

Installation of Shock/Vibration Control Switches

Model Series: VS2™, VS2C, VS2EX, VS2EXR, VS2EXRB and VS94

Please read the following instructions and warnings before installation. Visually inspect the product for any damage that may have occurred during shipping.

Warnings	<p>Before beginning installation of this product:</p> <ul style="list-style-type: none"> • Disconnect all electrical power to the machine • Make sure the machine cannot operate during installation • Follow all safety warnings of the machine manufacturer • Read and follow all installation instructions • It is your responsibility to ensure that qualified mechanical and electrical technicians install this product • Please contact FW Murphy immediately if you have any questions
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The FW Murphy shock and vibration switches are available in a variety of models. They are used for applications on machinery or equipment where excessive vibration or shock can damage the equipment or otherwise pose a threat to proper operation. A set of contacts is held in a latched position through a mechanical latch and magnet mechanism. As the level of vibration or shock increases, inertia forces act against the latch arm and force it away from the magnetic latch. This action causes the latch arm to operate the contacts. Sensitivity is obtained by adjusting the size of the air gap between the magnet and the target or bolt head on the adjusting mechanism. Applications include all types of rotating or reciprocating machinery such as cooling fans, engines, pumps, compressor, and pump jacks, etc.



Models and Options

- **VS2:** Base mount; suitable for non-hazardous locations or as simple apparatus connected to a certified non-incendive or intrinsically safe electrical digital input. Meets IP54 specifications when mounted on a horizontal surface with the drain holes down.
- **VS2C:** VS2 with C-clamp mount installed on switch.
- **VS2EX:** Explosion-proof; meets IP54 specifications; Class I, Div. 1, Groups C and D hazardous locations; CSA for Canada and US.
- **VS2EXR:** Explosion-proof with remote reset (CSA approved).
- **VS2EXRB:** Explosion-proof; Class 1, Div. 1, Group B; with remote reset (no third-party approval for this product). No IP rating for this product.
- **VS94:** Base mount; non-hazardous locations, NEMA 4X/IP66.

Optional Remote Reset Feature (VS2EXR, VS2EXRB and VS94)

An optional remote reset includes built-in electric solenoids which allows reset of tripped unit from a remote location, or hold-in reset during starting. Options are listed below:

- R15: Remote reset for 115 VAC
- R24: Remote reset for 24 VDC

VS94 Time Delay Option

Overrides trip operation on startup. For VS94 series models, the delay time is field adjustable from 5 seconds up to 100 seconds with a 20-turn potentiometer (5 seconds per turn approximately). Options listed below:

- T15: Time Delay for 115 VAC
- T24: Time Delay for 24 VDC

VS94 Space Heater Option

This optional space heater board prevents moisture from condensing inside the VS94 Series case. Options listed below:

- H15: Space Heater for 115 VAC
- H24: Space Heater for 24 VDC

Service Parts

Part Number	Description
20000031	Glass and gasket assembly
20000032	Reset push button assembly
20000261	Cable clamp assembly (1 each) (VS2C)
20000288	Snap-switch and insulator kit (one switch per kit)
20000289	C-clamp conversion mounting kit
25050506	Dust boot

Specifications

VS2 and VS2C

Case: Environmental Protection: Ingress protected to IP54 (when mounted on a horizontal surface with drain holes down)

VS2: Base Mount

VS2C: C-Clamp mount. Includes 45' (13.7M), 2-conductor 16 AWG, 30 strands/0.25mm strand diameter (1.5mm²) cable and five cable hold-down clamps

Contacts: SPDT double make leaf contacts, 3A @ 240 VAC, 10A @ 120 VAC; 10A @ 32 VDC

Operating Temperature Range: -40° F to 185° F (-40° C to 85° C)

Range adjustment: 0-7 G's; 0-100 Hz/0.10 in. displacement

VS2EX

Case: Base mount, explosion-proof aluminum alloy housing; meets IP54 specifications; Class I, Division 1, Groups C&D

Certification: CSA Canada and US

Snap switches: 2-SPDT snap-switches; 5A @ 480 VAC; 2A resistive, 1A inductive, up to 80 VDC

Operating Temperature Range: -40° F to 185° F (-40° C to 85° C)

Range adjustment: 0-7 G's; 0-100 Hz/0.10 in. displacement