

Air Pressure Sensor Vaisala PTB110.3

Silicon capacitive absolute pressure sensor



Description

- 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

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| Operating range | |
|------------------------|---|
| 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 lens |
| Mounting plate | Aluminum |
| Housing classification | IP 32 |
| Manufacturer | Vaisala |
| Calibration | IEC 17025 |

Sensor connection diagram

Sensor Connection to Ammonit Meteo-40 Data Logger

| 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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