

PERTRONIC INDUSTRIES LTD

Dual Alert-Evac VAD - Installation Instructions



Overview:

The Pertronic Industries' Dual Visual Alarm Device (DVAD) has been designed to provide indoor visual indication for emergency evacuation systems. The DVAD supports two-wire connection, where the operation of the red or white flash is determined by the polarity of the DC voltage applied to the terminals. Two options are available; one for mounting on a wall (max height 2.4m) and the other for mounting on a ceiling (max height 3.0m). The wall and ceiling options have different lens designs, necessary to achieve the illumination requirements specified in AS ISO7240.23:2014.

The low profile two-part case enables the unit to be easily mounted, and then accessed by the removal of a single screw. Four conveniently placed 20mm knockouts are provided for ducted cabling; 3 on the base, and one on the long side of the case.

The DVAD is supplied complete with EVACUATE and ALERT labels. These labels may be fitted to the VADs and oriented to suit the mounting position.

Applications:

- Factories
- Rest homes
- Hospitals
- Suppression Systems



Figure1 : Pertronic Dual Alert-Evac Device (DVAD)

Specification:

Dimensions:	218 x 113 x 32	H x W x D mm
Weight:	0.464Kg	
Knockout Diameter:	20mm	
VAD Body/Flash Colour:	White (Alert) and Red (Evac)	
Coverage, Max Height	Ceiling	Wall
High Power	Max height: 3.0m, Coverage: 7.5m ² (C-3-7.5)	Max height: 2.4m, Coverage: 7.5m ² (W-2.4-7.5)
Low Power	Max height: 3.0m, Coverage: 5.0m ² (C-3-5)	Max. height: 2.2m (red), 2.3m (white) Coverage: 2.3m ² (red), 2.2m ² (white) (W-2.2-2.3) (W-2.1-2.2)
Flash Rate:	1.0Hz (at 24V), switchable to 0.5Hz	

Power Requirements:	Voltage Range:	9V to 60V (DC)	
	Monitoring voltage:	0.25V	
	Operating current:	High Power:	51mA/VAD (@ 24V, 1.0Hz)
		Low Power Standby:	35mA/VAD (@ 24V, 1.0Hz) 0.2uA
VAD Type:	Type A (IP33C). For use in conditioned indoor areas		
Operational Mode:	2-Wire		
Standard compliance:	AS ISO7240.23:2014		

Mechanical:

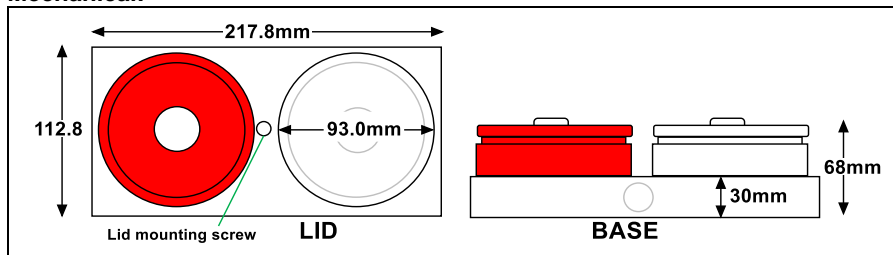


Figure 2: Mechanical Dimensions

Wall and Ceiling Lens Types:

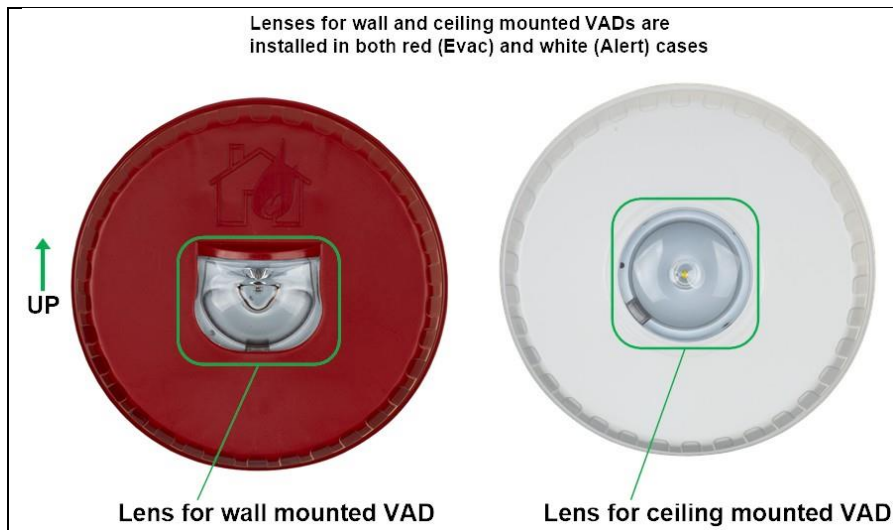


Figure 3: Wall and Ceiling Lens Types

Operation:

The DVAD is designed to operate with the Pertronic EA60 and EA120 amplifiers, and the Pertronic Agent Release Controller. Operation of the two VADs is determined by the polarity of the DC voltage applied to the terminals of connector K2. When the DC supply applies a negative voltage to the +ve terminal, the White VAD is activated. Conversely, when the supply connects positive voltage to +ve terminal, the Red VAD is activated. Only one VAD can be driven at any one time. The maximum number of DVAD units that can be daisy chained to an EA60 or EA120 is 100. The last DVAD in the chain must have a 10kΩ 0.5W EOL resistor installed.

Interconnection diagrams:

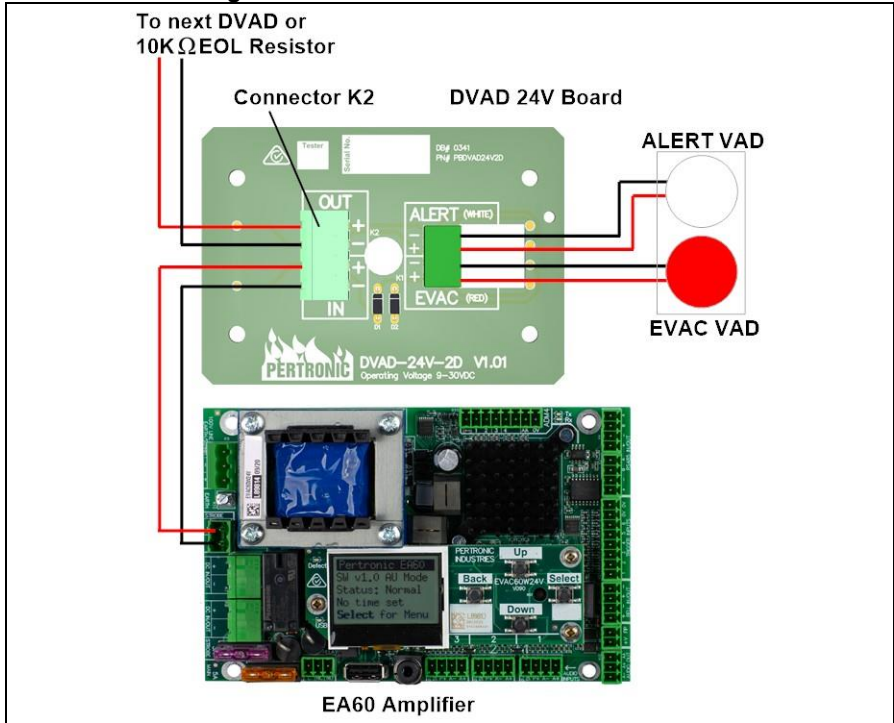


Figure 4: EA60/EA120 Amplifier to DVAD board Interconnection Diagram

Note:

1. The final DVAD unit in the VAD string must be terminated with a 10kΩ End of Line Resistor.
2. The maximum number of DVAD units that can be driven by either an EA60 A or EA120 Amplifier is 100.
3. The maximum VAD current supplied by an EA60 or EA120 to a string of VADs is 3A.

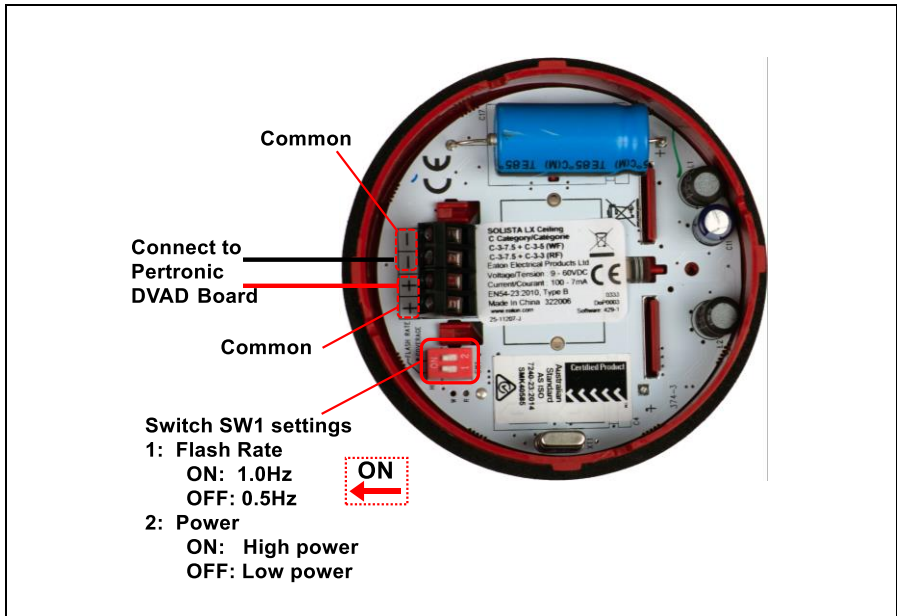


Figure 5: DVAD Board to VAD Interconnection Diagram

WARNING

For correct operation, the wiring configuration of each DVAD, must be identical to the next. Failure to connect the terminals with the correct polarity or configuration will result in incorrect operation and / or damage to the components.

Product Code:

Product Code	Description
DVAD-C-24V-2D	Dual Red & White Polarity Reversal VAD 24V Ceiling Mount
DVAD-W-24V-2D	Dual Red & White Polarity Reversal VAD 24V Wall Mount

Document Change History:

Issue Number	Reason for Update	Description of Changes	Author
1.0 Nov 2021	New Document	CN3095	RJK
1.1 May 2022	Wiring updated	CN3172	RJK