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WHEN MEASUREMENTS MATTER

SDM-AO4A

4-Channel Analog Output Module

Increases Available CAO Ports

Provides high resolution and high accuracy

Overview

The SDM-AO4A includes four independent, continuous, analog outputs (CAO), which are used for proportional control or driving strip charts. Measured or processed values in the data logger are scaled to millivolts and transferred to the SDM-AO4A as digital values. The SDM-AO4A then performs a digital to analog conversion and outputs an analog voltage signal.

Benefits and Features

- Increases the number of CAO ports available to the data logger
- Supports both ±5 V and 0 to 10 V modes, allowing the module to be used in more applications
- Includes a choice of synchronous and sequential operation

Detailed Description

The SDM-AO4A is designed to output four continuous voltages at levels set by a Campbell Scientific data logger. The data logger enables individual modules through an addressing scheme; multiple SDMs (in any combination) can be connected to one data logger. After a module is enabled, it operates independently of the data logger until additional commands are received or results are transmitted.

The SDM-AO4A can be operated in ±5 V mode or 10 V mode. In each of these modes, the SDM-AO4A can operate synchronously or sequentially. In synchronous mode, all channels are set at the same time.

Specifications

Function	Increases the number of continuous analog output (CAO) ports available to a data logger. CAOs are used for proportional control or driving strip charts.

Number of Channels	4
Operating Temperature	-40° to +60°C
Voltage Range	±5 V or 0 to 10 V

For comprehensive details, visit: www.campbellsci.com/sdm-ao4a

Resolution	167 µV
Operating Voltage	12 Vdc nominal (9.6 to 16 Vdc)
Maximum Output Current	50 mA (per channel) 100 mA (total)
Overcurrent Shutdown Point	130 mA ± 15 mA
Dimensions	13.46 x 8.51 x 2.41 cm (5.3 x 3.35 x 0.95 in.)
Weight	175 g (6.2 oz)

Accuracy with 20 kΩ Load (maximum)

25°C	±(0.05% of $\|V_{out}(V)\|$+500µV)
-40° to +60°C	±(0.1% of $\|V_{out}(V)\|$+500µV)

Additional Full-Scale Error with 50 mA Load

±5 V Mode	-1.3 mV (typical)
0 to 10 V Mode	-1.5 mV (typical)

Typical Current Drain (±5 V Mode)

No load, V_{out}=0, V_{supply}=12V	11 mA
No load, V_{out}=fullscale, V_{supply}=12V	13 mA
With load, V_{supply}=12V	13 mA + load
Power Down Mode, V_{supply}=12V	1.1 mA

Typical Current Drain (0 to 10 V Mode)

No load, V_{out}=0, V_{supply}=12V	21 mA
No load, V_{out}=fullscale, V_{supply}=12V	28 mA
With load, V_{supply}=12V	28 mA + (2.4)(load)
Power Down Mode, V_{supply}=12V	1.1 mA