Shock and Vibration Control Switch

VS94 Model

VS94 Model

■ NEMA 4X/IP66 Enclosure (CSA Types 4 & 12)

■ Protects Your Equipment from Excessive Shock or Vibration

■ Fine Adjustment to Precisely Select the Degree of Sensitivity

■ Reset from a Remote Location (Optional)

■ Time Delay to Override Trip Operation at Start-up (Optional)

■ Space Heater to Prevent Moisture Condensation Inside the Unit (Optional)

Description

VS94 Series is an electro-mechanical device designed to protect equipment from damaging shock or vibration. This sensitive mechanism can detect excessive shock or vibration and shutdown the equipment before further damage occurs. A set of contacts is held in a latched position through a magnetic latch mechanism. As the level of shock or vibration increases an inertia mass exerts force against the latch arm and forces it away from the magnetic latch causing the latch arm to separate and to operate the contacts. Sensitivity is obtained by adjusting the amount of air gap between the magnet and latch arm plate.

The VS94 Series is housed in a NEMA 4/4X glass filled polyester enclosure and has a base mount. It is for applications in non-hazardous locations.

VS94 models are rated up to 480 VAC.
(See the How to Order section on back page for models and options available.)

Applications

Applications for the VS94 include all stationary types of machinery or equipment where excessive shock/vibration can be damaging or poses a threat to normal operations such as in:

■ Cooling fans
■ Engines
■ Pump jacks
■ Compressors
■ Pumps
■ Rotating and Reciprocating Machinery

Features

■ Electromechanical Design
■ Detects Shock or Vibration in Three Planes of Motion
■ NEMA 4/4X (CSA types 4 and 12) Weather-proof Enclosure
■ Reliable Magnetic Latch Feature
■ Micro Fine, Easy-to-Adjust Sensitivity Adjustment
■ Manual Reset (Standard)

■ Remote Reset (Optional)
■ Adjustable Start-up Time Delay (Optional)
■ Space Heater Circuit to Prevent Housing Moisture Condensation (Optional)
■ Two (2) versatile SPDT snap-switches rated up to 480 VAC.

Options

Remote Reset
This option of the VS94 includes a built-in electric solenoid which allows reset of tripped unit from a remote location. Available for 115 VAC or 24 VDC.

Time Delay
Overrides trip operation on start-up. The time delay option is field-adjustable from 5 seconds up to 6-1/2 minutes with an easy-to-adjust 20-turn potentiometer. Available for 115 VAC or 24 VDC.

Space Heater
This optional circuit prevents moisture condensation inside the VS94 housing.

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Specifications

Case: Polyester fiberglass reinforced; NEMA type 4X; IP66; CSA types 4 and 12.

Conduit Fitting: 3/4 NPT conduit fitting connection.

Normal Operating Ambient Temperature:
0 to 140°F (-18 to 60°C).

Snap-switches: 2-SPDT snap acting switches; 5A @ 480 VAC; 2A resistive, 1A inductive, up to 30 VDC.

Range adjustment: 0 - 7 G's; 0 - 100 Hz /0.100 in. displacement.

Space Heater (optional):

Option	Operating Current
H15	.023 A @ 115 VAC
H24	.12 A @ 24 VDC

Remote Reset (optional):

Option	Operating Current
R15	.17 A @ 115 VAC
R24	.36 A @ 24 VDC

Time Delay (optional):

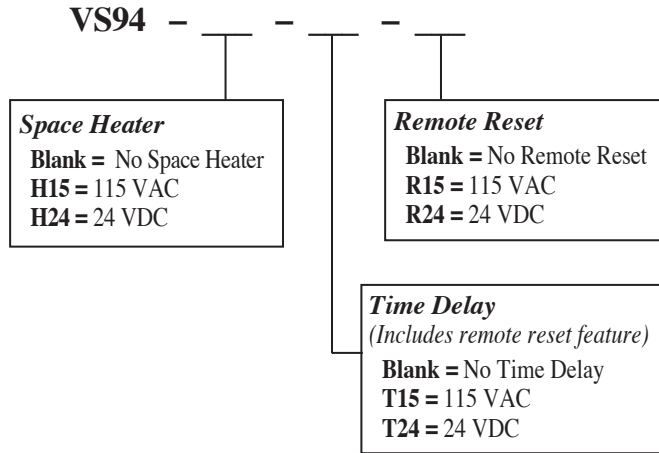| Option	Operating Current	Standby Current
T15	.360 A @ 115 VAC	.01 A @ 115 VAC
T24	1.15 A @ 24 VDC	.01 A @ 24 VDC

Time Delay/Remote Reset: Adjustable 20-turn potentiometer from 5 seconds to 6-1/2 minutes (15 seconds per turn approximately).

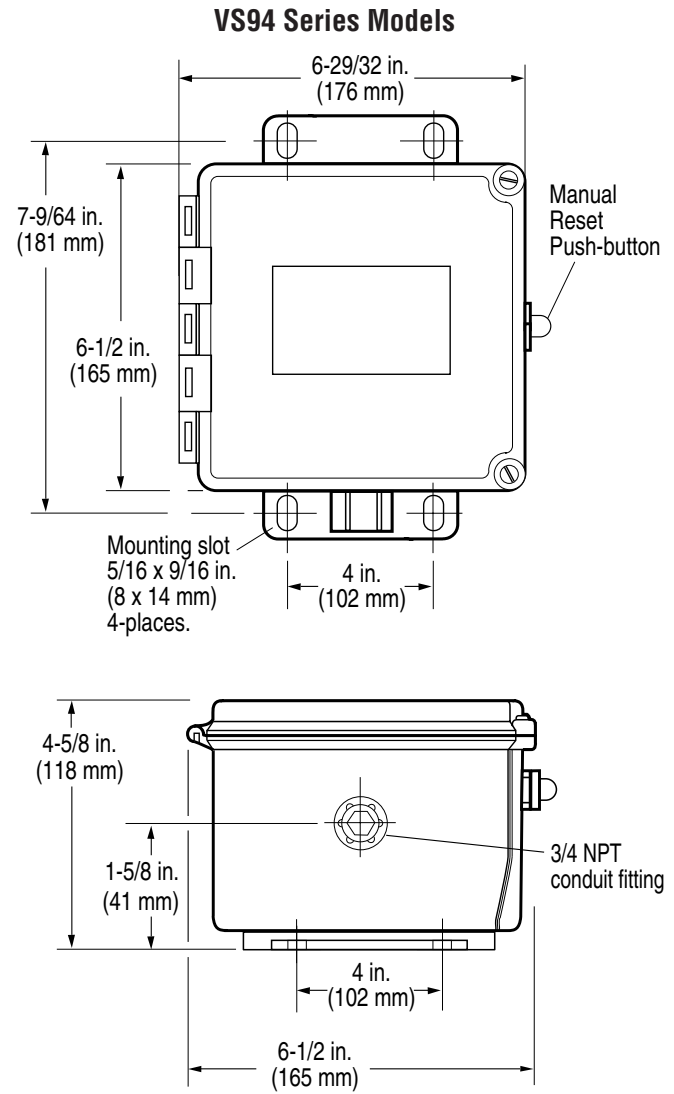**Shipping Weight:** 4.35 lb. (2 kg.)

Shipping Dimensions: 9 x 8 x 4-11/16 in. (229 x 203 x 119 mm)

How to Order

To order your VS94 model use the diagram below.

VS94 – __ – __ – __

Space Heater
Blank = No Space Heater
H15 = 115 VAC
H24 = 24 VDC

Remote Reset
Blank = No Remote Reset
R15 = 115 VAC
R24 = 24 VDC

Time Delay
(Includes remote reset feature)
Blank = No Time Delay
T15 = 115 VAC
T24 = 24 VDC

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Dimensions

VS94 Series Models

6-29/32 in. (176 mm)

7-9/64 in. (181 mm)

6-1/2 in. (165 mm)

Manual Reset Push-button

Mounting slot 5/16 x 9/16 in. (8 x 14 mm) 4-places.

4 in. (102 mm)

4-5/8 in. (118 mm)

1-5/8 in. (41 mm)

3/4 NPT conduit fitting

4 in. (102 mm)

6-1/2 in. (165 mm)

Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/support/warranty.htm

In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.

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