Success Story

Top class among barometers

Air is one of the most important elements of our environment and it plays a significant role in formation of weather patterns in any particular area. Thus atmospheric pressure is one of the key weather indicators.

After carrying out market research of existing sensors we realized that we were not able to reach the accuracy and long-term stability required for the use in aviation meteorology. Therefore, we initiated a project of in-house development of atmospheric pressure sensor which resulted in the emergence of a top-class leader among its contemporaries, the Digital Barometer MSB780X.

The barometer is available in several versions to satisfy all customer needs and requirements. The basic version named MSB780 comes with one transducer, while the X version is extendible up to three transducers and embedded display.

A transducer installed in the device works on a principle of vibrating cylinder which ensures the highest accuracy, significant stability, and resistance. The barometer operates in a range of 500 to 1100 hPa and can withstand the overpressure up to 4000 hPa while not affecting the sensor calibration. It achieves excellent total accuracy of 0.1 hPa at temperature range –50 °C to +80 °C. Due to this excellence, we have decided to apply the device as a laboratory standard to perform the calibration processes in our premises.

The sensor is extremely reliable and stable in the long term what puts it in a prominent position among the currently available barometers on the market. Its high

Thanks to the unique technology principle the sensor works on, the barometer is designed for use in professional applications and to withstand even the most challenging environmental conditions.

stability and minimal change over a long period of time reduce the cost of maintenance activities, provide the low cost of ownership and ensure life-long durability.

Fulfilling the strict criteria for use at both civil and military airports, in January 2014, the Civil Aviation Authority of Slovak Republic officially certified the device for usage in civil aviation as an Aeronautical Ground Facility.

By this date, the barometer has become an essential component part of all MicroStep-MIS systems being implemented worldwide. More than a thousand devices have been manufactured and installed at customers in various countries. This expanding network includes airports, meteorological institutes, and a number of producers of meteorological equipment and systems.

In 2017 MicroStep-MIS won the tender for the delivery of 50 travel standard kits for a customer in India. For this purpose, the field version of the barometer was developed to assist the routine inspections and field comparisons of the sensors integrated into a network of 600 Automatic Weather Stations all over the country. The kit was manufactured to be supplied in a robust yet light carrying case which is ideal for field comparison purposes. The product consists of the barometer and optional temperature and relative humidity sensors and can run on a battery operating for up to 24 hours without charging.

We received a number of positive references from testing and certification of the product in metrology institutes. One of the recent tests was more than satisfactory. All

three versions (with 1, 2, and 3 transducers) of digital barometer MSB780X passed the tests successfully without any complaints. The measurement range was 500 – 1100 hPa with an error very close to the reference, the difference was 0.02 – 0.05 hPa. The employees of the testing facility were very surprised by the high level of accuracy of the device. The tests were carried out at fixed points with increasing and decreasing pressure in the entire measured range.

1300+ Digital Barometers MSB780(X) sold and delivered worldwide

150+

talented and dedicated professionals working together

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