

# MSB181

## Digital Barometer

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



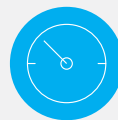
Digital output



Accuracy  $\pm 0.3$  hPa



Fully temperature compensated

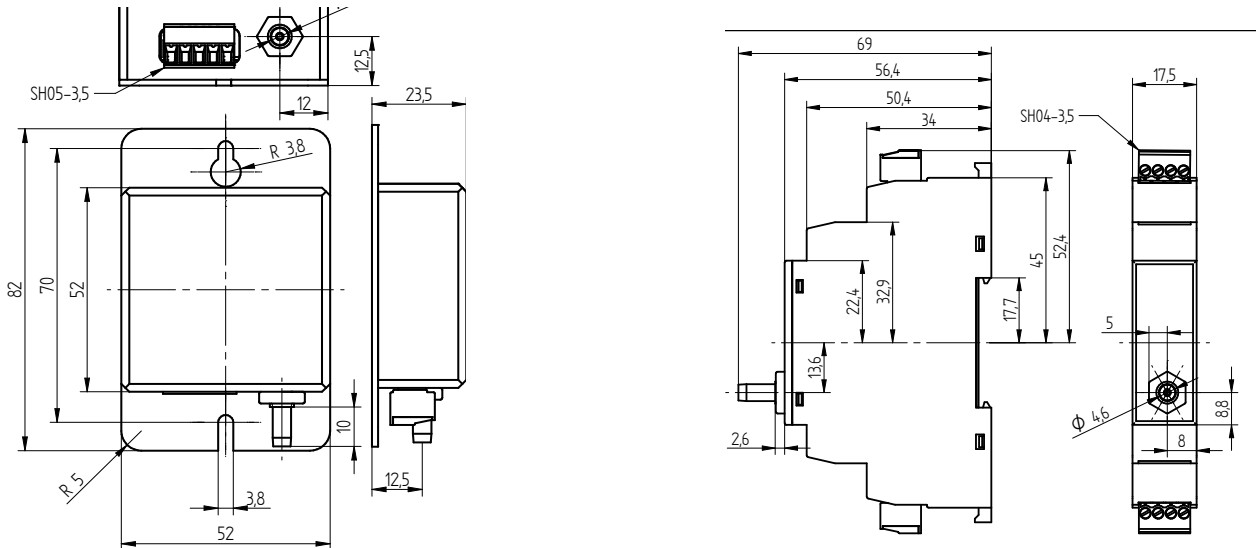


Long-term stability  $\pm 0.2$  hPa / year



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  $\mu$ 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.



Dimensions in millimeters

## Operating range

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

## General

<b>Supply voltage</b>	6 to 16 V DC
<b>Current consumption (active)</b>	6 mA nominal (@12 V)
<b>Current consumption (idle)</b>	50 uA typ.*
<b>Wake-up from sleep mode</b>	< 1 s
<b>Pressure fitting</b>	fitting 4.6 mm
<b>Minimum pressure limit</b>	0 hPa
<b>Maximum pressure limit</b>	1500 hPa
<b>Measurement principle</b>	piezoresistive transducer
<b>Output options</b>	SDI-12, RS-485, RS-232, 2.5 V analog
<b>Protocol</b>	ASCII, Modbus RTU
<b>Weight</b>	135 g / 55 g (DIN version)

\*Available in SDI-12 version only

## Accuracy

<b>Accuracy</b>	±0.3* hPa (@20 °C)
<b>Long-term stability</b>	±0.2 hPa / year

\*Custom range or accuracy available upon request

## Factory calibration

<b>Typical uncertainty U</b>	0.15 hPa
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ISO Quality Certified Company

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