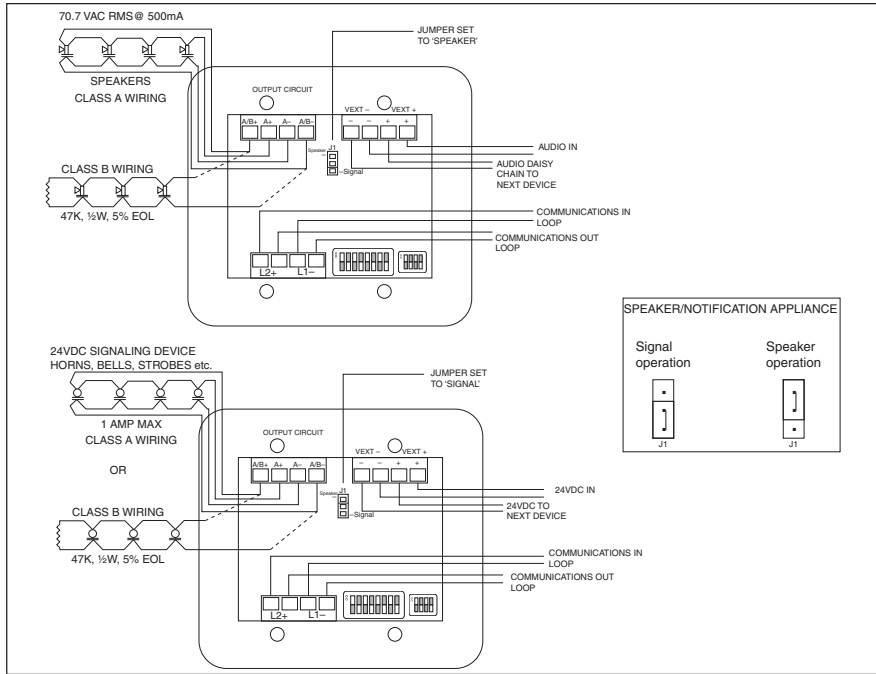


**Fig 2**. Wiring diagram for FB-AP Series Sounder Control Module
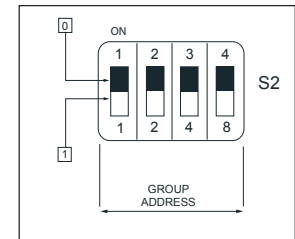
## Address Setting

Segments 1-7 of the DIP switch are used to select the address of the module. Each of the seven segments must be set to '0' (ON) or '1' (OFF) using a small screwdriver or similar tool. A complete list of address settings is shown below. (The eighth segment of the switch is used to select Class A or B wiring)

| addr | DIP switch setting 1234567 | addr | DIP switch setting 1234567 | addr | DIP switch setting 1234567 | addr | DIP switch setting 1234567 | addr | DIP switch setting 1234567 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1000000 | 11 | 1101000 | 21 | 1010100 | 31 | 1111100 | 41 | 1001010 |
| 2 | 0100000 | 12 | 0011000 | 22 | 0110100 | 32 | 0000010 | 42 | 0101010 |
| 3 | 1100000 | 13 | 1011000 | 23 | 1110100 | 33 | 1000010 | 43 | 1101010 |
| 4 | 0010000 | 14 | 0111000 | 24 | 0001100 | 34 | 0100010 | 44 | 0011010 |
| 5 | 1010000 | 15 | 1111000 | 25 | 1001100 | 35 | 1100010 | 45 | 1011010 |
| 6 | 0110000 | 16 | 0000100 | 26 | 0101100 | 36 | 0010010 | 46 | 0111010 |
| 7 | 1110000 | 17 | 1000100 | 27 | 1101100 | 37 | 1010010 | 47 | 1111010 |
| 8 | 0001000 | 18 | 0100100 | 28 | 0011100 | 38 | 0110010 | 48 | 0000110 |
| 9 | 1001000 | 19 | 1100100 | 29 | 1011100 | 39 | 1110010 | 49 | 1000110 |
| 10 | 0101000 | 20 | 0010100 | 30 | 0111100 | 40 | 0001010 | 50 | 0100110 |
| 51 | 1100110 | 61 | 1011110 | 71 | 1110001 | 81 | 1000101 | 91 | 1101101 |
| 52 | 0010110 | 62 | 0111110 | 72 | 0001001 | 82 | 0100101 | 92 | 0011101 |
| 53 | 1010110 | 63 | 1111110 | 73 | 1001001 | 83 | 1100101 | 93 | 1011101 |
| 54 | 0110110 | 64 | 0000001 | 74 | 0101001 | 84 | 0010101 | 94 | 0111101 |
| 55 | 1110110 | 65 | 1000001 | 75 | 1101001 | 85 | 1010101 | 95 | 1111101 |
| 56 | 0001110 | 66 | 0100001 | 76 | 0011001 | 86 | 0110101 | 96 | 0000011 |
| 57 | 1001110 | 67 | 1100001 | 77 | 1011001 | 87 | 1110101 | 97 | 1000011 |
| 58 | 0101110 | 68 | 0010001 | 78 | 0111001 | 88 | 0001101 | 98 | 0100011 |
| 59 | 1101110 | 69 | 1010001 | 79 | 1111001 | 89 | 1001101 | 99 | 1100011 |
| 60 | 0011110 | 70 | 0110001 | 80 | 0000101 | 90 | 0101101 | 100 | 0010011 |
| 101 | 1010011 | 111 | 1111011 | 121 | 1001111 | | | | |
| 102 | 0110011 | 112 | 0000111 | 122 | 0101111 | | | | |
| 103 | 1110011 | 113 | 1000111 | 123 | 1101111 | | | | |
| 104 | 0001011 | 114 | 0100111 | 124 | 0011111 | | | | |
| 105 | 1001011 | 115 | 1100111 | 125 | 1011111 | | | | |
| 106 | 0101011 | 116 | 0010111 | 126 | 0111111 | | | | |
| 107 | 1101011 | 117 | 1010111 | | | | | | |
| 108 | 0011011 | 118 | 0110111 | | | | | | |
| 109 | 1011011 | 119 | 1110111 | | | | | | |
| 110 | 0111011 | 120 | 0001111 | | | | | | |

## Group Address Setting

In Group mode the Sounder Control Module responds to an additional address referred to as the 'group address', which is used to activate groups of Sounder Control Modules simultaneously. (The module continues to respond to its own individual address and report its status from that address in the normal way.) The group address is selected by the four-segment DIP switch S2 which is factory-set to 0000. A group address may be any spare address within - and only within - the range 112 to 126 inclusive. The required group address is set by moving one or more of the segments on the switch to '1' (OFF). The table shows the settings for the group address switch:

| addr | DIP switch setting 1248 | addr | DIP switch setting 1248 |
|---|---|---|---|
| 112 | 1111 | 121 | 0110 |
| 113 | 0111 | 122 | 1010 |
| 114 | 1011 | 123 | 0010 |
| 115 | 0011 | 124 | 1100 |
| 116 | 1101 | 125 | 0100 |
| 117 | 0101 | 126 | 1000 |
| 118 | 1001 | | |
| 119 | 0001 | | |
| 120 | 1110 | | |



**Fig 4**. DIP Switch, S2