TSP200
1-Wire barometric pressure sensor

Short description

TSP200 is an absolute pressure sensor with a digital 1-Wire output, targeting low-cost applications.

The sensor's low current consumption and wide operating temperature range are essential when focusing on low-power environmental monitoring applications.

TSC200 employs a MEMS pressure sensor with a conditioning IC to provide accurate pressure measurements. An integrated ADC converts pressure and temperature sensor readings to digitized outputs via 1-Wire bus.

TSP200 has two RJ11 connectors, for easy daisy chain arranging of the 1-Wire bus.

Technical parameters

Working pressure range	300 to 1100 hPa
Relative accuracy (950 to 1050hPa, @25°C)	± 0.12 hPa
Absolute accuracy (950 to 1050hPa, @25°C)	± 1 hPa
Resolution	0.1 hPa
Supply voltage range (1-Wire bus)	4.0 to 5.5 V
Maximum supply current (1-Wire bus)	2 mA
Operating temperature range	-20 to +70 °C
Operating relative humidity range	0 to 85 %RH (non-condensing)
Dimensions	85 x 35.1 x 23.5 mm

Usage

Can be used with following TERACOM controllers:

- TCW241   - TCW220

Pinout

Pin	Description	Corresponding UTP wires color
1	1-Wire GND	White/Brown
2	1-Wire GND	White/Green
3	1-Wire Data	Green
4	1-Wire GND	White/Orange
5	1-Wire + VDD	Orange
6	1-Wire + VDD	Brown

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LED indicator

The status of the device is shown by single LED, located on the front panel:
- If the LED blinks on a period of 1 second, the sensor works properly;
- If the LED blinks on a period of 3 seconds, there isn't communication with the controller;
- If LED doesn't blink, there isn't power supply.

Sensor connection

It is strongly recommended to use only UTP/FTP cables. It is strongly recommended to use daisy-chained (linear) topology for multiple sensors and keep total cable length up to 30 meters.

„Star" topology can be used only as a last resort for up to 4 sensors and total cable length up to 10 meters.

TCW220   TSP200   TSP200

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1-Wire Bus

1-Wire is a registered trademark of Maxim Integrated Products, Inc. We strongly recommend read Maxim's 1-Wire tips at http://www.maxim-ic.com/app-notes/index.mvp/id/148.