CAMPBELL SCIENTIFIC
WHEN MEASUREMENTS MATTER

SDM-CD16D

16-Channel Digital Control Port Expansion Module

Expands Low-Voltage Control Capacity

For low-power applications not suitable for the SDM-CD16AC

Overview

The SDM-CD16D increases the number of digital outputs that can be controlled (set to 0 or 5 V) by a Campbell Scientific datalogger. In addition to being able to drive normal logic level inputs, when an output is set HI, a boost circuit allows it to source a current of up to 100 mA for controlling low voltage valves, relays, or other devices.

SDM Operation

The SDM-CD16D is a synchronously addressed datalogger peripheral. Datalogger control ports 1, 2, and 3 are used to address the SDM-CD16D, then clock out the desired state of each of the 16 control ports. Up to 15 SDM-CD16Ds may be addressed, making it possible to control a maximum of 240 ports from the first three datalogger control ports.

Datalogger Connection

The SDM Jumper Wire Kit (pn 32505) connects up to four SDMs to the datalogger. This kit is recommended when multiple SDMs are connected to one datalogger or for extremely short distances between the SDM and datalogger. The CABLE5CBL-L cable is recommended for connecting a single SDM to the datalogger, and for longer distances between the SDM and datalogger.

Power Considerations

The SDM-CD16D power requirements are large compared to most Campbell Scientific products when driving significant loads. For many applications an external power supply is recommended to power the SDM-CD16D. For some applications, it may be convenient to use the datalogger supply to power the SDM-CD16D.

For long-term applications, the sealed rechargeable power supply available with Campbell Scientific dataloggers should be used, allowing the batteries to be float charged. Alkaline batteries are not recommended for long-term applications.

Specifications

- Operating Temperature Range: -25° to +70°C
- Operating Voltage Range: 9 to 18 Vdc
- Current Drain: 100 µA typical (all ports HI, no load)
- EMC Status: Complies with EN55022-1:1998 and EN50082-1:1998
- Output Voltage (no load): Output ON/HI, nominal 5 V (minimum 4.5 V)
- Output OFF/LO: Nominal 0 V (maximum 0.1 V)
- Output Source Current: Output sources 36 mA @ 3 V, 115 mA short-circuited to ground
- Maximum Output Current*: 400 mA and 50°C and 12 V supply.
- Dimensions: 18.0 x 9.9 x 2.0 cm (7.1 x 3.9 x 0.8 in)
- Weight: 318 g (11 oz)

**The maximum current (total all outputs) should be derated by 50 mA for every 10°C above 50°C and/or 50 mA for every voltage above 12 V.*

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