

## **CM-I ANALOG PORT SENSOR COMPATIBILITY**

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### **I.O SCOPE**

Dyacon CM-2 weather station controller has two input analog ports. Each port has several pre-configured options, such as solar sensor (PSP-110) and thermistor (TSSP-1).

These analog input ports can also be used in “Custom” mode, allowing the user to add other analog sensors. This requires the user to set the slope and offset so that the sensor analog values are properly scaled to the desired measurement units.

The following tables show the settings that would be used for each sensor.

In some cases, the values are the result of reviewing technical data and have not been tested on actual sensors.

\*\* This is an active document and will be expanded as more sensors are evaluated.

### **2.0 PRE-CONFIGURED ANALOG SENSORS**

The following are preconfigured analog output sensors. Users may simply select the installed sensor in the Setup Analog menu. Each CM-1 supports two analog sensors.

Dyacon PSP-110 (Apogee Instruments SP-110) Silicon Solar Pyranometer

Dyacon TSSP-1 Stainless Steel Thermistor Probe (Soil/Liquid temperature)

Dyacon TSFS-1 Flat Surface Thermistor Probe

Dyacon SMEC-5 (METER Group EC-5) Soil Moisture Sensor

Dyacon GT-2 Globe Temperature Sensor

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## 3.0 PYRANOMETERS

The following are alternatives to Dyacon PSP-110 Solar Solar Sensor.

### 3.1 DYNAMAX SPNI SUNSHINE PYRANOMETER

Two analog outputs provide both global and diffuse radiation. This sensor alone would occupy both analog inputs available on CM-1. Information is based on a technical evaluation.

#### Global Irradiance Output

Measurement	Global (Total) irradiance
Vout	0-2.5 V
Power Input	2 mA @ 12 V
Scaling	1 mV = 1 W/m <sup>2</sup>
Dyacon CM-1 Settings	Slope = 1000; Offset = 0
Notes	This is a powered sensor and requires 5 VDC to 12 VDC power input.

#### Diffuse Irradiance Output

Measurement	Diffuse irradiance
Vout	0-2.5 V
Power Input	2 mA @ 12 V
Scaling	1 mV = 1 W/m <sup>2</sup>
Dyacon CM-1 Settings	Slope = 1000; Offset = 0
Notes	This is a powered sensor and requires 5 VDC to 12 VDC power input.

#### Heater Input

Power Input	1.5 A @ 12 VDC to 15 VDC
Notes	In some installations, this may not be required.

## 4.0 REVISION HISTORY

Rev	Description	Author	Date
A	Initial release.	E. Bodrero	11. Sep. 2019