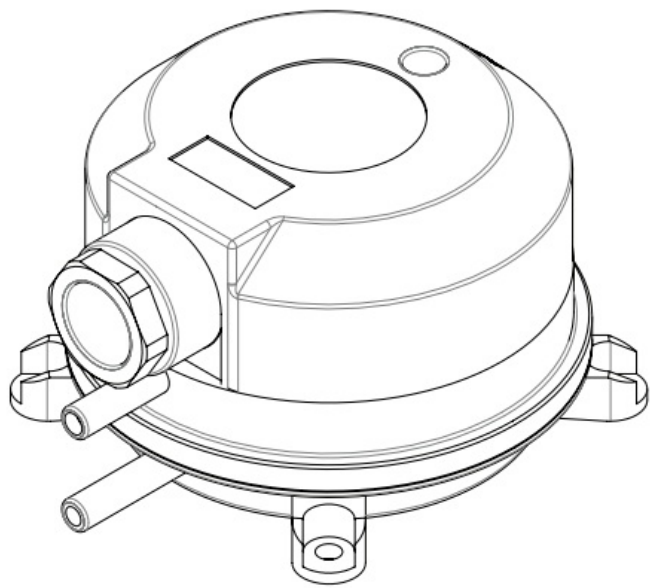
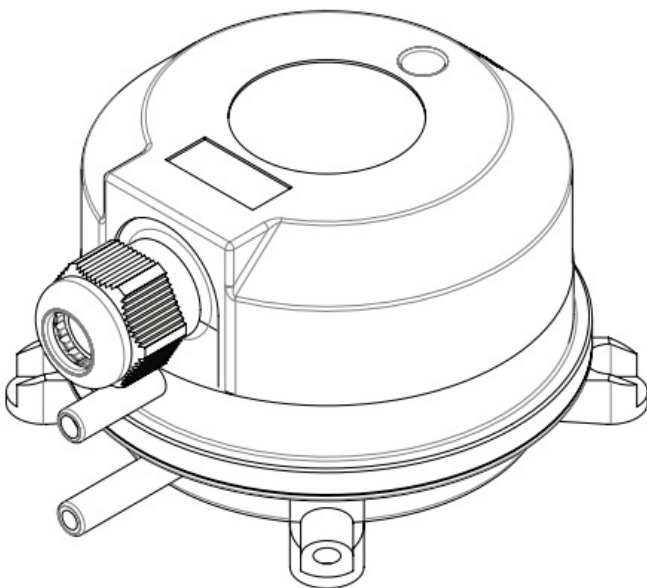




GREYSTONE GFS-U Differential Pressure Switch Instruction Manual

[Home](#) » [Greystone](#) » GREYSTONE GFS-U Differential Pressure Switch Instruction Manual 

GREYSTONE GFS-U Differential Pressure Switch



Contents

- [1 INTRODUCTION](#)
- [2 BEFORE INSTALLATION](#)
- [3 ELECTRICAL CONNECTIONS](#)
- [4 HOSE CONNECTIONS](#)
- [5 SWITCHING PRESSURE ADJUSTMENT](#)
- [6 MOUNTING](#)
- [7 SAFETY & LIABILITY](#)
- [8 SPECIFICATIONS](#)
- [9 DIMENSIONS](#)
- [10 Documents / Resources](#)
 - [10.1 References](#)
- [11 Related Posts](#)

INTRODUCTION

The differential pressure switch housing unit contains a diaphragm, a snapacting SPDT switch, and a range adjustment knob with increments. The sample connections located on the side accept 6.35mm (0.25") OD tubing. There are various optional pressure ranges, and 2 pickup tubes and 2 m (6.56') of PVC tubing available. The enclosure cover guards against accidental contact with the live switch terminal screws and the setpoint adjustment knob with indication.

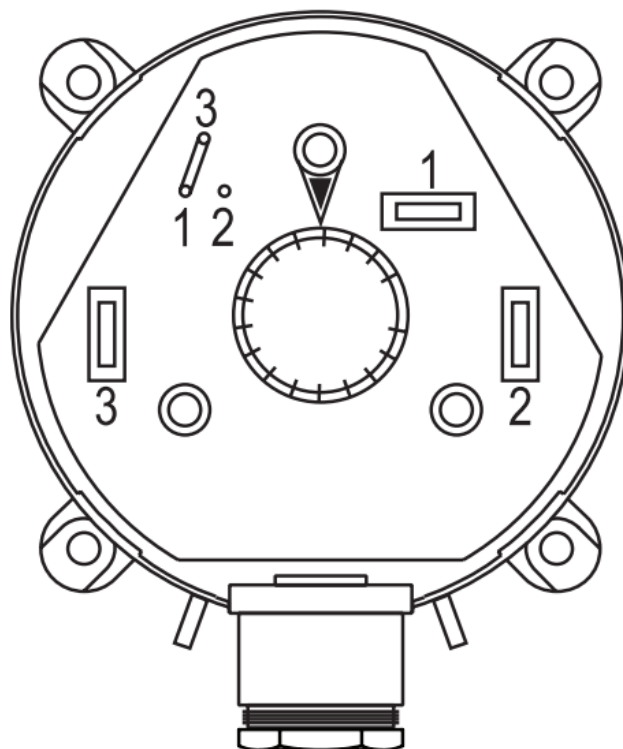
BEFORE INSTALLATION

The electrical equipment may only be installed, added to, changed or maintained by authorized electricians. No voltage is to be applied when you work on electrical installations.

ELECTRICAL CONNECTIONS

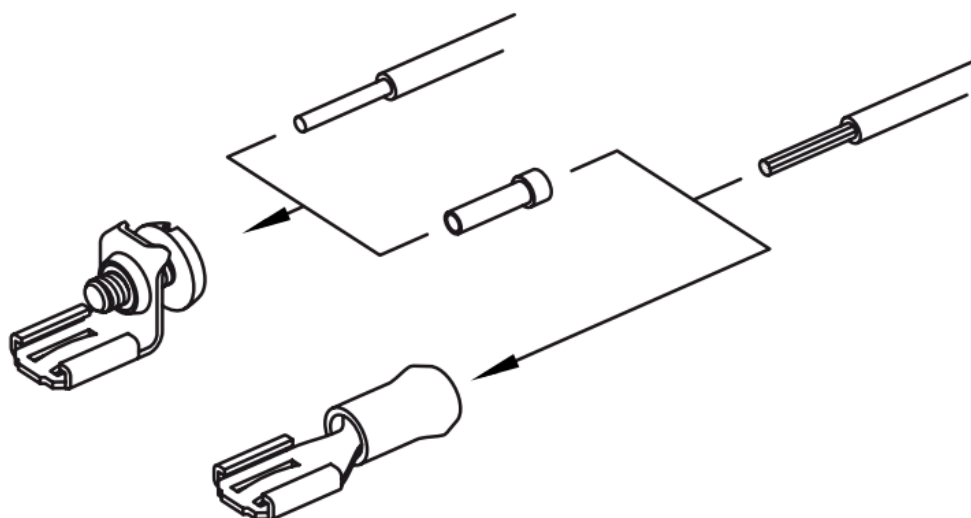
Use a three wired cable with an outer diameter of 5-10mm for the electrical connection. Either tighten the screwed cable gland or insert a conduit tube with 1/2" thread and tighten with a torque of 2.5NM. See **Figure 1**.

Figure 1



The connections are intended for 6.3mm crimp-type-sockets. Assemble flex- and solid wires accordingly. See **Figure 2**.

Figure 2



The switch (P) in the pressure switch is designed as a change over contact. Pole 3 (COM) closes to pole 2 (NO) at increasing pressure and to pole 1 (NC) at decreasing pressure. See **Figure 3**. Protect the feed line to pole 3 (COM), either in the control system or along the line (F), as shown in **Figure 4** as follows:

Figure 3

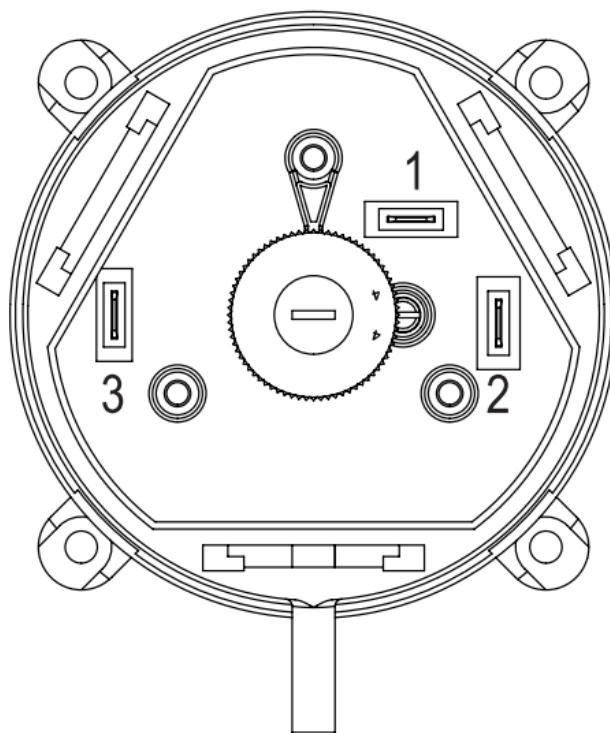
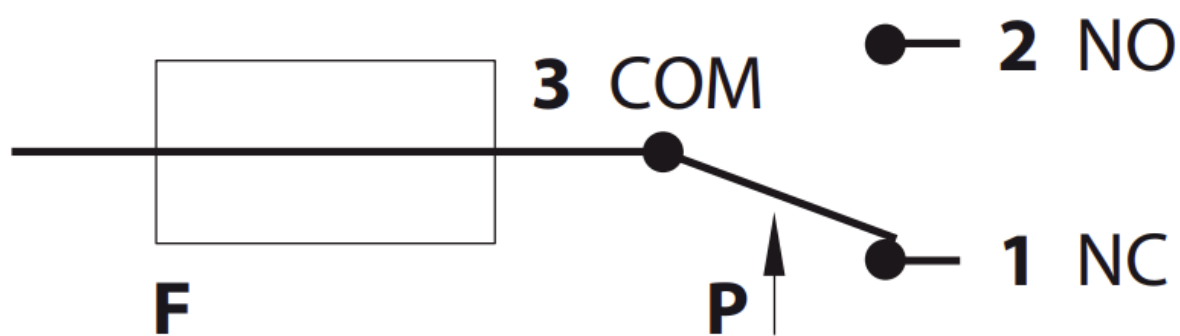


Figure 4



(Use time-lag fuse)

Max. 1.0 A / 250 VAC 50-60 Hz, at ohmic consumers.
Max. 0.4 A / 250 VAC 50-60 Hz, at inductive consumers.
Max. 0.1 A / 24 VDC 50-60 Hz, at the low-voltage version.

HOSE CONNECTIONS

Hoses are not to be bent or damaged during mounting. Leaking hoses and leaking hose connections cause disturbances on the device or inaccurate measurements. It is essential to remove the cap for transportation safety mounted on P2.

Inner hose diameter = 5.5mm for optimal clamping

P1 = Over pressure measurement (Bottom Port)

P2 = Vacuum measurement (Top Port)

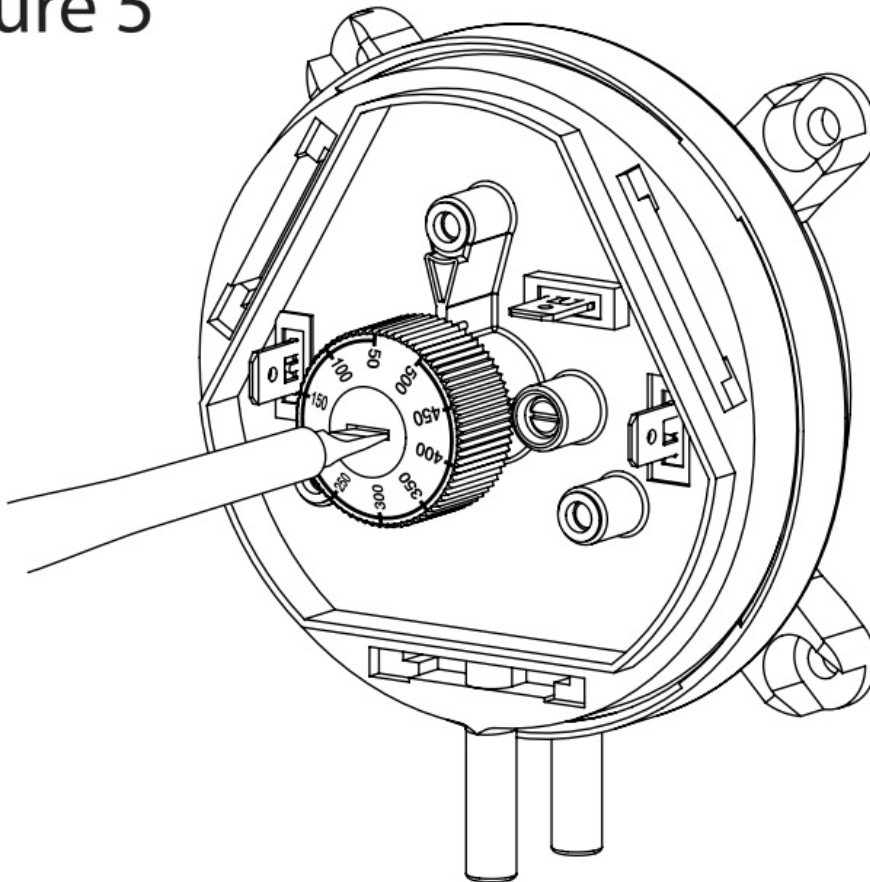
P1 & P2 = Differential pressure measurement

SWITCHING PRESSURE ADJUSTMENT

Caution. Make absolutely sure that no voltage is applied to the electrical connections BEFORE any settings on the pressure switch are carried out.

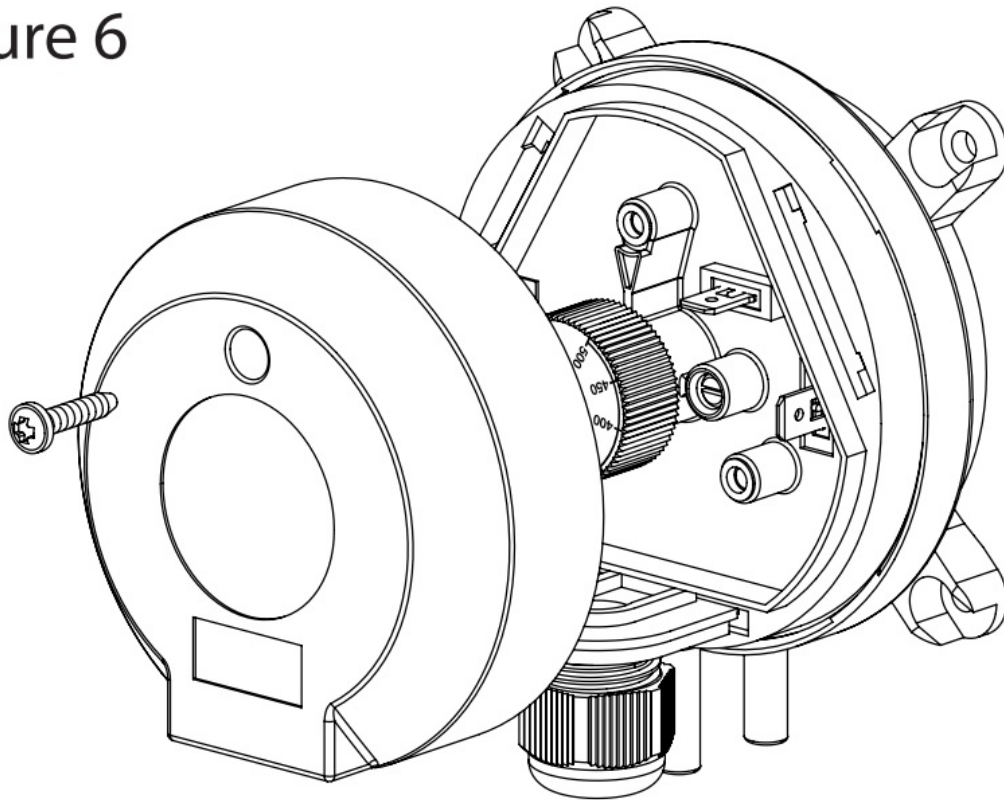
Set the desired pressure trip point (which trips at increasing pressure) using a flathead screw driver. The switch returns to its resting position as soon as the pressure falls below the set switching differential. See **Figure 5**.

Figure 5



Replace the cover on the switch as illustrated in **Figure 6**. Do not operate the system until the housing is closed. Check the trip and reset pressure by slowly increasing and decreasing pressure.

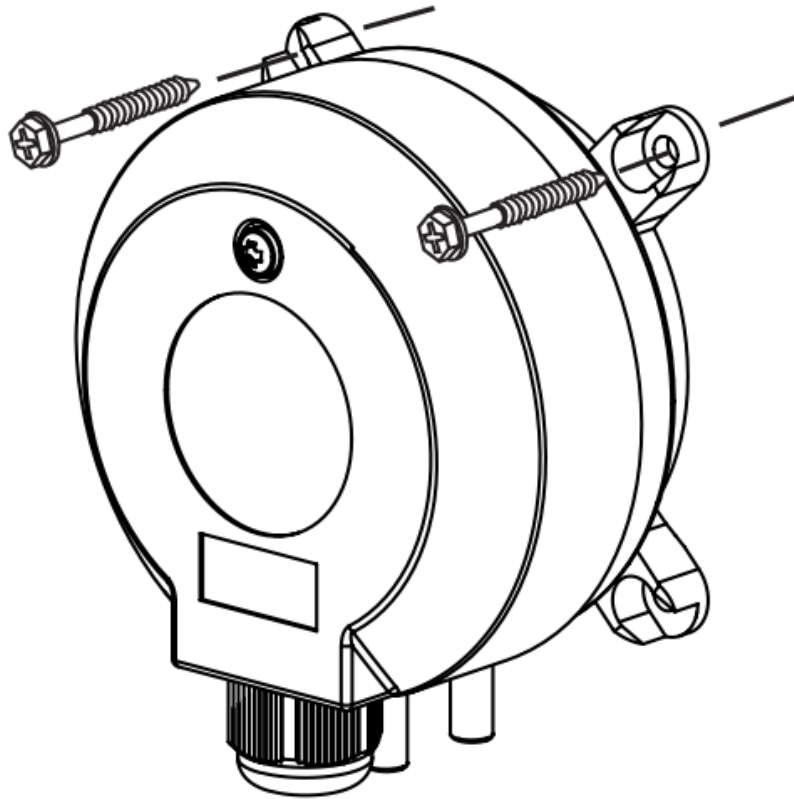
Figure 6



MOUNTING

Important: Check the pressure switch for damages. Do not use if the switch is damaged. Do not mount the pressure switch on uneven surfaces. Do not over tighten the screws as it will deform the the device's base. Mount the pressure switch with the pressure connections pointing downwards, to drain condensation that may occur. Mount the pressure switch horizontally with electrical connectors pointing upward only if no condensate can form. In this position, the switching values are approximately 20 Pa higher as indicated. In general using two screws for mounting is sufficient, as illustrated in **Figure 7**. The maximum diameter of the screw head cannot exceed 8mm.

Figure 7



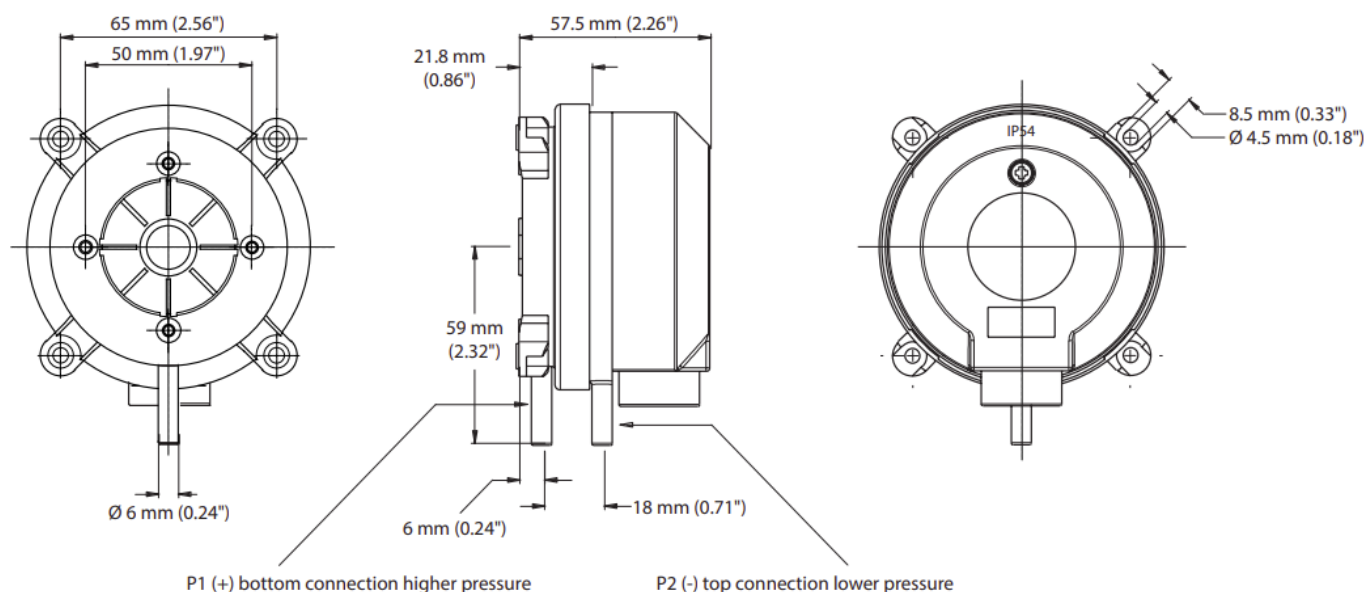
SAFETY & LIABILITY

The existing safety regulations, the intended use and the technical data must be strictly observed. According to these regulations, plants must be zero-potential and secured against inadvertently restart. The product can not be used for U.S. FDA-controlled application areas. For damage caused by improper use no liability is assumed.

SPECIFICATIONS


Medium / Max. Operating Pressure	Air / 10 kPa for all pressure ranges
Temperature Range	Medium and ambient temperature: -20 to 60°C (-4 to 140°F) Storage Temperature: -40 to 85°C (-40 to 185°F)
Pressure Connectors	P1 (+): Connection to higher pressure P2 (-): Connection to lower pressure
Weight	With / without cover: 160g / 115g
Working Life	Over 106 mechanical switching operations
Electrical Rating .	Standard Version: Max. 1.0 A (0.4 A) / 250 VAC 50-60 Hz Low-voltage Version: Max. 0.1 A / 24 VDC Switching Rate: Max. 6 Cycles/min
Arrangement of Contacts	Break contact – NC Operating contact – NO Power supply line – COM
Protection Category	With cover: IP 54
Conformity	CE; ANSI; UL508; CSA C22.2#14
Country of Origin	Germany

DIMENSIONS



GREYSTONE
ENERGY SYSTEMS INC

Documents / Resources

	<p>GREYSTONE GFS-U Differential Pressure Switch [pdf] Instruction Manual GFS-U Differential Pressure Switch, GFS-U, Differential Pressure Switch, Pressure Switch, Switch</p>
--	--

References

-  [Greystone Energy Systems – HVAC Sensors and Transmitters](#)