Digital Barometer MSB181

Barometer MSB181 developed and manufactured by MicroStep-MIS, is designed for use in meteorological and agrometeorological applications that require accurate measurement.

MSB181 can be ordered with one of the following output options: SDI-12, RS-485 or analog voltage ranging from 0 to 2.5 V. Supply current is less than 6 mA at 12 V. The version with SDI-12 features 50 µA sleep mode. Time to first sample less than 1 s can be achieved with RS-485 and analog versions.

MSB181 is temperature compensated from –40 °C to +60 °C. The power supply range is from 6 to 16 V DC. MSB181 barometer weighs only 135 g. Mechanical mounting requires only two M3 bolts, enabling easy exchange on site thanks to removable 5-pin electrical connector. A fitting for 4,6 mm internal diameter tube is used for pressure connection. The fitting has a sintered filter integrated, thus protecting the barometer against dust from entering the measurement cell. MSB 181 comes factory calibrated with a manufacturer calibration certificate.

Features

- Digital output
- Fully temperature compensated
- Accuracy ±0.3 hPa
- Long-term stability ±0.2 hPa / year

Operating Range

Pressure range	500 to 1100 hPa (or custom)
Temperature range	–40 °C to +60 °C
Storage temperature	–40 °C to +60 °C

General

Supply voltage	6 to 16 V DC
Current consumption (active)	6 mA nominal (@12 V)
Current consumption (idle)	50 uA typ.*
Resolution	0.01 hPa
Wake-up from sleep mode	< 1 s
Pressure fitting	fitting 4,6 mm
Minimum pressure limit	0 hPa
Maximum pressure limit	1500 hPa
Measurement principle	piezoresistive transducer
Output options	SDI-12, RS-485, RS-232, 2.5 V analog
Weight	135 g

*Available in SDI-12 version only

Accuracy

Accuracy	±0.3* hPa (–40 °C to +60°C)
Long-term stability	±0.2 hPa / year

*Custom range or accuracy available upon request

Dimensions

Dimensions in millimeters