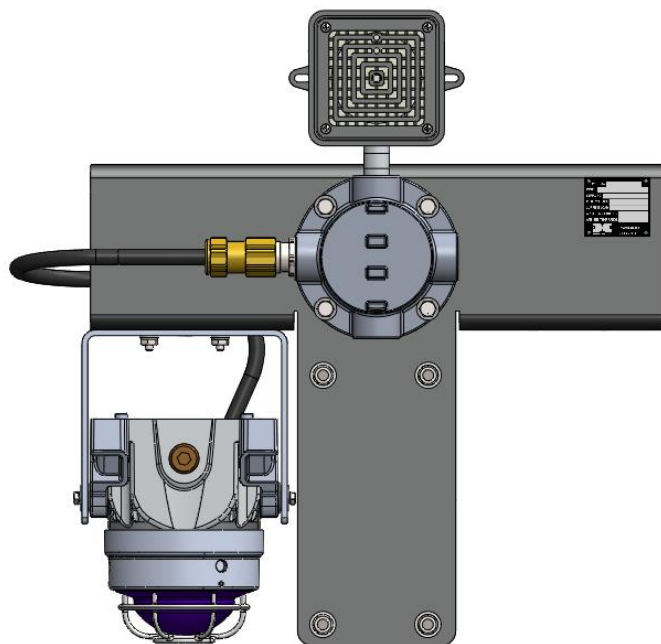




## TELEDYNE DETCON MODEL AV1-C1D2C Hazardous Duty Class I, Div 2, Continuous Tone Alarm Station



### Operator's Installation and Instruction Manual

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## 1.0 Description

Teledyne Detcon Model AV1-C1D2C audiovisual alarm stations are designed for installation and use in hazardous duty, Class I Division 2 Groups B, C, and D environments. The alarm station consists of a strobe and a horn.

The alarm station can be wired to control circuit alarm devices for the purpose of warning personnel of hazardous conditions. When used in conjunction with Teledyne Detcon controllers, the alarm station is typically used to provide an alarm 1 (strobe) and alarm 2 (horn) for pre-determined hazardous environmental gas levels (toxic or flammable) as indicated by remote mount sensors.

### 1.1 Strobe

The alarm station warning light 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.

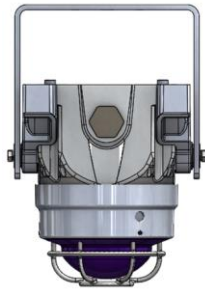


Figure 1 Strobe

### 1.2 Horn

The alarm station vibratone® horn produces a noise level of a 100dB of sound by the electromechanical vibration of a stainless steel diaphragm. The horn mechanism with diaphragm is attached to the grill and has an effective broadcast range of 200 feet. The rugged water and dust tight backbox is ideal for indoor and outdoor use.



Figure 2 Horn

## 2.0 Installation

The assembly can be mounted by using the two mounting holes located on the sides of the horn or the four mounting holes on the 4-way conduit located below the horn ( Figure 3). Additional mounting concepts may consist of utilizing brackets, U-bolts, or a combination of the two.

The alarm comes pre-wired for the voltage ordered from the factory (110, or 220VAC). Wiring is installed through the opening on the side of the 4-Way Outlet Box. C1D2 cable glands and C1D2 cable must be used. Connect wiring in accordance with the wiring diagram shown in Figure 4 or page 3. To determine the proper voltage of the strobe and siren, refer to the specifications label on the alarm system enclosure. 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. Ground can be connected either to the 4-Way Outlet Box Ground Screw or to the Terminal Block Ground.

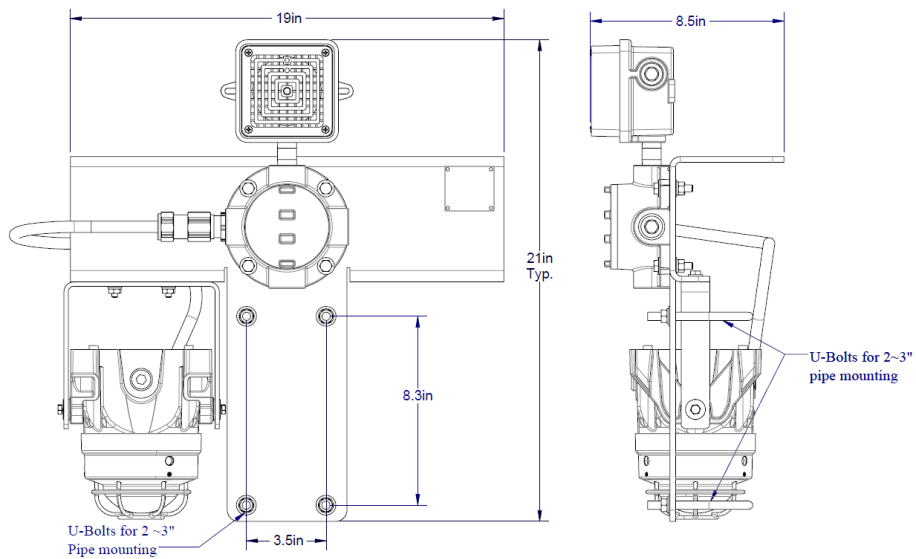
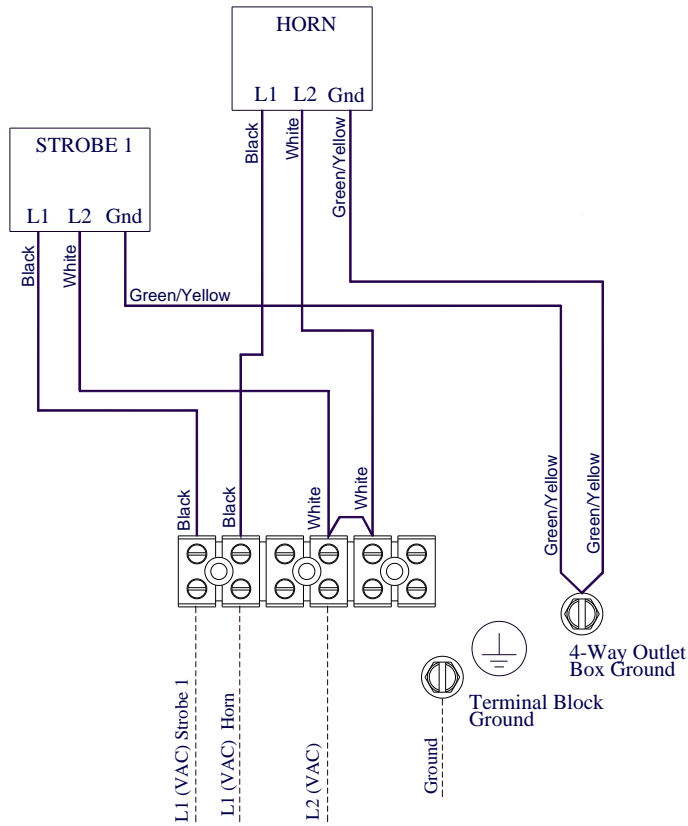





Figure 3 Dimensional



Customer Wiring  
**Figure 4** 120/240VAC Wiring diagram

-  **CAUTION:** Explosion Hazard – DO NOT remove or replace lamps or plug-in modules unless power has been disconnected or the area is free of ignitable concentrations.
-  **CAUTION:** Explosion Hazard – DO NOT disconnect while the circuit is live or unless the area is free of ignitable concentrations.
-  **CAUTION:** Explosion Hazard – DO NOT connect or disconnect when energized.

### 3.0 Strobe

The strobe has 8 built-in light patterns with 3 pattern speeds. The default setting is selection 2 from the Strobe Patterns Table 1 below at 60 FPM. To change the pattern selection or pattern rate:

Commented [SD1]: Should be Strobe Patterns or Signals Table 1???

- 1) Loosen the set-screw on the side of the housing (cable entry side) with a 1.5mm hex-key one full turn.
- 2) Remove the lens cover from the housing by turning the cover counter-clockwise. Three 120-degree spaced reliefs are provided for a 3/8" spanner wrench if needed. If the cover will not unscrew, back out the set-screw a few additional turns.
- 3) Loosen the captive Philips screw retaining the printed circuit board.
- 4) Slide out the PCB
- 5) Locate the pattern select DIP switch at SW1 and the adjacent pattern rate potentiometer. "On" is "1".

	PATTERN DESCRIPTION	SWITCH	PATTERN NAME
1	All five segments active. 100% duty cycle	000	Steady On
2	Light flashes at 66% duty cycle. 60/75/90 FPM	100	Flash
3	Light gradually fades on and off. 60/75/90 FPM	010	Swell
4	Three 10ms pulses with 10ms pauses. 60/75/90 FPM	110	Strobe Simulation
5	Simulated reflector rotate (smooth). 60/75/90 RPM	001	Rotate Clockwise
6	Simulated reflector rotate (smooth). 60/75/90 RPM	101	Rotate CCW
7	Simulated reflector rotate (smooth). Stop and reverse at $\pm 90^\circ$ 60/75/90 RPM	011	Half-Rotate "Bounce"
8	Simulated dual light source reflector rotate (pinwheel) 60/75/90 RPM	111	Dual Rotate CW

Table 1 Strobe Patterns

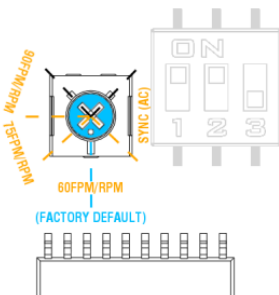


Figure 5 Flash Rate Pattern Configuration





## 4.0 Parts List

Teledyne Detcon Part #	Description
300-679612-ABS	6-position Terminal Block
356-35W006-120	120 VAC Hazardous location vibrating siren
356-35W006-240	240 VAC Hazardous location vibrating siren
354-GLE6X6-240	191XST – 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:	120VAC (50/60Hz), or 240VAC (50/60Hz)
Current :	0.39 @ 120VAC, 0.22 @ 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:	-40°C to 65°C
Dimensions:	21" H x 19" W x 8.5" D
Dome Colors:	Amber, Blue, Clear, Green, Magenta and Red
Light Source/Lamp Style:	LED
Lamp Life:	60,000 Hours
Flash Rate/Minute:	60 default – adjustable 60/75/70
Sound Output:	100dB(A) @ 1 meter
Duty Cycle	Continuous
Approvals:	cCSAus
Electrical Classification:	Class I Division 2 Groups C, D T4 Tamb -20°C to +40°C

## 6.0 Warranty

Teledyne Detcon Inc., as manufacturer, warrants under intended normal use each new AV1-C1D2C 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 Teledyne Detcon Inc. facility located in The Woodlands, Texas.



## 7.0 Revision Log

Revision	Date	Changes made	Approval
2.0	01/13/08	Changes made	BM
2.1	08/14/09	Changed Terminal board to 500-003198-000	BM
3.0	03/20/15	Added 24 VDC horn and strobe information	LU
3.1	02/29/16	Update information for correctness, remove 24VDC info	MM
3.2	06/11/18	Added Caution Statements in Section 2.0	MM
3.3	12/17/19	Updated for new strobe	JG

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