



The Digital Barometer 8127

is a new generation barometer, designed for a wide range of high-end atmospheric pressure measurement. The pressure measurement of the 8127 is based on an in-house, silicon capacitive, absolute pressure sensor. It provides high measurement accuracy and excellent long-term stability.

High Accuracy

The 8127 is highly accurate. The Class A barometers for the most demanding applications are fine-tuned and calibrated against a high-precision pressure calibrator.

Applications

The 8127 can be used successfully for aviation, professional meteorology and for demanding industrial pressure measurement Applications.

Features

- Accurate measurement
- Excellent long-term stability
- Added reliability through redundancy
- For professional meteorology and aviation, laboratories, demanding industrial application

Technical Data

Barometric pressure range	500 ... 1100 hPa	Serial I/O	RS485
Linearity*	±0.05 hPa	Resolution	0.01 hPa
Hysteresis*	±0.03 hPa	Settling time at power-up	4 s
Repeatability*	±0.03 hPa	Response time	2 s
Calibration uncertainty**	±0.07 hPa	Supply voltage	10 ... 35 VDC
Accuracy at +20 °C (+68 °F) ***	±0.10 hPa	Typical power consumption at +20 °C (Uin 24 VDC; RS-485)	40 mA
Temperature dependence ****	±0.1 hPa	Housing classification	IP65
Total accuracy -40 ... 60 °C	±0.15 hPa	Housing material	G AlSi10 Mg (DIN 1725)
Long-term stability	±0.1 hPa/year	Maximum pressure limit	5000 hPa abs.
Temperature range	-40 ... +60 °C		

Compliance	EMC standard EN61326-1:1997 + Am1:1998 + Am2:2001: Industrial Environment
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* Defined as ±2 standard deviation limits of endpoint non-linearity, hysteresis or repeatability error.

** Defined as ±2 standard deviation limits of inaccuracy of the working standard including traceability to NIST.

*** Defined as the root sum of the squares (RSS) of endpoint non-linearity, hysteresis error, repeatability error and calibration uncertainty at room temperature.

**** Defined as ±2 standard deviation limits of temperature