

MSB780 & MSB780X

Digital Barometers

Digital Barometer MSB780 developed and manufactured by MicroStep-MIS, is designed for use in professional meteorological and aviation applications that require reliable and highly accurate measurement, fast dynamic response, and advanced long-term stability.

MSB780 is built to withstand even the most challenging environmental conditions, which are often faced in various environmental monitoring applications.

MSB780 is a low power consumption microprocessor controlled sensor suitable also for solar and battery powered applications. Barometer is operable in temperature range from $-50\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$. The excitation range is from 5 to 32 V DC.

MSB780 is a robust product made of durable hardware components enclosed in heavy-duty metal IP66 enclosure. This barometer comes factory calibrated with a manufacturer calibration certificate.

Digital Barometer MSB780X

MSB780X is extended version of MSB780. It features pressure transducer of the same premium quality as MSB780, but allows using also two and three pressure transducers in one unit. MSB780X comes also in a brand new design with touchscreen display option.

Performance

Barometric pressure range	500 hPa to 1100 hPa (or as specified)
Linearity	$< 0.02\text{ hPa}$
Hysteresis	$< 0.02\text{ hPa}$
Accuracy ($20\text{ }^{\circ}\text{C}$ to $25\text{ }^{\circ}\text{C}$)	0.10 hPa
Total accuracy	0.15 hPa ($-50\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$)
Typical long-term stability	better than 0.05 hPa/year

Operating Environmental

Pressure range	500 hPa to 1100 hPa
Temperature range	$-50\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$
Display operating temperature	$-10\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$
Relative humidity	(0 to 100) % RH
Overpressure limit	4000 hPa (not affecting sensor calibration)
Burst pressure limit	7000 hPa
Enclosure	IP66



Features

- Excellent total accuracy **0.15 hPa**
- Typical long-term stability better than **0.05 hPa / year**
- Fast dynamic response
- Fully temperature compensated
- Digital output
- 1 to 3 transducers

Inputs and Outputs

Supply voltage	5 to 32 V DC
Power supply current	32 mA @ 12 V DC (1 sensor, without display)
Resolution	0.001 hPa
Communication	RS-232, RS-485, SDI-12
Number of transducers	1 to 3

Touchscreen Display

- optional