



VS102 Electronic Vibration Switch

Introduction

The VS102 Electronic Vibration Switch is designed to be the cost effective solution for vibration switch applications. The VS102's unique and rugged design is suitable for harsh environments and hazardous areas. It has a universal mounting feature, relays or triacs, and a 4-20mA output.

Applications

- ✓ Pumps
- ✓ Motors
- ✓ Industrial Fans
- ✓ Heat Exchangers/ Cooling Towers
- ✓ Engines
- ✓ Reciprocating Compressors
- ✓ Centrifuges
- ✓ Rock or Coal Crushers

Features

- ✓ Direct replacement for mechanical switches with universal mounting plates and studs
- ✓ 4-20mA output
- ✓ Dual alarms with relays or triacs
- ✓ NEMA 4X, IP65 environmental rating
- ✓ Hazardous area approvals: CSA, CE, ATEX, GOST-R, PCEC

Specifications

Frequency Range:	2 to 1000 Hz
Alarms:	Dual alarms
Dry-contact relay:	5A 230VAC/115VAC or 5A 30VDC
Triac:	5A 230VAC. Optically Isolated, Standard NC
Temperature Limit:	-40°C to +85°C (-40°F to +185°F)
Power Supply:	95 - 250VAC@100mA, 50-60Hz, or 22 - 30VDC @ 200mA
Enclosure:	Cast Aluminum (copper free)
Coating:	Standard plastic coating for all cased aluminum parts outside. Mounting plate, mounting stud and local reset are 304 stainless steel.



Environmental Rating: NEMA 4X, IP65
Hazard Rating: See order information

Physical

Temperature:
 Operation: -40°C to +85°C (-40°F to +185°F)
 Storage: -50°C to +120°C (-58°F to +248°F)

Dimensions: See attached drawing

Weight: 1.4kg (3 lbs)



Order Information

VS102-ABCD-EFGG

A: Alarms***

- A = 0: Dual SPDT Relays
- A = 1*: Single SPDT Relay
- A = 2: Single SPST Triac, NO
- A = 3: Dual SPST Triacs, NO
- A = 4: Single SPST Triac, NC
- A = 5: Dual SPST Triacs, NC

B: Conduit Entries

- B = 0*: 3/4" NPT
- B = 1: M20x1.5

C: Mounting Plate or Mounting Stud

- C = 0*: Mounting Plate PT500-13
- C = 1: Mounting Plate PT500-14
- C = 2: Mounting Stud 3/4" NPT
- C = 3: Mounting Stud M20x1.5

D: Power Supply

- D = 0*: 115VAC or 230VAC
- D = 1: 24VDC

E: Hazardous Area Approvals

- E = 0: CE Mark (With Local Reset)
- E = 1: Multiple approvals (With Local Reset):
 - CSA: Class I, Div 1, Groups B, C, D, T4 & T6
CERTIFICATE: 2079756
 - ATEX: II2G Ex d II B+ H₂T4T6
KAMA 09ATEX0080 X
T4@Ta= -40°C to +100°C
T6@Ta= -40°C to +70°C
 - PCEC: Ex d II CT4
CE Mark
- E = 2: Multiple approvals (No Local Reset):
 - CSA: Class I, Div 1, Groups A, B, C, D, T4 & T6
CERTIFICATE: 2079756
 - ATEX: II2G Ex d II CT4T6
KAMA 09ATEX0080 X
T4@Ta= -40°C to +100°C
T6@Ta= -40°C to +70°C
 - PCEC: Ex d IIC T4
CE Mark

- E = 3*: CE Mark (No Local Reset)
- E = 4: Multiple approvals (With Local Reset):
 - GOST R: II2G Ex d IIB+H2T4T6
CE Mark
- E = 5: Multiple approvals (No Local Reset):
 - GOST R: II2G Ex d II C T4T6
CE Mark

F: 4-20mA Outputs

- F = 0: None
- F = 1*: 4-20mA

GG: Full Scale

- GG = 09: 0 - 5.0g pk
- GG = 10: 0 - 10.0g pk
- GG = 11: 0 - 20.0g pk
- GG = 20: 0 - 12.5 mm/s pk
- GG = 21: 0 - 20mm/s pk
- GG = 22: 0 - 25mm/s pk
- GG = 23: 0 - 50mm/s pk
- GG = 24: 0 - 100mm/s pk
- GG = 30: 0 - 12.5 mm/s rms
- GG = 31: 0 - 20mm/s rms
- GG = 32*: 0 - 25mm/s rms
- GG = 33: 0 - 50mm/s rms
- GG = 34: 0 - 100mm/s rms
- GG = 40: 0 - 0.5ips pk
- GG = 41: 0 - 1.0ips pk
- GG = 42: 0 - 2.0ips pk
- GG = 43: 0 - 4.0ips pk
- GG = 50: 0 - 0.5ips rms
- GG = 51: 0 - 1.0ips rms
- GG = 52: 0 - 2.0ips rms
- GG = 53: 0 - 4.0ips rms

Note:

* Factory default

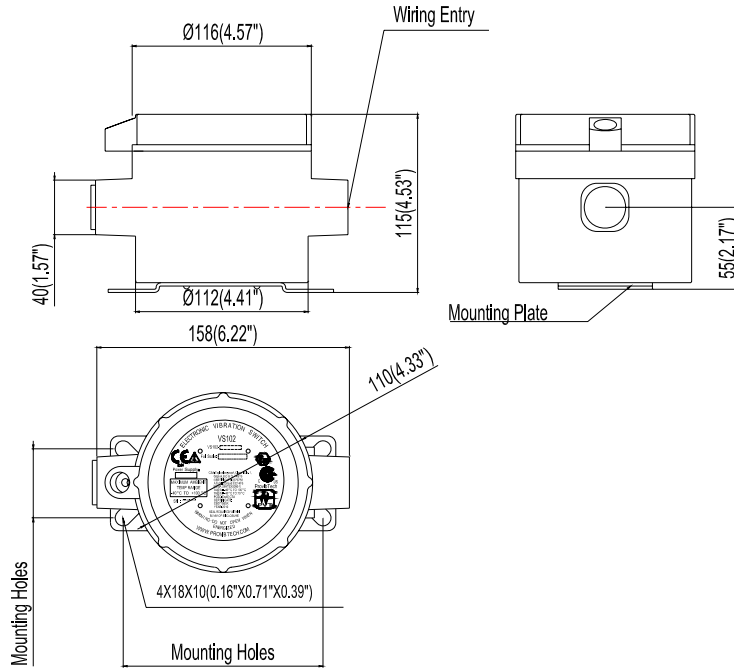
*** Alarm delays 6s and relay works in non-energized mode.

E=0/ E=1 default setting is alarm latching.

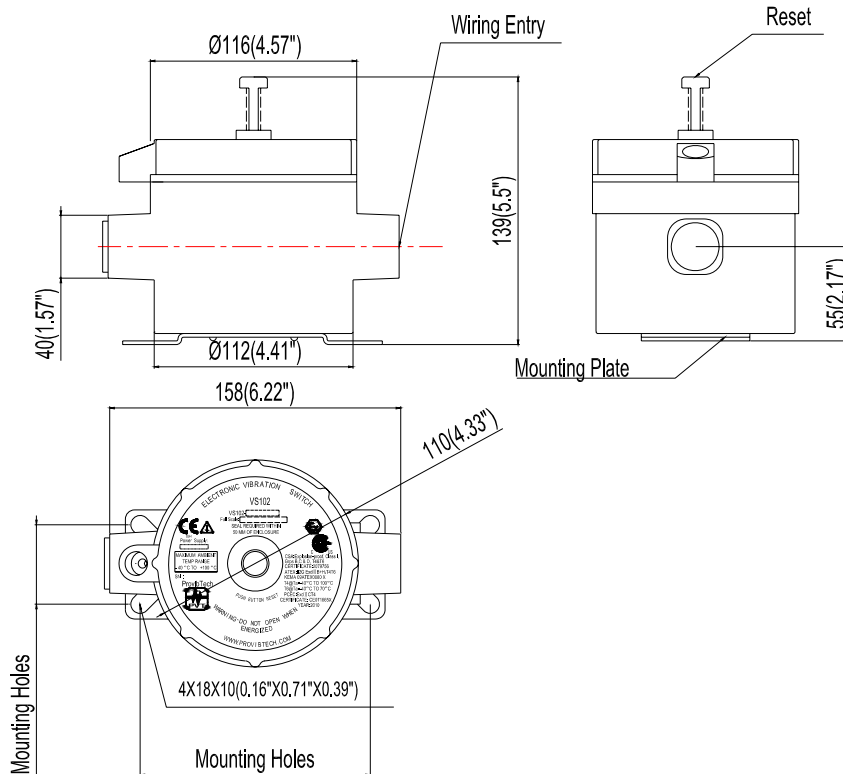
E=2/ E=3 default setting is alarm non-latching.



Mechanical Outline Drawing



All dimensions in mm (inches)

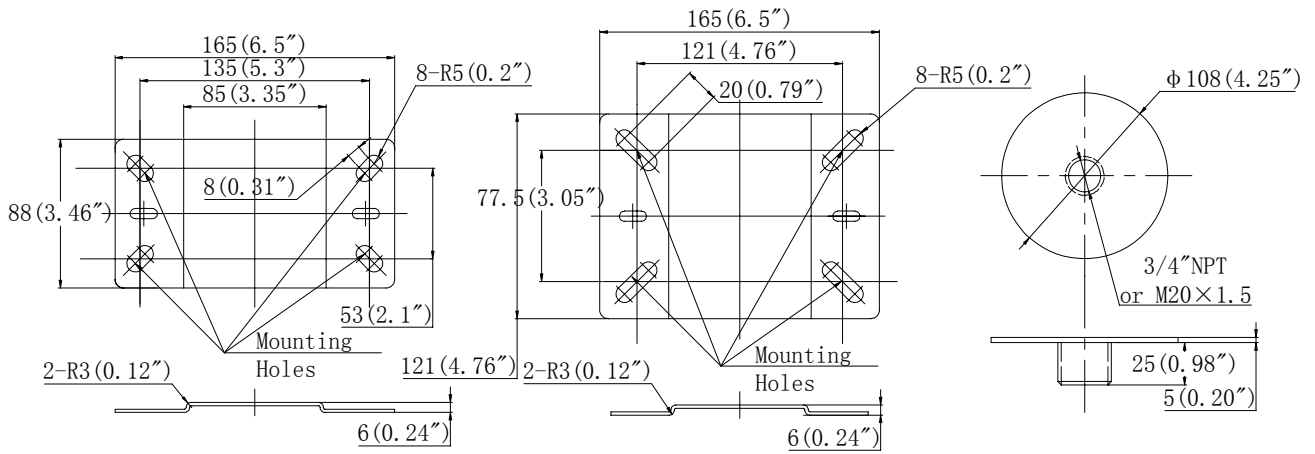


All dimensions in mm (inches)

Note: The default case has no local Reset.



Mounting Plate, Mounting Studs



PT500-13

PT500-14

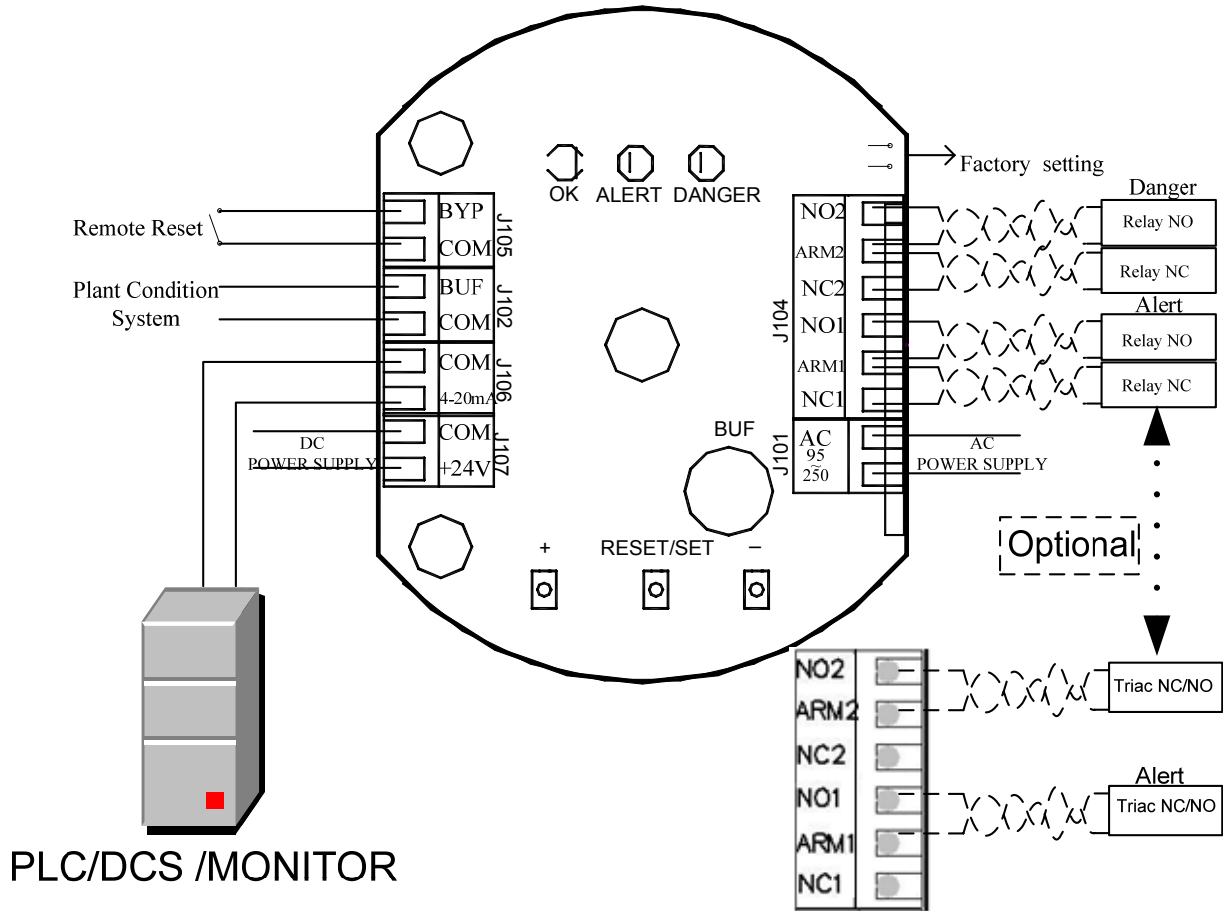
All dimensions in mm (inches)

PT500-15 (3/4" NPT)

PT500-17 (M20 x 1.5)



Field-Wiring Diagram



- Note: 1. Select Relay/Triac NO/Triac NC as per Alarm option
 2. If single alarm is selected, Alert is valid only