

### INTRODUCTION

Thank you for choosing an HK Instruments PS series differential pressure switch. The PS series is intended for use in commercial environments. It is designed with field selectable setpoint adjustment to meet your job requirements.

The PS series differential pressure switches is comprised of PS200 with range from 20...200 Pa, PS300 with range from 30...300 Pa, PS500 with range from 30...500 Pa, PS600 with range from 40...600 Pa, PS1500 with range from 100...1500 Pa and PS4500 with range from 500...4500 Pa.

### APPLICATIONS

PS series devices are commonly used in HVAC/R systems for:

- fan, blower and filter monitoring
- pressure and flow monitoring
- valve and damper monitoring

### SPECIFICATIONS

#### Performance

**Accuracy** (at applied pressure)

At low limit (Typical):

PS200:  $\pm 5$  Pa

PS300:  $\pm 5$  Pa

PS500:  $\pm 5$  Pa

PS600:  $\pm 5$  Pa

PS1500:  $\pm 10$  Pa

PS4500:  $\pm 50$  Pa

**Overpressure:**

Proof pressure: 25 kPa

Burst pressure: 50 kPa

#### Technical Specifications

**Media compatibility:**

Dry air or non-aggressive gases

**Measuring units:**

Pa

**Measurement range:**

PS200: 20-200 Pa

PS300: 30-300 Pa

PS500: 30-500 Pa

PS600: 40-600 Pa

PS1500: 100-1500 Pa

PS4500: 500-4500 Pa

**Environment:**

Operating temperature: -20...60 °C

Storage temperature: -20...85 °C

Humidity: 0 to 95 % rH, non condensing

#### Physical

**Dimensions:**

Case: 105 x 73 x 63 mm

**Weight:**

150 g

**Mounting:**

2 each 4.3 mm screw holes, one slotted

**Materials:**

Case: ABS

Cover: PC

Membrane: Silicone

**Protection standard:**

IP54

**Electrical connections:**

3 screw terminals

Wire: 12-24 AWG (0.2-1.5 mm<sup>2</sup>)

**Cable entry:**

Strain relief: M16

Knockout: 16 mm

**Pressure fittings:**

Pressure fittings integral to case

Material: ABS

Size: 5.0 mm

Markings:

+ High pressure

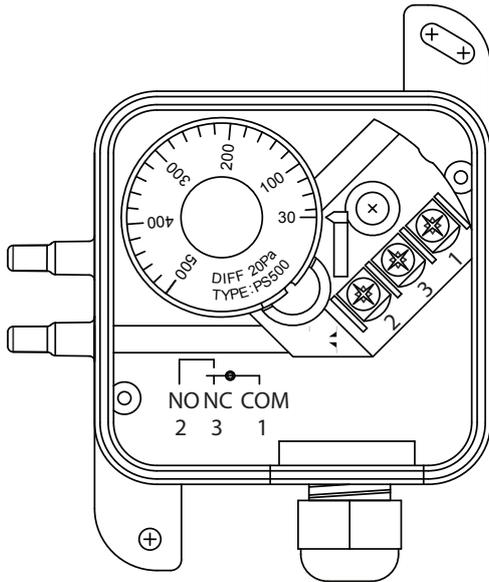
- Low pressure



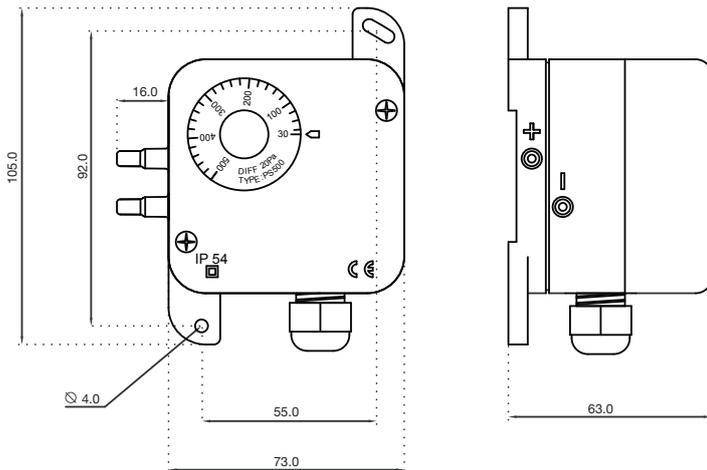
### WARNING

- READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS DEVICE.
- Failure to observe safety information and comply with instructions can result in PERSONAL INJURY, DEATH AND/OR PROPERTY DAMAGE.
- To avoid electrical shock or damage to equipment, disconnect power before installing or servicing and use only wiring with insulation rated for full device operating voltage.
- To avoid potential fire and/or explosion do not use in potentially flammable or explosive atmospheres.
- Retain these instructions for future reference.
- This product, when installed, will be part of an engineered system whose specifications and performance characteristics are not designed or controlled by HK Instruments. Review applications and national and local codes to assure that the installation will be functional and safe. Use only experienced and knowledgeable technicians to install this device.

## SCHEMATICS



## DIMENSIONAL DRAWINGS



## INSTALLATION

- 1) Mount the device in the desired location (see step 1).
- 2) Open the lid.
- 3) Select the desired switching point by turning the selection wheel.
- 4) Route the cables through the strain relief and connect the cables properly to the terminal block (see step 2).
- 5) Close the lid.

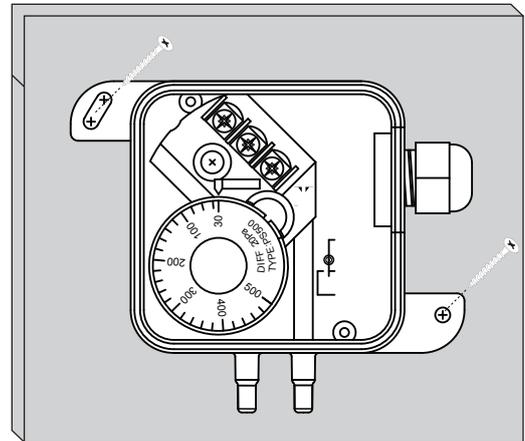
 **WARNING!** Apply power only after the device is properly wired.

## STEP 1: MOUNTING THE DEVICE

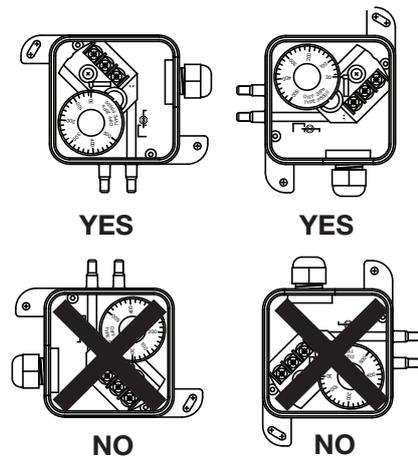
Mounting position:

To be installed in vertical position, either the pressure inlets or the electrical cable downwards.

**Figure 1a - Surface mounting**



**Figure 1b - Mounting orientation**

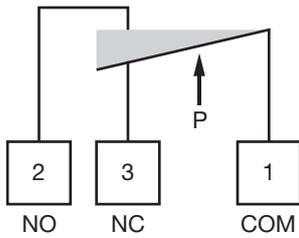


## STEP 2: WIRING DIAGRAMS

For CE compliance, a properly grounded shielding cable is required.

- 1) Unscrew the strain relief and route the cable.
- 2) Connect the wires as shown in Figure 2.
- 3) Tighten the strain relief.

**Figure 2 - Wiring diagram**



## WARRANTY POLICY

The seller is obligated to provide a warranty of 24 months for the delivered goods regarding material and manufacturing. The warranty period is considered to start on the delivery date of the product. If a defect in raw materials or a production flaw is found, the seller is obligated, when the product is sent to the seller without delay or before expiration of the warranty, to amend the mistake at his/her discretion either by repairing the defective product or by delivering free of charge to the buyer a new flawless product and sending it to the buyer. Delivery costs for the repair under warranty will be paid by the buyer and the return costs by the seller. The warranty does not comprise damages caused by accident, lightning, flood or other natural phenomenon, normal wear and tear, improper or careless handling, abnormal use, overloading, improper storage, incorrect care or reconstruction, or changes and installation work not done by the seller or his/her authorized representative. The selection of materials for devices prone to corrosion is the buyer's responsibility, unless otherwise is legally agreed upon. Should the manufacturer alter the structure of the device, the seller is not obligated to make comparable changes to devices already purchased. Appealing for warranty requires that the buyer has correctly fulfilled his/her duties arisen from the delivery and stated in the contract. The seller will give a new warranty for goods that have been replaced or repaired within the warranty, however only to the expiration of the original product's warranty time. The warranty includes the repair of a defective part or device, or if needed, a new part or device, but not installation or exchange costs. Under no circumstance is the seller liable for damages compensation for indirect damage.