

# Barometric Pressure Sensors

## Vaisala's PTA427 & PTA427A

The PTA427 & PTA427A Barometric Pressure Sensors use Vaisala's patented silicon capacitive design to achieve accuracies of  $\pm 0.5$  millibar. The PTA427 covers a 800 to 1060 millibar range; the PTA427A covers a 600 to 1060 millibar range (to 550 mbar on special order). The sensors output a linear signal of 0 to 5 or 0 to 2.5 VDC and are compatible with Campbell Scientific's CR10, 21X, and CR7 dataloggers. The PTA427 is connected to the datalogger's 12 VDC power supply, a single-ended analog input channel, an excitation channel or control port, and ground.

A switching circuit provides the sensor with power from the datalogger's power supply only during measurement, thereby reducing power requirements. Sensor warm-up and measurement time is approximately three seconds.

### Construction and Mounting

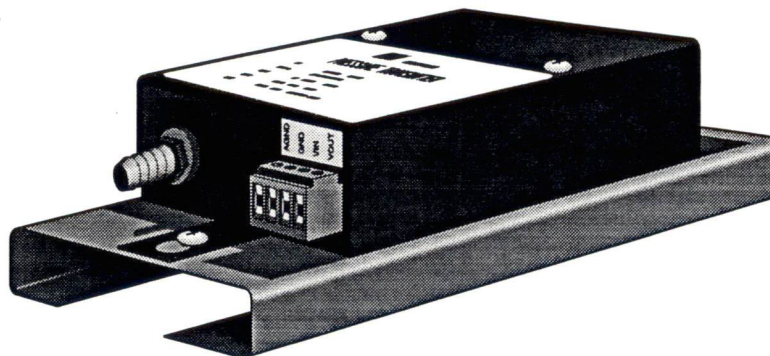
The sensor is housed in an anodized aluminum case fitted with an intake valve for pressure equilibration. Terminal strips provide for datalogger power and signal connections. The sensor is designed for placement adjacent to a CR10 or 21X datalogger inside a weather-proof enclosure (Model ENC 12/14 or larger recommended). A two-foot lead is supplied; additional lead length is required when the sensor is housed in a separate enclosure.

### Ordering Information

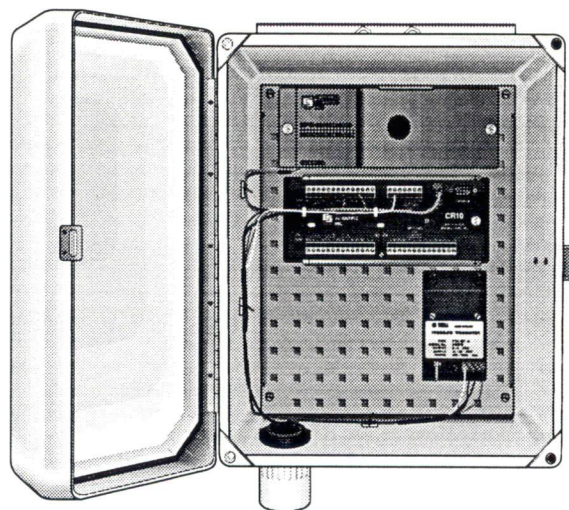
PTA427	1060 to 800 mbar; 2 ft lead length
PTA427-L__	1060 to 800 mbar; user-specified lead length. Enter lead length (in feet) after L.
PTA427A	1060 to 600 mbar; 2 ft lead length. Extended to 550 mbar on special order; consult CSI for details.

### Manufacturer's Specifications

- Accuracy: (at room temperature)  $\pm 0.4$  mb (PTA427)  $\pm 0.6$  mb (PTA427A). Both specifications include a 0.2 mb calibration uncertainty.
- Long-Term Stability:  $\pm 0.2$  millibars per year
- Operating Temperature:  $-40^{\circ}$  C to  $+60^{\circ}$  C
- Dimensions: 5.0" x 2.6" x 1.2"
- Weight (shipping): 5.6 ounces (1 pound)
- Supply Voltage: 11 to 30 VDC
- Current Consumption: <10 mA (active)
- Warm-up Time: 3 seconds
- Cable: Contains an integral power switch and 2:1 voltage divider



PTA427 Barometer. Shown attached to enclosure mounting bracket (included).



PS12 power supply (top), CR10 datalogger, and PTA427 inside ENC 12/14 enclosure.



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