

# Bailey & Mackey Ltd



## Pneumatic Signal Switches

Pneumatic Pressure Switches are ideal for use where an electric circuit cannot be used. This type of pressure switch operates on an air bleed system. Gases other than air should not be used as the pilot medium.

- For use in pneumatic powered systems
- Signal above set point suffix A
- Signal below set point suffix B
- Automatic reset
- Adjustable Set Point
- Robust & Reliable
- Diaphragm Operated < 42 Bar
- Piston Operated > 42 Bar



### Mechanical Specifications

#### Pressures

Type No.	Pressure Range	Hysteresis Typical
1361	-1 to 0.07 bar	40 mbar
1361	-1 to 1 bar	40 mbar
1361	0.2 to 4 bar	70 mbar
1361	0.5 to 10 bar	0.3 bar
1361	0.7 to 14 bar	0.4 bar
1361	2 to 28 bar	0.6 bar
1361	2 to 42 bar	0.8 bar
1461	10 to 125 mbar	3 mbar
1461	15 to 250 mbar	6 mbar
1461	25 to 400 mbar	10 mbar
1561	9 to 100 bar	10 bar*
1561	14 to 200 bar	18 bar*
1561	20 to 400 bar	25 bar*

\*Typical for mid-range set point

#### Standard Materials (1361 & 1461)

Diaphragm	Beryllium Copper
Seal	Gas Filled PTFE ≤ 10 Bar Nitrile Rubber ≥ 10 Bar
Base	Brass
Housing	Aluminium / Zinc Diecast
Cover	Glass Filled Nylon with Neoprene Seal
Connecting Block	Brass
Amplifier Valve	Aluminium / Zinc body with Nitrile Seals

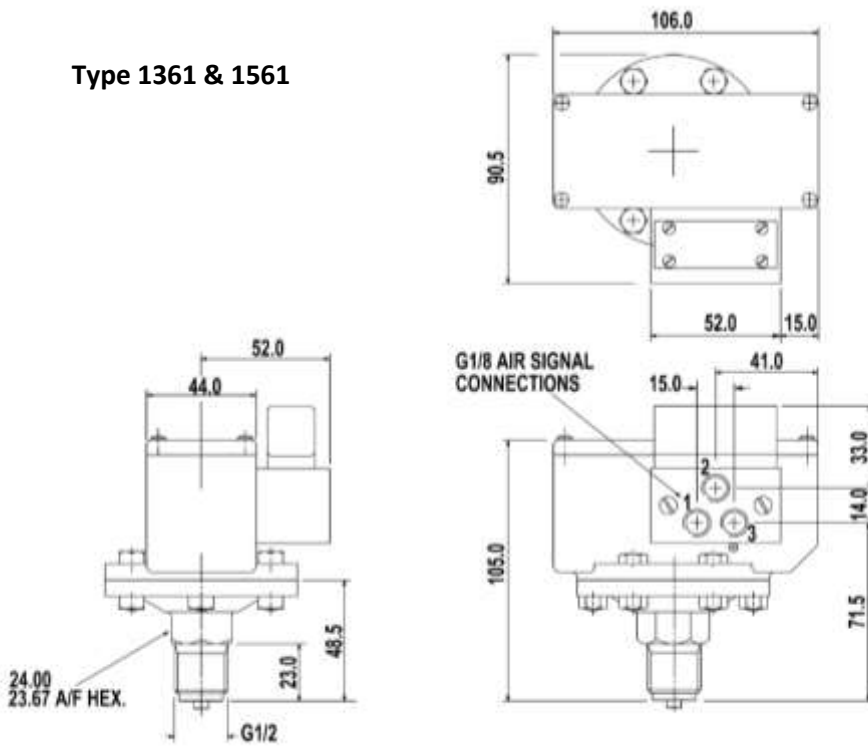
#### Standard Materials (1561)

Piston	Stainless Steel
Seal	Nitrile rubber With PTFE anti-extrusion rings
Base	Stainless Steel
Housing	Aluminium / Zinc Diecast
Cover	Glass Filled Nylon with Nitrile Seal
Connecting Block	Brass
Amplifier Valve	Aluminium / Zinc body with Nitrile Seals

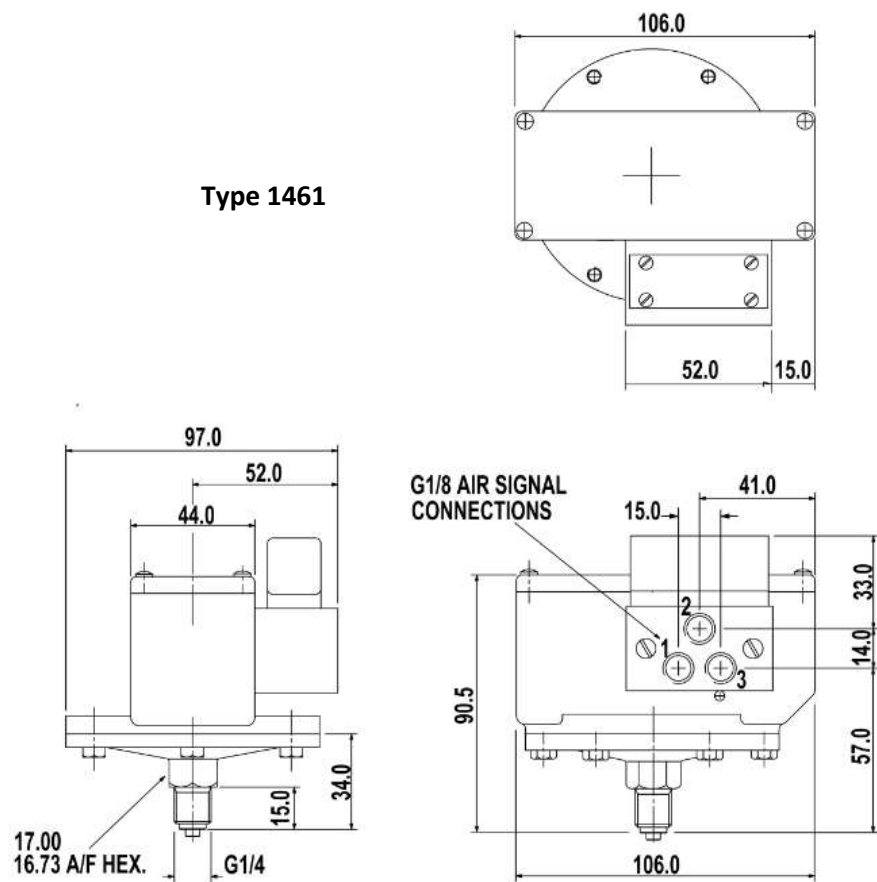
<b>Setting Accuracy</b>	+/- 5%
<b>Temperature Range</b>	-10 to +85°C
<b>Temperature Coefficient</b>	0.05% (Of range per 0°C from 20°C)

## Technical Drawings

Type 1361 & 1561



Type 1461



## 1362 & 1462

Differential Pressure switches are used to monitor the pressure difference between two points. Air Signal Differential Pressure switches are ideal for use in Hazardous areas. They will often be found to provide a more sensitive and cost effective solutions than flameproof or intrinsically safe equipment.

- Differential Pressure Switches
- Air Signal – No electrics
- Spring Diaphragm Operated

### Pressures

Type No.	Pressure Range	Hysteresis Typical
1362	0.07 to 1 bar	40 mbar
1362	0.2 to 4 bar	70 mbar
1362	0.5 to 10 bar	0.3 bar
1362	2 to 28 bar	0.6 bar
1462	10 to 125 mbar	3 mbar
1462	15 to 250 mbar	6 mbar
1462	25 to 400 mbar	10 mbar

## Further Info

### Maximum Pressure

To ensure long service and life select the pressure range as follows:

Dynamic pressure applications  $P_{max} = 75\%$  of Range

Static pressure applications  $P_{max} = 100\%$  of Range

Maximum Pressure that can be applied is 125% of pressure range

### Signal Air Supply

Compressed air at a supply pressure between 2 and 8 bar is required to operate the switch. Signal output is 200 NI/min at 5.5 bar with a 10% pressure drop. The flow of air through the bleed from the back-pressure valve when it is open is less than 3 NI/min. A 25µM filter should be fitted in the supply line.

### Signal Air Connection

Switches with Suffix A

For signal above set point – connect air supply to port marked 1, connect signal line to port marked 2, exhaust on change-over will come from port marked 3.

Switches with Suffix B

For signal below set point – connect air supply to port marked 3, connect signal line to port marked 2, exhaust on change-over will come from port marked 1.

## **Installation**

These pressure switches can be mounted directly on the connecting thread. Sealing grooves are machined onto the end face of parallel threads for use with sealing washers. A Mounting bracket is available if require. It is recommended that these switches be installed vertically i.e. with the process connection vertically down.

## **Vacuum Setting**

At ambient pressure the back-pressure valve will be operated, consequently, if the pneumatic signal is required between atmospheric pressure and the vacuum setting suffix A is required, suffix B gives an air signal after the vacuum has been reached.

## **Connecting Threads**

All process connecting threads used in industry are available including British, American & Metric. Please state the connection thread when ordering.