



DETCON MODEL AV1/V2/AV2-C1D2M

Hazardous Duty Class I. Div 2, Multitone Alarm Station



Operator's Installation and Instruction Manual

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1.0 Description

Detcon Model AV2-C1D2M audiovisual alarm stations are designed for installation and use in hazardous duty, corrosive work environments. The unit is Class I, Division 2, Groups B, C and D. The AV1-C1D2M alarm station consists of one strobe and a siren. The V2-C1D2 alarm station consists of two strobes, and the AV2-C1D2M alarm station consists of two strobes and a horn.

The Alarm Stations are designed to be wired to control circuit alarm devices for the purpose of warning personnel of hazardous conditions. When used in conjunction with Detcon controllers, the alarm station is typically used to provide a low alarm (strobe) and high alarm (strobe/horn) for pre-determined hazardous environmental gas levels (toxic or flammable) as indicated by remote mount sensors.

1.1 Strobe

The alarm station Strobe is configured with choice of dome colors such as amber, blue, clear, green, magenta, or red. Dome guard is included. The rugged warning light is specifically designed for hazardous locations or corrosive environments where a very bright visual signal is required.



Figure 1 Strobe

1.2 Horn

The alarm station Explosion Proof Power Alarm® siren is a rain-tight solid-state audible alarm that features four field selectable sounds: Wail, Yelp, Horn, and Temporal Slow Whoop. The explosion proof power alarm siren is available in voltage ratings of 24VDC, 120VAC or 240VAC @ 50/60Hz. and mounts on a unidirectional mounting bracket with ½” conduit access.



Figure 2 SSTX-MV Siren

2.0 Installation

The assembly is mounted on a T-shaped Aluminum bracket with holes pre-drilled to accommodate (2) U-bolt attachments on a 2.5" maximum diameter pipe. U-bolt size is 3/8-16 x 3 inches. Overall Dimensions are 33"H x 16.5"W x 18.5"D (Figure 4).

The tone for the siren is set using tone selector jumpers, J4 & J5. Each jumper consists of three pins and the selection of appropriate tone is made by placing a jumper on two of the three pins as shown in Figure 3.

The alarm comes pre-wired for the voltage ordered from the factory (110/220VAC or 24VDC). Control wiring is installed through the opening at bottom of 4-Way Outlet Box. CID2 cable glands and CID2 cable must be used. Connect wiring in accordance with the appropriate wiring diagram (Figure 5 or Figure 6) The AV2C1D2M is wired for two strobes and a horn, the AV1-C1D2M being wired for Strobe 1 and Horn only, and the V2-C1D2 being wired for two strobes only. Use only 12 to 18 AWG wire for power connections. Strip no more than 0.25-inch of insulation from the ends of the power leads. The unit should be properly grounded according to local electrical codes and specifications. Ground should be connected either to the 4-Way Outlet Box Ground Screw or to the Ground Screw on the terminal block assembly. Optionally, each annunciator can be powered independently by removing the jumper between terminal points 4 and 5, and 5 and 6, and wiring directly to the return path of the annunciator.

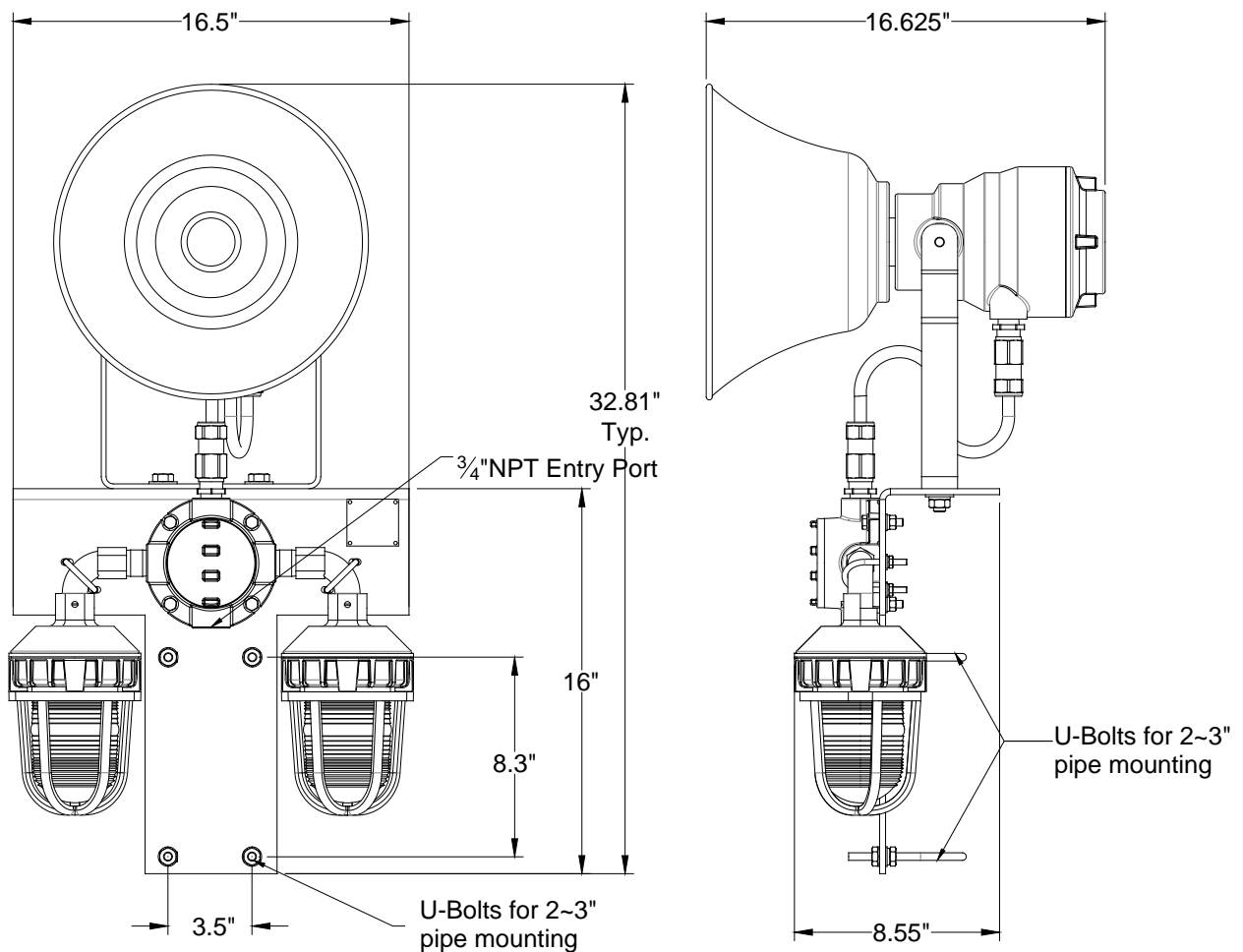
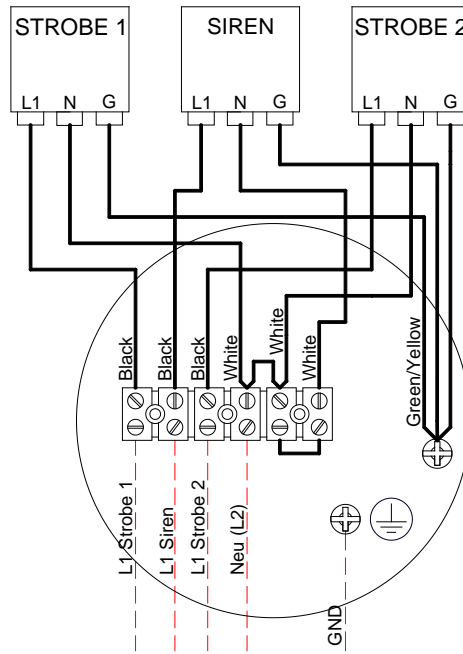
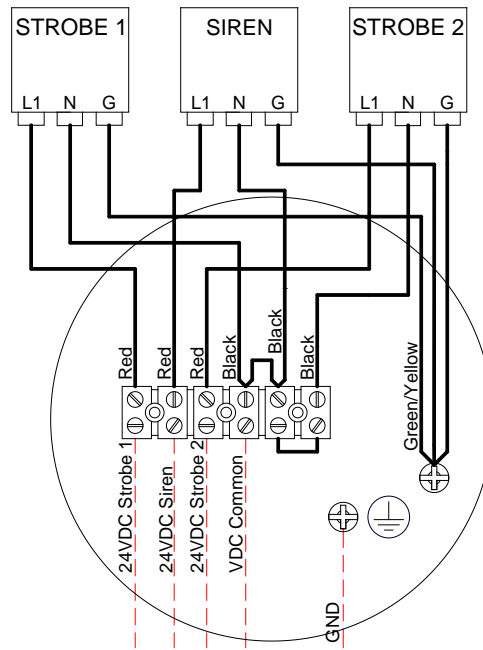


Figure 3 AV2-C1D2M Dimensional



Customer Input Wiring

Figure 4 120/240VAC wiring diagram



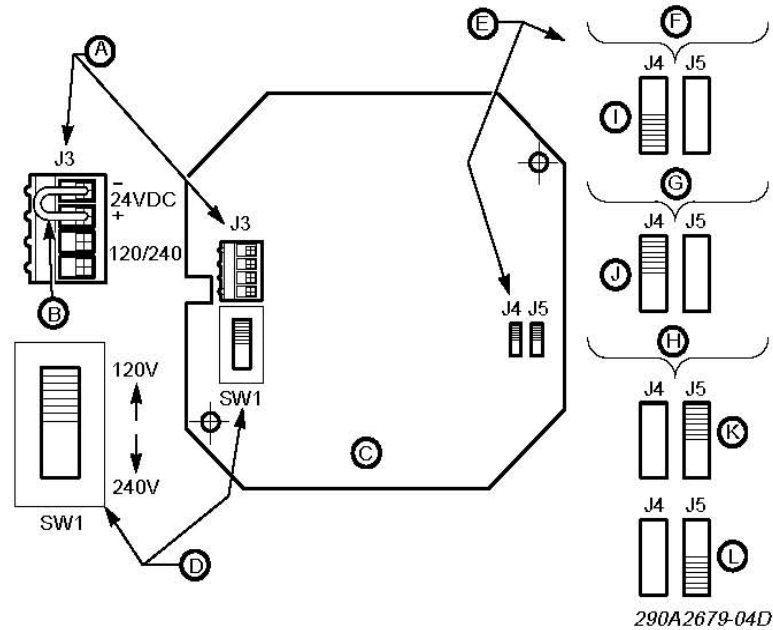
Customer Input Wiring

Figure 5 24 VDC Wiring

3.0 Operation

The AV2-C1D2 Alarm Stations provide two strobes and a horn. All strobes have a flash rate of 1Hz, (one flash per second). This is preset by the manufacture and cannot be modified.

The horn has 4 possible tone settings for use in different configurations. The default tone setting of the horn is factory set. To change the tone setting of the horn, remove the rear cover from the horn, and set jumpers 4 and 5 on the PCA according to Figure 6.



English

- A. Power connector plug, J2
- B. Jumper
- C. SSTX-MV Printed circuit board
- D. AC Voltage selector switch, SW1
- E. Tone selector jumpers, J4 & J5
- F. For yelp tone
- G. For wail tone
- H. For horn tone
- I. Yelp
- J. Wail
- K. Horn
- L. Temporal Slow Whoop

Figure 6 SSTX-MV printed circuit board

4.0 Parts List

Detcon Part #	Description
300-679612-ABS	Alarm System Terminal Block Assembly
356-889321-MV0	24 VDC / 120VAC / 240VAC Hazardous Location Siren
354-1916X6-240	191XL – 120~240VAC Strobe, Ext Ground (X represents color of lamp) Strobe colors: Red (2), Amber (4), Green (5), Blue (6), and Clear (9)

5.0 Specifications

Input Voltage:	24VDC, 120VAC (50/60Hz), or 240VAC (50/60Hz)
Current :	1.4A @ 24VDC, 0.77 @ 120VAC, 0.4 @ 240VAC
Mount:	Wall Mount or 2~3" Pipe Mount
Environment Rating:	Designed to meet NEMA 4 specifications
Area Classification:	Designed for use in CID2 Groups B, C, D locations
Ambient Temperature Range:	-50°C to 65°C
Dimensions:	2 Strobes and Horn: 32.8H X 16.5W X 16.625D 1 Strobe and Horn: 32.8H X 16.5W X 16.625D 2 Strobes: 16H X 15.5W X 8.5D
Dome Colors:	Amber, Blue, Clear, Green, Magenta and Red
Light Source/Lamp Style:	LED
Lamp Life:	60,000 Hours
Flash Rate/Minute:	60
Sound Output:	111 to 118dB(A) @ 1 meter (Tone dependent)
Duty Cycle	Continuous

6.0 Warranty

Detcon Inc., as manufacturer, warrants under intended normal use each new AV1/V2/AV2-C1D2M Alarm station to be free from defects in material and workmanship for a period of one year. The warranty period begins from the date of shipment to the original purchaser and ends one year thereafter. All warranties and service policies are FOB the Detcon Inc. facility located in The Woodlands, Texas.

7.0 Revision Log

Rev.	Date	Changes made	Approval
1.2	03/06/06	Using Tomar WEP1002 siren	BM
1.4	09/07/07	Changed to Federal Signal SSTX-MV siren, addition of spare parts for the Siren	BM
2.0	05/20/08	Modified wiring drawings to show common return and individual activation of siren(s) and horn. Removed Federal Signal spare parts	BM
2.1	11/06/09	Change to title of AV1/AV2-C1D2M, addition of picture and drawings relating to AV1-C1D2M alarm station, addition of Revision log	LU
3.0	05/26/11	Change Terminal Board to Terminal Blocks, and re-wire unit	LU
3.1	02/26/16	Update information for correctness	MM