

# Model PSS

## General Purpose Pressure Switches

### Description

PSS sensing element, has excellent temperature properties by adopting a self temperature compensation foil strain gauge. A diaphragm and a pressure port are composed as one body for the prevention of leakage. It can control the system without any controller due to the output of a 2-channel NPN open collector switch.

### Features

- ▶ Electrical pressure switch with no mechanical moving part
- ▶ Fast response 1ms
- ▶ Measuring range 0~400MPa
- ▶ Two pressure setting points
- ▶ Self temperature compensation foil strain gauge
- ▶ Stainless steel media-wetted materials

### Applications

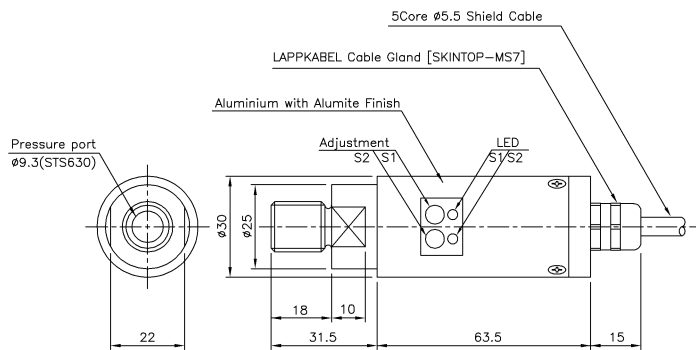
- ▶ Process control
- ▶ Hydraulics & Pneumatic
- ▶ Compressor Control
- ▶ Chillers
- ▶ Refrigeration Equipment

### Specifications



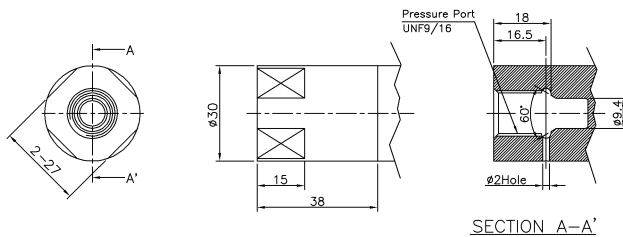
|                               |          | PSSI                                                             | PSSL               |
|-------------------------------|----------|------------------------------------------------------------------|--------------------|
| <b>Range</b>                  |          | 0~1, 2, 3, 5, 10, 20, 30, 35, 50, 100, 250, 400MPa (Gauge)       |                    |
|                               |          | -0.1~0, 1, 2, 3, 5, 10, 20, 30, 35, 50, 100, 250, 400MPa (Gauge) |                    |
| <b>Performance</b>            |          |                                                                  |                    |
| Accuracy                      |          | ±1%FS                                                            |                    |
| Hysteresis                    |          | 3%FS (Factory Setting)                                           |                    |
| Thermal Effect on Zero        |          | ±0.1%FS/°C                                                       |                    |
| Thermal Effect on Span        |          | ±0.1%FS/°C                                                       |                    |
| Compensated Temperature Range |          | -10 ~ 70°C                                                       |                    |
| Operating Temperature Range   |          | -20 ~ 80°C                                                       |                    |
| <b>Electrical</b>             |          |                                                                  |                    |
| Excitation                    |          | 11 ~ 28VDC                                                       |                    |
| Output                        | (analog) | 1~3VDC                                                           | -                  |
|                               | (switch) |                                                                  | NPN Open Collector |
| Switch Load Current           |          |                                                                  | 28V 80mA Max.      |
| Electrical Connection         |          |                                                                  | Cable              |
| <b>Physical</b>               |          |                                                                  |                    |
| Proof Pressure                |          | 150%FS Max.(≤100MPa), 120%FS Max.(>100MPa)                       |                    |
| Burst Pressure                |          | 200%FS Min.(≤100MPa), 130%FS Min.(>100MPa)                       |                    |
| Vibration                     |          | 49.1m/s <sup>2</sup> {5G}, 10~500Hz                              |                    |
| Shock                         |          | 490m/s <sup>2</sup> {50G}                                        |                    |
| Pressure port                 |          | R(PT)3/8"                                                        |                    |
| Media-Wetted Materials        |          | Stainless Steel 630                                              |                    |
| Weight                        |          | Approx. 180g (include cable 1m)                                  |                    |

## Dimension

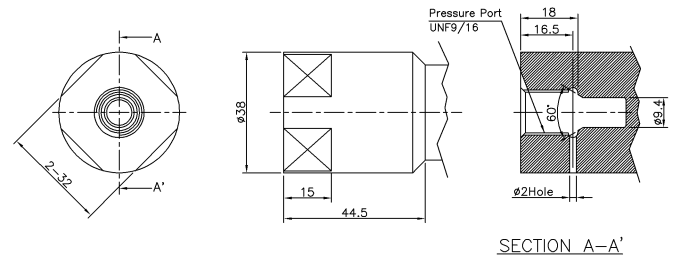


| Wire Color | Connections     |          |
|------------|-----------------|----------|
|            | PSSI            | PSSL     |
| Red        | Power ⊕         | Power ⊕  |
| Black      | Com. ⊖          | Com. ⊖   |
| Green      | Analog Output ⊕ | ×        |
| Yellow     | Switch 1        | Switch 1 |
| White      | Switch 2        | Switch 2 |
| Shield     | Earth           | Earth    |

### ► Port of 250MPa Type

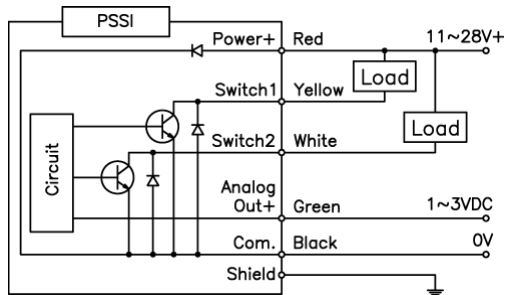


### ► Port of 400MPa Type

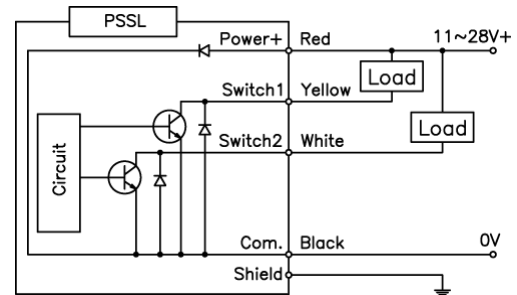


## Circuit Diagram

### ► PSSI



### ► PSSL



## Ordering Information

| Model Name     | PSS | L | 0010 | K | A | S | A | Option                          |
|----------------|-----|---|------|---|---|---|---|---------------------------------|
| Output         |     |   |      |   |   |   |   | A : Normal                      |
| Pressure Range |     |   |      |   |   |   |   | Connecting Methods              |
|                |     |   |      |   |   |   |   | S : Cable Gland                 |
|                |     |   |      |   |   |   |   | Pressure port                   |
|                |     |   |      |   |   |   |   | A : R(PT)3/8"                   |
|                |     |   |      |   |   |   |   | K : UNF9/16"(Female)            |
|                |     |   |      |   |   |   |   | Pressure Unit                   |
|                |     |   |      |   |   |   |   | M : MPa B : bar                 |
|                |     |   |      |   |   |   |   | K : kgf/cm <sup>2</sup> P : psi |