Data sheet High precision air pressure sensor

MBRE

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 highprecision pressure calibrator.

Applications

The 8127 can be used successful 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

е	500 1100 hPa ±0.05 hPa	Serial I/O Resolution	RS485 0.01 hPa
	±0.03 hPa	Settling time at power-up	4 s
	±0.03 hPa	Response time	2 s
	±0.07 hPa	Supply voltage	10 35 VDC
°F) ***	±0.10 hPa	Typical power consumption at +20 °C	
****	±0.1 hPa	(Uin 24 VDC; RS-485)	40 mA
°C	±0.15 hPA		
	±0.1 hPa/year	Housing classification	IP65
		Housing material	G AlSi10 Mg
	-40 +60 °C		(DIN 1725)
		Maximum pressure limit	5000 hPa abs.

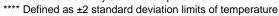
Compliance

EMC standard EN61326-1:1997 + Am1:1998

+ Am2:2001: Industrial Environment

* 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.







Technical Data

Barometric pressure range Linearity* Hysteresis* Repeatability* Calibration uncertainty** Accuracy at +20 °C (+68 °F Temperature dependence Total accuracy -40 ... 60 °C Long-term stability

Temperature range