

MSB181

Digital Barometer

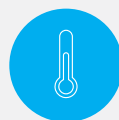
Barometer MSB181, developed and manufactured by MicroStep-MIS, is designed for use in meteorological and agrometeorological applications requiring accurate measurement.



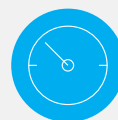
Digital output



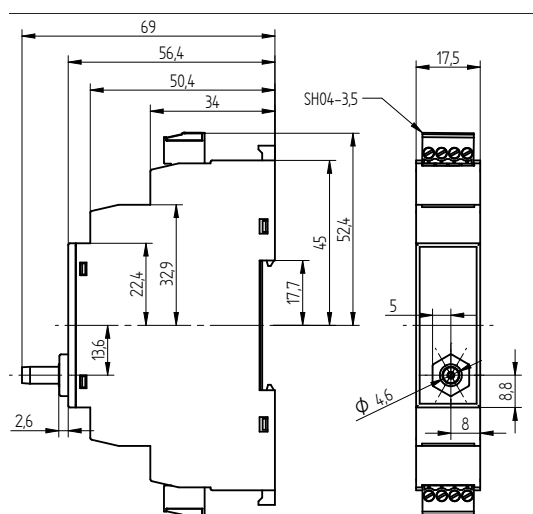
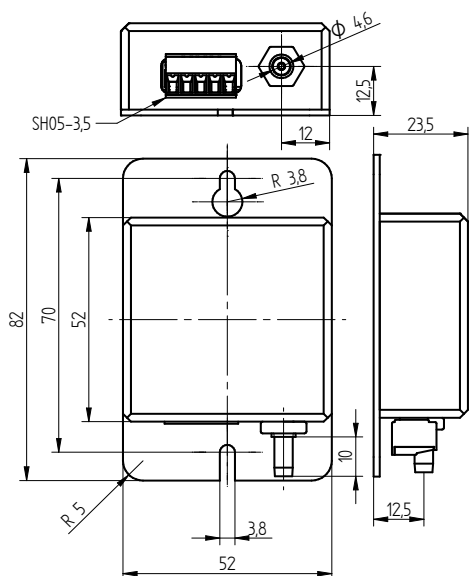
Accuracy ± 0.3 hPa



Fully temperature compensated



Long-term stability ± 0.2 hPa / year



Dimensions in millimeters

MSB181 can be ordered with one of the following output options: SSDI-12, RS-232, 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 μ A 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.

The barometer weighs 135 g, DIN version only 55 g. DIN version is mounted on DIN rail (1 or 2 removable 4-pin connectors.) A fitting for 4.6 mm internal diameter tube is used for pressure connection. The device has an integrated sintered filter preventing the dust to enter the barometer measuring cell. MSB181 comes factory calibrated with a manufacturer calibration certificate.

Operating range

Pressure range	600 to 1100 hPa (or custom)
Temperature range	-40 °C to $+60$ °C
Storage temperature	-40 °C to $+60$ °C
Upgrade to ISO 17025 accredited calibration	optional

General

Supply voltage	6 to 16 V DC
Current consumption (active)	6 mA nominal (@12 V)
Current consumption (idle)	50 μ A typ.*
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
Protocol	ASCII, Modbus RTU
Weight	135 g / 55 g (DIN version)

*Available in SDI-12 version only

Accuracy

Accuracy	$\pm 0.3^*$ hPa (@20 °C)
Long-term stability	± 0.2 hPa / year

*Custom range or accuracy available upon request

Factory calibration

Typical uncertainty U	0.15 hPa
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