Air Pressure Sensor Vaisala PTB110

Silicon capacitive absolute pressure sensor

Description

Order-No		
S32100	PTB 110.3A	800 ... 1100 hPa
S32200	PTB 110.2A	600 ... 1100 hPa
S32300	PTB 110.1A	500 ... 1100 hPa

- Accuracy ±0.3 hPa @ +20 °C
- Delivery including IEC 17025 calibration certificate
- Accurate barometric pressure measurements at a room temperature and
- General environmental pressure monitoring over a wide temperature range

Vaisala BAROCAP® technology

The PTB110 barometric pressure sensor uses the Vaisala BAROCAP® sensor, a silicon capacitive absolute pressure sensor developed by Vaisala for barometric pressure measurement applications. The sensor combines the outstanding elasticity characteristics and mechanical stability of single-crystal silicon with the proven capacitive detection principle.

Accuracy and stability

The excellent long-term stability of the barometric pressure sensor minimizes or even removes the need for field adjustment in many applications.

Applications

The PTB110 is suitable for a variety of applications, such as environmental pressure monitoring, data buoys, laser interferometers, and in agriculture and hydrology. The compact PTB110 is especially ideal for data logger applications as it has low power consumption.

Specifications

Characteristic	
Operating pressure	S32100: 800 ... 1100 hPa (mbar)
	S32200: 600 ... 1100 hPa (mbar)
	S32300: 500 ... 1100 hPa (mbar)
Temperature range	-40 ... +60 °C
Humidity range	non-condensing
Electrical data	
Output voltage	0 ... 5 VDC
Supply voltage	10 ... 30 VDC
Current consumption	< 4 mA
Accuracy	
Total accuracy	±0.3 hPa (+15 ... +25 °C)
	±0.6 hPa (0 ... +40 °C)
	±1.0 hPa (-20 ... +45 °C)
	±1.5 hPa (-40 ... +60 °C)
Repeatability	±0.03 hPa
Long term stability	±0.1 hPa/year
Resolution	0.1 hPa
General	
Dimensions	97.3 x 68.4 x 28.1 mm (H x W x D)
Weight	90 g
Connection	Screw terminal plug (5-pole plug)
Housing cover	ABS / PC lend
Mounting plate	Aluminum
Housing classification	IP 32
Calibration	IEC 17025
Manufacturer	Vaisala

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Sensor connection diagram

Sensor	Plug Pin No.	Ammonit Cable Wire Colour	Meteo-40 Analog Voltage	Supply Sensor
Air Pressure Output Voltage	5	white	A	
Analog Ground	2	blue	B	
Supply	4	red		10 … 30 VDC
Ground	3	black		Main Ground

Connect the shield logger-sided to Ground (GND)

Cable type: LiYCY 4 x 0.25 mm²

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