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Pressure Sensor Installation and Calibration

Corsa #: PS130G
Label: P165-150G-E1A
Range: 0 -- 130 psi (gauge)
Scale: 26.67 mv / PSI
Zref: 500 mv nominal

Installation:

The sensor has a 1/4" NPT male pipe thread. This is the same thread used on most ordinary pressure gauges. A 1/8" NPT adapter is available from Corsa or from other suppliers. Mount the sensor where it is protected from high temperatures. It will operate up to 250° F, but is rated to maintain 1% accuracy only up to 200° F. If the fluid being measured is hot, mount the sensor with a few inches of small diameter pipe so the fluid near the sensor is stagnant and relatively cool. Make sure the sensor is mounted so vibration won't work the fittings loose or crack the tubing.

Hookup:

Each Corsa DB9 cable is wired for 1 to 5 channels. The numbers are shown on the round connector on the sensor end. For example, if the number on the round connector is 2, then when the sensor is connected to the Analog A input port, the channel number would be A2. You can use a junction box to connect up to 5 sensors to one input port, as long as all the sensors have different channel numbers.

Configuration:

When creating the configuration file, set the Scale and Zero Reference (Zref) as follows:

Scale: 26.67 mv/PSI
Zero Reference: 500 mv

For better accuracy, you can set the exact zero reference to match your sensor. With no pressure applied to the sensor, use the Read feature (Alt-Box-Read) and observe the value for the appropriate channel. Write down this value and enter it as the Zref for that channel. This should be close to 500mv. For one Corsa system and one pressure sensor, this number will not change much over time, so it is not necessary to do this calibration procedure before each test. We suggest that you do this at the beginning of the season, or whenever you change the wiring or move the sensor.