Four Channel Analog Output Module
Model SDM-AO4

The SDM-AO4 provides four independent, continuous, analog outputs for proportional control or driving strip charts. Measured or processed values in the datalogger are scaled to millivolts and transferred to the SDM-AO4 as digital values. The SDM-AO4 then performs a digital to analog conversion and outputs an analog voltage signal. The output voltage level is maintained until updated by the datalogger. The CR10X and CR7 communicate and control the SDM-AO4 with Instruction 103. Instruction 103 is standard in the CR10X and available as an option in the CR7. The CR800, CR1000, CR3000, and CR5000 use Instruction SDMAO4.

SDM Operation

The datalogger enables individual modules through an addressing scheme; multiple SDMs (in any combination) can be connected to one datalogger. After a module is enabled, it operates independently of the datalogger until additional commands are received or results are transmitted. Total cable length between datalogger and all SDMs cannot exceed 20 feet (6 m).

Power Supply

It is often convenient to power the SDM-AO4 from the datalogger power supply, but when doing so consideration must be given to the SDM-AO4's 10.5 mA continuous current drain. The alkaline supply available with the datalogger has 7.5 Ahr and will power one SDM-AO4 for less than one month. This supply is not recommended for continuous long-term operation. The rechargeable lead acid option, float charged by an ac supply or solar panel, may be used for long-term operation.

The SDM-AO4 may also be powered from an external 12 V supply, independent from the datalogger supply. The low side of an external 12 V supply should be connected to datalogger ground and not directly earth grounded.

Specifications

Analog Output
- Range: ±5000 mV
- Resolution: 2.5 mV
- Output resistance: 200 ohms
- Accuracy: 0.5% of Vout (with ≥50000 ohm load)
  4% of Vout (with 4800 ohm load)

Power Requirements
- Operating voltage: 12 Vdc nominal (9.6 V to 16 V)
- Typical current drain: 10.5 mA
- Output current: <0.125 mA
- Minimum load: 75000 ohms
- Weight: 0.9 lbs. (0.4 kg)

Environmental
- Operating temperature range: -25° to +55°C
- Relative humidity: 0 to 90% RH, non-condensing

Physical
- Size: 6.1" X 2.7" X 1.1" (15.5 x 6.9 x 2.8 cm)
- Weight: 0.9 lbs. (0.4 kg)

CAMPBELL SCIENTIFIC, INC.
815 West 1800 North • Logan, Utah 84321-1784 • (435) 753-2342 • Fax (435) 750-9540
Offices also located in: Australia • Brazil • Canada • England • France • Germany • South Africa • Spain

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