

R P T 4 1 0

## Barometric Pressure Sensor

- Accuracy to  $\pm 0.5$  mbar from  $-10$  to  $50^{\circ}\text{C}$
- Pressure range 600 to 1100 mbar absolute
- High Stability 100 ppm/year
- Wide operating voltage 9.5 to 24Vd.c.
- Operating temperature range  $-40$  to  $60^{\circ}\text{C}$
- Voltage or frequency outputs



The RPT 410 Resonant Silicon Pressure Transducer (RPT) uses advanced sensor technology proven for highly accurate and stable barometric pressure measurement. For example, Druck RPT technology is used within aircraft cockpits for in-flight air data processing, where the stability of various absolute pressure measurements is paramount.

Manufactured in Druck's advanced class 100 clean room, the multi-layer sensor structure comprises a resonator and pressure sensitive diaphragm micro-machined from a single piece of silicon. This enables the highest standards of performance to be achieved.

The sensor is available with either a frequency or voltage output corresponding to the barometric pressure range. Accuracy is maintained over a wide temperature range and current consumption conserved by an external trigger shutdown function.

The RPT 410 is therefore ideally suited for weather stations monitoring atmospheric trends, engine test stands and generally as a highly stable pressure reference transfer standard.

# RPT 410



## Barometric Pressure Sensor

### STANDARD SPECIFICATIONS

#### Pressure Measurement

##### Operating Pressure Ranges

600 to 1100 mbar absolute.

Other engineering units can be specified.

##### Overpressure

1.4 bar absolute.

##### Pressure Containment

1.5 bar absolute.

##### Media Compatibility

Non-corrosive, non-condensing gas only.

##### Excitation Voltage

9.5 to 24Vd.c. at 6mA nominal.

(8mA nominal for RPT 410F)

##### Pressure Output

Frequency output (RPT 410F) or voltage output (RPT 410V) versions available.

##### Frequency Output

TTL square wave from 600 to 1100Hz.

Others available - refer to Druck.

##### Voltage Output

0 to 2.5V (4-wire) or 0 to 5V (4-wire).

Others available - refer to Druck.

#### Performance Specification

##### Accuracy (standard)

±0.5 mbar at 20°C

±1 mbar from -10 to 50°C

±2 mbar from -20 to 60°C

±2.5 mbar from -40 to 60°C.

##### Accuracy (Option A)

±0.5 mbar from -10 to 50°C

±1.5 mbar from -20 to 60°C

±2 mbar from -40 to 60°C.

##### Long Term Stability

Better than 100 ppm/year.

##### Operating Temperature Range

-40°C to 60°C

##### Safety

CE marked.

EMC emissions: BS EN50081-1

EMC immunity: BS EN61000-6-2.

#### Physical Specification

##### Weight

125 grams nominal.

##### Pressure Connection

4mm barbed hose.

#### Electrical Connection

5 way terminal block

#### External Trigger ON/OFF Voltage

ON: 1 to 24Vd.c.

OFF: 0Vd.c.

### CALIBRATION STANDARDS

Pressure transducers manufactured by Druck are calibrated against precision pressure calibration equipment which is traceable to International Standards.

### ORDERING INFORMATION

Please state the following:

(1) Model number RPT 410F or RPT 410V

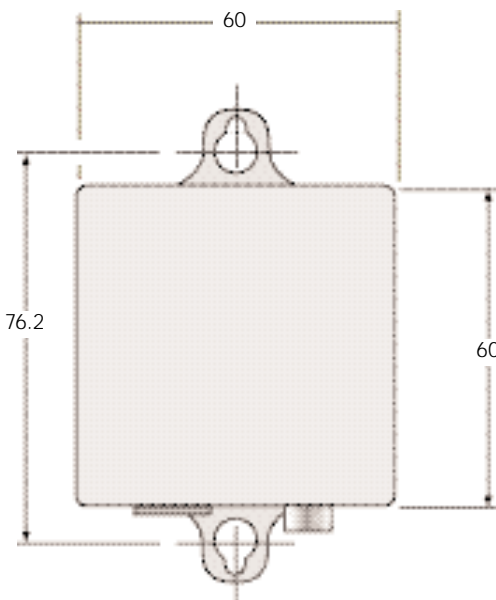
(2) Pressure range and units

(3) Accuracy - Option A (if required)

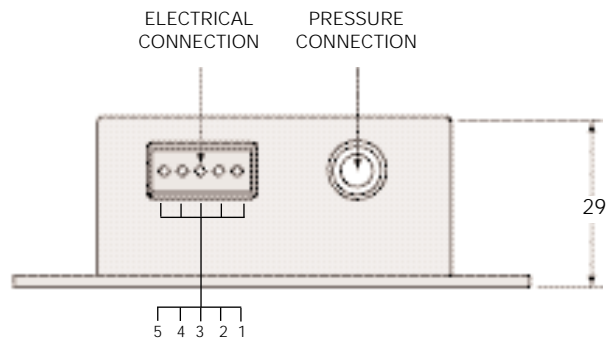
(4) Output Voltage (RPT 410V only)

**Continuing development sometimes necessitates specification changes without notice**

### INSTALLATION DRAWINGS - Dimensions mm



PIN No.	Frequency Version	Voltage Version
1	Frequency out	Positive output
2	Positive supply	Positive supply
3	Negative supply	Negative supply
4	-	Negative output
5	External trigger	External trigger



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