Electronic Vibration Switch (EVS-2)

Features

- Vibration (0 to 3.0 ips peak)
- Suitable for Universal use - with mounting at any angle
- Aluminum Housing
- 4 to 20 mA Analog Vibration Signal
- RAW Signal 100 mV/g
- Two Relays
- Rugged Design

1 Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

The Electronic Vibration Switch (EVS-2) protects against equipment failure by monitoring velocity-based vibration levels and providing an early warning or shutdown when abnormal vibration is detected.

The EVS-2 can be connected to Murphy's TTD™ Annunciator, Centurion™ or Centurion *PLUS*™ controllers for increased functionality. It complements Murphy's VS2™ shock and excessive vibration/pulsation switch designed to detect abnormal shock or pulsation due to equipment failure and to shutdown other equipment in a system to prevent further damage.

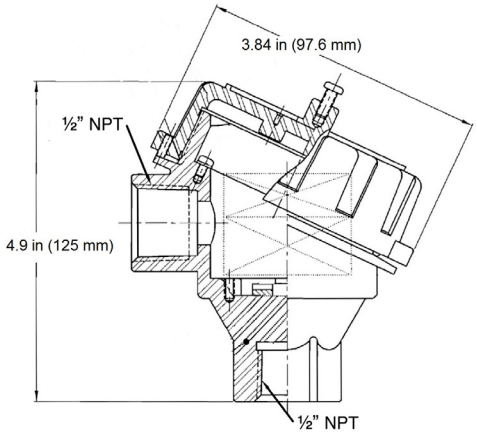
The EVS-2 offers two adjustable level detectors with definable response delay for either Warning or Shutdown alarms. Measuring ranges and response times of the level detectors are set by DIP switch. The assigned relay powers a warning or shutdown alarm.

The EVS-2 can be used on any equipment where abnormal vibration could lead to equipment damage, including:

- Cooling Fans
- Engines
- Pumps
- Compressors
- Gear Boxes
- Motors
- Generator Sets

The EVS-2 can monitor and alert the operator of abnormal vibration caused by a variety of factors, including:

- Imbalance and misalignments
- Defective sleeve bearings
- Broken tie-down bolts
- Defective ball or roller bearings
- Gear mesh
- Blade-pass frequencies
- Detonation or broken parts



Terminal Connections

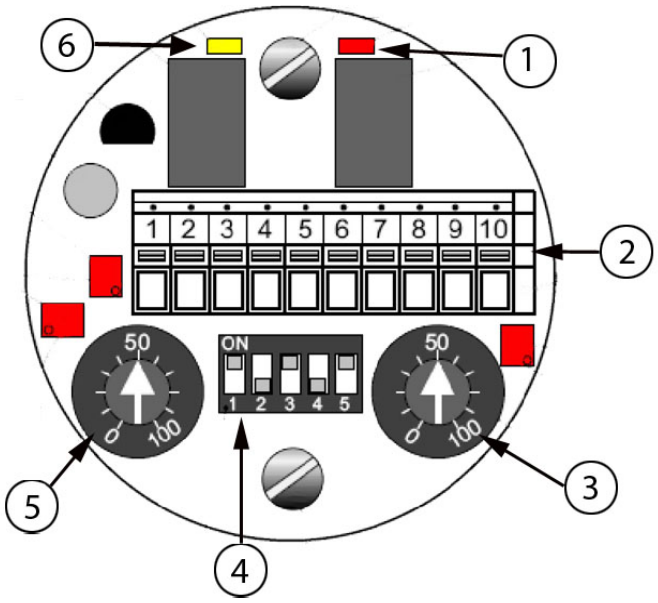
1	+24 V DC
2	0 V DC
3	Relay K1 NC
4	Relay K1 COM
5	Relay K1 NO
6	Relay K2 NC
7	Relay K2 COM
8	Relay K2 NO
9	Analog Output 4 – 20 mA
10	RAW-Signal – 100 mV/g

Specifications

PERFORMANCE			***RELAY***	
Vibration Range (Adjust jumper S1)	0.75, 1.5 or 3.0 IPS Peak		Switch Contact Capacity	30 VDC/1A, 150 VAC/0.46 A
Frequency Range	5 to 1000 Hz		Relay Function	Non-latching
Analog Output (R_{load})	4-20 mA ≤ 500Ω		Threshold Set Point	10 to 100% of Alarm Set Point
RAW Signal (R_{load})	100 mV/g (offset +5VDC) ≤ 20 kΩ		Normally Energized (NE)	Fail Safe
			Time Delay (Adjust DIP switch S1 and S5)	1 or 5 seconds
ENVIRONMENT			***PHYSICAL***	
Operating Temperature	-22°F to + 185°F (-30°C to + 85°C)		Housing Material	Aluminum / Epoxy Paint (Red)
Storage Temperature	-40°F to + 185°F (-40°C to + 85°C)		Weight	1.5 Lbs (0.7 Kg)
Enclosure Classification	IP68		Size (H x W)	4.9 in. x 3.9 in. (125 x 100 mm)
Cable Connection	½ NPT, IP66, IRA 06 ATEX 1188 X SIRA 07 ATEX 4327 X		Mounting Threads	½" NPT Female, ½" NPT Male/Male SS
ELECTRICAL			***INDICATORS***	
Sensor Type	Accelerometer		Alarm (LED)	Yellow
Power Required	20 to 30 VDC		Shutdown (LED)	Red
Current Draw	< 40mA			
Electrical Connectors	Spring Terminals			
APPROVALS				
CSA (c/us)	Class I, Div. I, Grp A, B, C, D (T6) / Class I, Zone 0 AEx ia IIC (T6) / EX n IIC Class I, Div. 2, Grp A, B, C, D (T6) / Class I, Zone 2 AEx n IIC (T6) / Ex n IIC Class II, Div. 1, Grp E, F, G			
ATEX	Ex d IIC T6, Ex tD A21 T100°C			

Mechanical Diagram

1	Red Channel 2 LED (K2)
2	Spring terminal 16-24 AWG.
3	Channel 2 (K2) Vibration Set Point Potentiometer (Pot)
4	DIP switches for vibration ranges and time delays.
5	Channel 1 (K1) Vibration Set Point Potentiometer (Pot)
6	Yellow Channel 1 (K1) LED



How to Order

A single model provides all the features and benefits described in the bulletin. Order EVS-2 (PN: 20-70-0242).

MURPHY by ENOVATION CONTROLS

美国Murphy仪表经销商

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