Argus Technologies SM02
Analog Calibration

Analog to Digital Channel (A/D) Calibration Procedures

Tools Required

- 4 ½ digit digital multimeter (DMM), high impedance (10Mohm)
- Assorted insulated tools.
- Ice bath for temperature channel calibration only (This requires placement of temp sensors in ice water).
- Thermometer (May be necessary for Temp. high point)

> **NOTE: There are 10 analog input channels. These channels are calibrated at the factory before shipment. However, these channels may require calibration if different inputs or scaling factors from the original defaults are required. Periodic calibration may be required as part of the unit's maintenance.**

WARNING: If Power Plant contains a Low Voltage Disconnect, please put the LVD switch to the "IN" position prior to any calibrations and bypass the LVD with a suitably sized cable.

Current Calibration

Low Point Calibration Procedure:

1. Remove one shunt lead and connect it to the other shunt lead position (on the shunt).
2. Scroll to Configuration/IO Channel Configuration/Analog Inputs/Discharge Amps.
3. Choose the Source (I1) and Icon/Units (A).
4. Select Low Point and enter "0".

High Point Calibration Procedure:

1. Put shunt leads back to their original position.
2. Using a DVM (on mV scale), measure across the shunt. Take this measured value, divide by 50 and multiply by the current value of the shunt.
   e.g. You have a 50mV, 800 Amp shunt. You measure 25mV with a DVM. By using the calculation 25/50 x 800, your current would equal 400 Amps.
3. Select High Point and enter your measured/calculated value.
4. Select Done
5. Select Decimal Precision for determining the number of decimal points.
6. Select Enable or Disable for the A1/A2 Display. This will allow you to view this channel in the normal operating screen by toggling the A1 or A2 key.

Temperature Input Calibration

Low Point Calibration Procedure:
1. Ensure SM02 is operating in CELSIUS mode.
2. Prepare Ice Bath (0 C) by adding small amount of water to container filled with ice.
3. Remove temp sensor from battery string and immerse in ice bath.
4. Scroll to Configuration/IO Channel Configuration/Analog Inputs.
5. Scroll to the temperature sensor that has to be calibrated.
6. Select °C
7. Scroll to Low Point and enter "0".

High Point Calibration:
1. Remove temp sensors from ice bath and allow time for sensors to warm up to room temperature.
2. Take thermometer reading, or estimate, of room temperature.
3. Select High Point and enter room temperature.
4. Select Done
5. Select Decimal Precision, for determining the number of decimal points.
6. Select Enable or Disable for the A1/A2 Display. This will allow you to view this channel in the normal operating screen by toggling the A1 or A2 key.

Saving New Calibration Settings to SM02 Memory

After the entire calibration procedure is complete for all the channels, the new settings should be saved to the SM02 memory. To do this, follow the steps below:

1. After completing calibration procedures, press the ESC key four times.

2. Select Download and Save Settings to save the new settings.

Thank you for choosing Argus Technologies