

16-Channel Digital Control Port Expansion Module

Model SDM-CD16D

The SDM-CD16D increases the number of digital outputs that can be set to 0 or 5 V by a Campbell CR10X, CR800, CR1000, CR3000, or CR7 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, allowing direct control of low voltage valves, relays etc. Up to 16 SDM-CD16Ds may be addressed, making it possible to control a maximum of 256 ports from the datalogger.



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 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 lead-acid 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

Power

Operating voltage:	12 Vdc nominal (9 to 18 V)
Current drain at 12V dc:	100 μ A typical (All ports HI, no load)

Output

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 Sink Current:	Output will sink 8.6 mA from a 5 V source
Output Source Current:	Output will source 36 mA @ 3 V, 115 mA short-circuited to ground
Max. Output Current:	400 mA at 50°C and 12 V supply. The maximum current should be derated (total all outputs) under the following conditions: 50 mA for every 10°C above 50°C and/or 50 mA for every volt above 12 V.

Environmental

Operating temperature:	-25° to +70°C standard
------------------------	------------------------

Physical

Size:	9" x 4" x 1" (23 x 10 x 2.4 cm)
Weight:	0.77 lbs (0.35 kg)
Total cable length:	585 ft (180 m) for CR7; 20 ft (6 m) for other dataloggers
EMC Status:	Complies with EN55022-1:1998 and EN50082-1:1998



CAMPBELLSCIENTIFIC
CANADA CORP.

11564 - 149 street - edmonton - alberta - T5M 1W7
tel 780.454.2505 fax 780.454.2655
www.campbellsci.ca

Copyright © 2006
Campbell Scientific, Inc.
Printed June 2006