

A pressure sensor is a device that converts fluid pressure into an electrical signal. COPAL ELECTRONICS pressure sensors are manufactured from the semiconductor pressure sensing chips to a variety of pressure sensor products at its own facility.

- COPAL ELECTRONICS pressure sensors feature:
1. Compact and light weight
  2. Excellent electrical and mechanical performance
  3. Wide range of products to choose from for various applications

## ■ PRODUCT LINE-UP

### a) Diffusion type semi-conductor pressure sensors ...

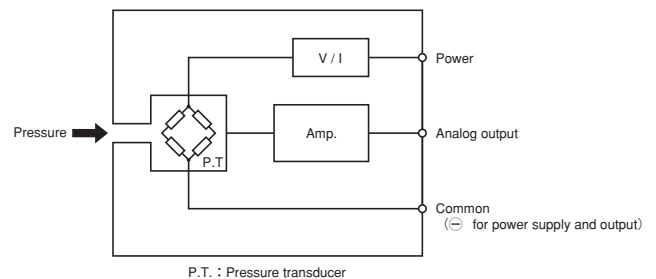
#### P series

A basic pressure sensing device which converts pressure into an electrical signal. The output is in the form of voltage which is proportional to the applied pressure. The output voltage will be positive when the pressure is positive and negative when the pressure is negative with a constant current source connected.

### b) Pressure transducers with a built-in amplifier ...

#### PA series

The PA series pressure transducers are semiconductor (diffusion type) pressure sensors combined with electronic circuits and provide electrical analog output signals. The electronic circuits consist of a voltage to current conversion circuit which provides excitation current for the pressure sensor and an amplifier circuit which amplifies the pressure sensor signals and provides specified output. The output signals are provided either in the form of voltage change or current change that is proportional to the pressure applied to the pressure transducer.

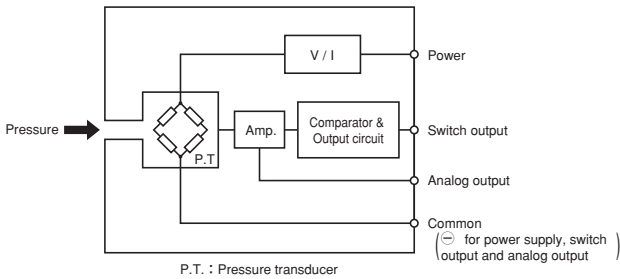


# OUTLINE

## PRESSURE SENSORS

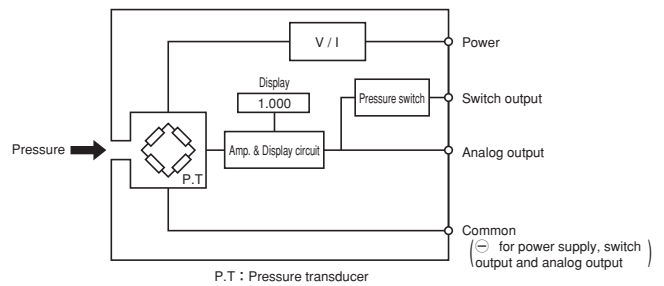
### c) Solid-state pressure switches ... PS/PSA series

The PS/PSA series pressure switches are solid-state pressure switches consisting of a semiconductor type pressure transducer and electronic circuits which turn on and off according to a preset pressure value. The electronic circuits are composed of a voltage to current conversion circuit which supplies electric current needed for excitation of the pressure transducer, an amplifier which amplifies the pressure transducer signal and a comparator & output circuit which compares the amplified pressure transducer output and the preset voltage corresponding to the preset pressure value and turns the output transistor on and off. The pressure setting can be made easily by adjusting the potentiometer. The switch output is given by an open collector transistor and can turn on and off an external load. The state of the switch output can be visually confirmed by an indicator LED.



### d) Pressure gauges ... PG series

The PG series pressure gauges are pressure gauges composed of a semiconductor type pressure sensor, electronic circuits and a display which measure pressure and display the pressure in the digital/numerical value. The option includes those with a pressure switch function and an analog output function. The pressure setting for the pressure switch can be made looking at the digital pressure display.



### e) Pressure indicators ... PZ series

The indicator is used in combination with a pressure sensor with an amplifier. Pressure is indicated in the digital form with voltage input of 1~5 V or current input of 4~20 mA.