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. Please note that the SDM-AO4 is not compatible with our CR200-series, CR500, CR510, and CR9000(X) dataloggers.

**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.

**Datalogger Connection**
The CABLE5CBL-L is recommended for connecting the module to the datalogger. A 1-ft cable length should be sufficient when both datalogger and SDM-AO4 are housed within an ENC12/14 enclosure; a 2-ft length may be required if the datalogger and SDM-AO4 are housed at opposite ends of an ENC16/18 enclosure.

The cable length should be as short as possible. Typically, the maximum cable length is 20 ft. Contact Campbell Scientific if the length needs to be longer.

**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 datalogger’s sealed rechargeable power supply, 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.

**Ordering Information**

<table>
<thead>
<tr>
<th>Synchronous Device for Measurement</th>
<th>SDM-AO4 4-Channel Analog Output Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDM-to-Datalogger Cable</td>
<td>CABLE5CBL-L 5-conductor, 24 AWG cable with drain wire and Santoprene jacket. Enter cable length, in feet, after the -L. Must choose a cable termination option (see below).</td>
</tr>
<tr>
<td><strong>Cable Termination Options (choose one)</strong></td>
<td></td>
</tr>
<tr>
<td>-PT</td>
<td>Cable terminates in stripped and tinned leads for direct connection to a datalogger’s terminals.</td>
</tr>
<tr>
<td>-PW</td>
<td>Cable terminates in connector for attachment to a prewired enclosure.</td>
</tr>
</tbody>
</table>

**Specifications**

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

**Environmental**
- Operating Temperature: -25° to +55°C
- Relative Humidity: 0 to 90 RH (non-condensing)

**Physical**
- Dimensions: 6.1-in. x 2.7-in. x 1.1-in. (15.5-cm x 6.9-cm x 2.8-cm)
- Weight: 0.9 lbs (0.4 kg)