

## CS-PT624



## Applications

- General industrial applications
- Air measurement and control

## Description

The model CS-PT624 pressure switch for general purpose is the ideal solution for general industrial applications.

These measuring ranges can be combined in almost any way with relay output signal. When the pressure is higher than the alarm pressure point (at the case of high alarm), the LED turns on, and NO port is connected to COM port, NC port is isolated from COM port; and this situation will be kept, till the pressure is lower than the release pressure point.

Furthermore, it offers three options for the accuracy 0.5 % F.S, 0.25% and 1 %F.S.

All variants described in this data sheet are available on very short lead times. For particularly urgent demands, there is a sizeable stock available.

## Features

- SS304 Shell and Pressure Connector
- Relay Output
- Over-voltage protected
- Reverse voltage protected
- Alarm Pressure can be Adjusted from 0 to Full
- IP65



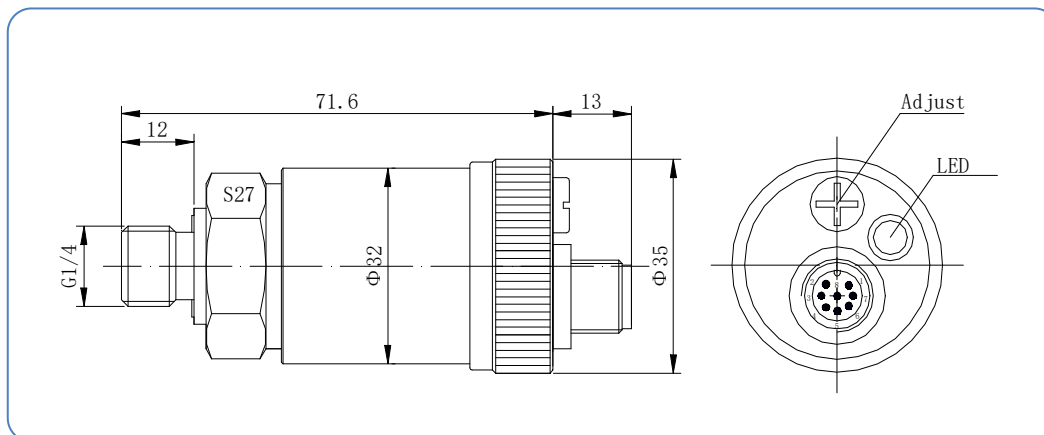
## Performance Specifications

Temperature: 25℃ ; Power supply: 12VDC(or 24VDC, if the range of power supply does not include 12VDC ); Relative humidity: 45%~75%; Ambient atmospheric pressure: 86KPa~106KPa.

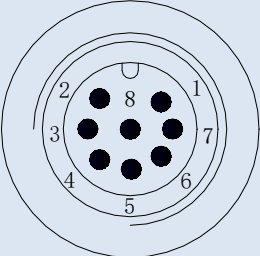
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| <b>Pressure range</b>        | 0...2~600bar                                                         |
| <b>Overload pressure</b>     | ≥150%F.S                                                             |
| <b>Accuracy</b>              | ±0.5%F.S                                                             |
| <b>Long-term stability</b>   | ±0.5%F.S/year                                                        |
| <b>Response Time</b>         | ≤10ms                                                                |
| <b>Output Signal</b>         | Relay Output                                                         |
| <b>Supply Voltage</b>        | 12~30VDC                                                             |
| <b>Current without Load</b>  | ≤ 8 mA                                                               |
| <b>Rated load for Relay</b>  | 0.5A 120VAC or 1A 24VDC                                              |
| <b>Overvoltage</b>           | 32VDC                                                                |
| <b>Reverse Voltage</b>       | -30VDC                                                               |
| <b>Insulate Resistance</b>   | ≥100MΩ@100VDC                                                        |
| <b>Pressure connector</b>    | G1/2, G1/4, M20*1.5, NPT1/2, NPT1/4 and others                       |
| <b>Electrical connection</b> | M12 (8P)                                                             |
| <b>Operating Temperature</b> | -20℃~60℃, but can't beyond the temperature of seal material          |
| <b>Storage Temperature</b>   | -20℃~60℃                                                             |
| <b>IP Rating</b>             | IP65                                                                 |
| <b>Random Vibration</b>      | 10g, 5~2000Hz                                                        |
| <b>Shock</b>                 | X/Y/Z, 20g, sine 11ms                                                |
| <b>Drop (any Axis)</b>       | 1m                                                                   |
| <b>connector material</b>    | 304 stain steel default, 316L stain steel and Titanium optional      |
| <b>Seal material</b>         | NBR O-Ring default (-20℃~+100℃), FKM optional (-15℃~+135℃) or others |



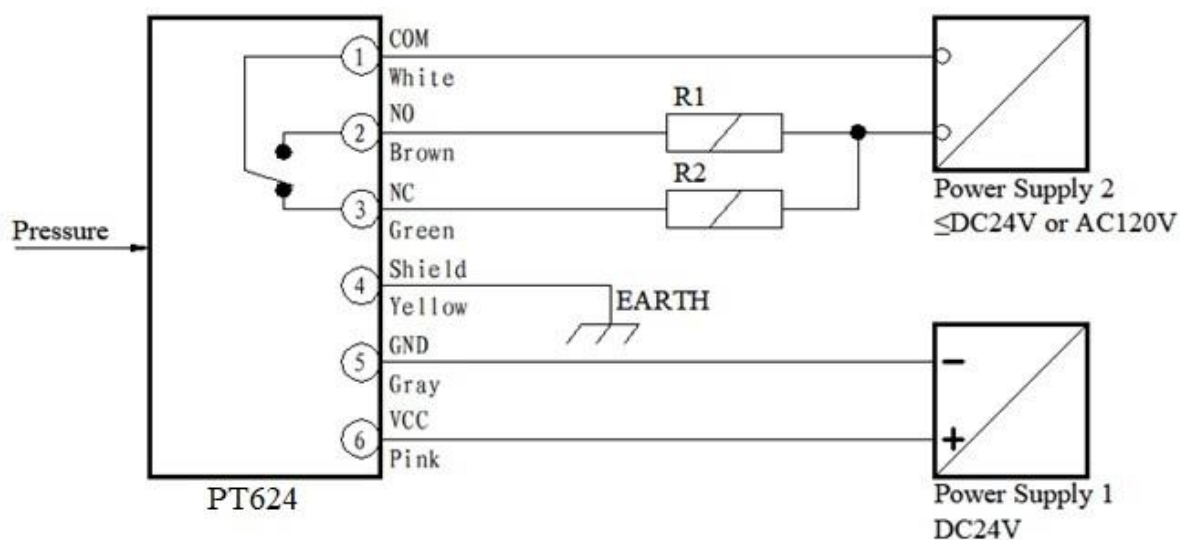
## Structure and Dimension (mm)



## Electrical Connection

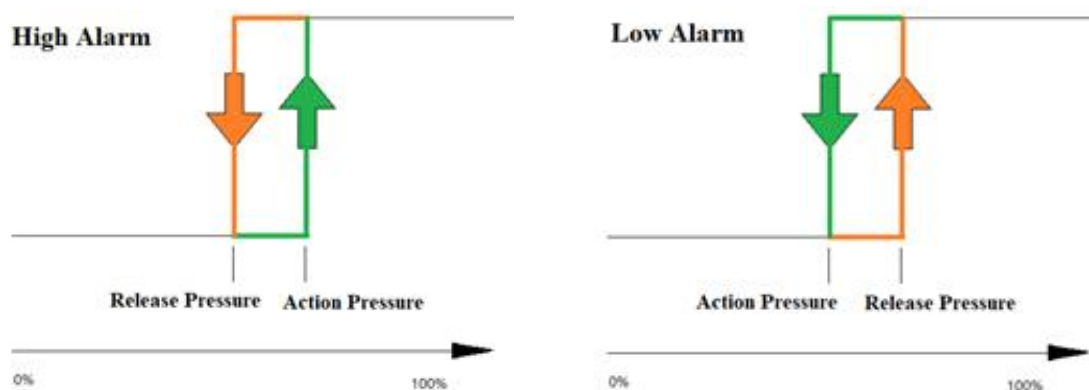
| Connection                                                                          | Pin | Define                      | Color  |
|-------------------------------------------------------------------------------------|-----|-----------------------------|--------|
|  | 1   | Common Contact(COM)         | White  |
|                                                                                     | 2   | Normally-Open Contact(NO)   | Brown  |
|                                                                                     | 3   | Normally-Closed Contact(NC) | Green  |
|                                                                                     | 4   | Shield                      | Yellow |
|                                                                                     | 5   | GND                         | Gray   |
|                                                                                     | 6   | VCC                         | Pink   |
|                                                                                     | 7   |                             | Blue   |
|                                                                                     | 8   |                             | Red    |

## Schematic Diagram



As shown above, the power supply 1 and 2 can be a same one, also can be unrelated. The power supply 1 is the power supply for this pressure switch. The power supply 2 is the power supply for the load, it should not exceed DC24V (or AC120V). The connection mode of the load is shown as R1 (or R2) in the figure. If the load requires the direction of the power supply (as current voltage), please follow the corresponding requirement.

## Switching Mode



$$\text{Return Stroke Error} = | \text{Action Pressure} - \text{Release Pressure} |$$

## Adjust

Turn left to release the screw above the adjusting knob, before you adjust the alarm pressure point. And Screw it after you finished it.

Turn left the adjusting knob to rise up the alarm pressure point, and Turn right the adjusting knob to drop down the alarm pressure point.

As the Alarm Direction is high alarm mode:

When  $P_v \geq P_s$ , NO is connected to COM, NC is isolated from COM;

When  $P_v \leq P_s - P_0$ , NC is connected to COM, NO is isolated from COM;

As the Alarm Direction is low alarm mode:

When  $P_v \leq P_s$ , NO is connected to COM, NC is isolated from COM;

When  $P_v \geq P_s + P_0$ , NC is connected to COM, NO is isolated from COM;

$P_v$ : Real-time Pressure

$P_s$ : Alarm Pressure (or Action Pressure)

$P_0$ : Return Stroke Error



## Ordering Guide

| PT624 Electronic Pressure Switch |                                                              |
|----------------------------------|--------------------------------------------------------------|
| Code                             | Measuring Range                                              |
| X                                | X stands for actual pressure measuring range                 |
| Code                             | Pressure Connection                                          |
| G1/2                             | G1/2                                                         |
| G1/4                             | G1/4                                                         |
| M20×1.5                          | M20×1.5                                                      |
| NPT1/2                           | NPT1/2                                                       |
| NPT1/4                           | NPT1/4                                                       |
| Code                             | Power Supply                                                 |
| 12V                              | 12VDC                                                        |
| 24V                              | 24VDC(Default)                                               |
| Code                             | Seal Material                                                |
| B                                | NBR                                                          |
| F                                | FKM                                                          |
| Code                             | Accuracy                                                     |
| 03                               | ±0.25%                                                       |
| 05                               | ±0.5%                                                        |
| 10                               | ±1.0%                                                        |
| Code                             | Action Pressure                                              |
| Y                                | Y stands for Alarm pressure point<br>(default: 50% of range) |
| Code                             | Alarm Direction                                              |
| H                                | High Alarm(default)                                          |
| L                                | Low Alarm                                                    |

PT624 -X - G1/2 - 24V -B 05 - Y -H



---

## Notes

1. Only use the pressure switch to test the medium which have no corrosion to its housing and seal material.
2. Cannot use sharp tools to clean the pressure hole when the hole of the pressure switch is blocked. The pressure switch shall be removed from system and put the pressure hole part into the fluid which can dissolve the blocking substance.
3. The switch should be installed in locations where they are not easily to be impacted or trampled.
4. Use beyond the overload pressure of the switch may cause damages.
5. In order to protect the transmitter used at areas with many lightning, suggest adding a lightning protection device and reliably connecting the shield line to EARTH.
6. Please contact factory for other needs.

