Sun Urja Energy Solution

A Complete Solar Solutions

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Datasheet & Installation Guide
Barometric Pressure Sensor [SB100]

MODEL

SB100

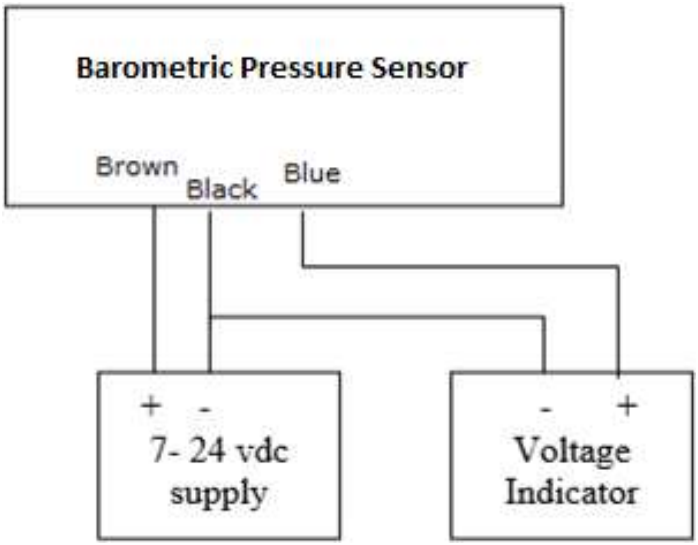
DATASHEET

Introduction

The SB-100 combines excellent performance in a small package size at an affordable price. Typical applications include pressure measurement in weather networks, often for weather forecasting and to correct the output of sensors that are sensitive to pressure changes.

Specifications

Measuring Range	0 to 115kpa
Accuracy	± 0.3%
Supply Voltage	12 to 24V
Housing	Poly Carbonate Enclosure
Protection	IP-65
Output A, B, C are 3 different models	A. 0 – 5 VDC B. 4 – 20 mA C. MODBUS RTU
Operating Temperature	40 to 80 deg C
Operating Humidity	0 to 90%
Weight Approx.	150gms
Wire Color Code	Brown: Supply Black: Gnd Blue : Output


Barometric Pressure Sensor
Brown
Black
Blue
+
-
7- 24 vdc
supply
-
+
Voltage
Indicator

INSTALLATION

Guidelines

The Sensor comes factory-assembled inside an Enclosure.

The sensor can be installed at a location where they are protected from the elements, specifically, precipitation, condensation, and dynamic pressure caused by wind. The data logger enclosure should not be air tight, as the pressure sensor must be exposed to an environment where the pressure varies with ambient pressure. As a result, vent holes in the enclosure are required and should be in the bottom of the enclosure to minimize the impact of dynamic pressure caused by wind.

Tools and Materials Needed

Please make sure you have all the necessary material as mentioned below:

- Wrench or pliers
- Wire cutters and stripper
- Multi meter
- Wire ties and tabs
- Electrical Tapes to cover the wire

Might be needed for mounting:

- Drill with 3/16 in drill bit (4.7 mm) to drill pilot holes
- Adjustable wrench or 11/32 in. wrench and 7/16 in

Location Recommendation

Use the following guidelines to determine the best location for mounting the ambient temperature Sensor

- Install at a location which is free from precipitation, condensation, and dynamic pressure caused by wind
- Do not install over or near sprinklers.

Mounting

Observe the following requirements regarding the mounting locatio n of the module temperature sensor.

Note:
1) Vent is to be kept slightly open to allow expose sensor to an environment where the pressure varies with ambient pressure

INSTALLATION

- If using Modbus sensor, then sensor is factory calibrated.
- If using analog output senor then use the following info to calibrate:
    - **Output**: 0 - 5 V_{DC} (0 to 115kpa)
    - **Barometric Pressure** in kpa = 23 * Sensor Output voltage (in Volt)

    - **Output:** 4-20mA (0- 115kpa)
    - **Barometric Pressure** in kpa = 7.1875 * (Output in mA - 4)

- If the cable length is insufficient for the installation, additional cable can be added to the existing cable. If this is done, an accuracy de-rating factor must be added to the overall temperature accuracy of this sensor.

It is highly recommended that the calibration be checked annually