Analog Voltage Input SCM

Introduction

These instructions will assist you in using the analog voltage input SCM (Signal Conditioning Module) to interface an analog voltage output from a battery or other sensor to the Symphonie*PLUS* or Symphonie logger.

Description

The analog voltage input SCM measures an analog voltage from a battery or other sensor. This SCM could be used for any generic analog voltage output sensor with a full-scale output up to 28 Volts. A common application is battery bank monitoring where input channels monitor the state of charge on a nominal 24 V lead-acid battery used to power the heaters on NRG IceFree sensors.

Installation and Settings

It is important to note that the voltage being monitored must be connected to the "+" terminal of the Symphonie's input channel, NOT the "Sig" terminal. The voltage must be referenced to earth ground, so the "-" side of the voltage should be connected to the input channel's "-" terminal.

The user will also need to input slope, offset, and units as follows:

Slope = 0.0503   Offset = 0   Units = volts (28 V full scale)

If the logger was not programmed in the field, this information can be entered in the Symphonie Data Retriever software by going to the site information editor (Site> Edit Site). Select the appropriate site and click 'OK'. Scroll through the sensor channels until you reach the one that has the analog voltage input SCM. Click the 'Load Defaults' button, and choose 'Unknown Analog'. Data files will include the voltage average, standard deviation, maximum and minimum for each 10 minute interval.

Specifications

Description	Accessory type	signal conditioning module (SCM)
	Applications	• battery bank monitoring • interface voltage output sensors to NRG Symphonie and Symphonie*PLUS* loggers
	Instrument compatibility	NRG Symphonie or Symphonie*PLUS* logger
	Sensor compatibility - analog channels	• any analog voltage signal • channel input impedance > 200K Ohms
	Functions	provides input channel electronics to monitor and log a voltage signal of up to 28 V DC full scale
Power requirements	Other	from any Symphonie logger
Physical	Connections	• installs in Analog 9, Analog 10, Analog 11, or Analog 12 SCM slot • note that signal is connected to "+" terminal of channel, not "Sig"
	Dimensions	41 mm x 27 mm x 5 mm (1.6 inches x 10.7 inches x 0.2 inches)