



## 8-Channel synchronously addressed datalogger peripheral

Connects to  
Campbell Scientific dataloggers

### Overview

The SDM-CD8S controls DC devices that have a moderate current load, such as solenoids, solenoid valves, DC motors, stepper motors, lights, horns, heaters, and fans. The SDM-CD8S is ideal for applications requiring only a few control ports, where a larger, high-powered relay module such as the SDM-CD16S is not necessary. The voltage range for this device is 8 to 26 Vdc. It can deliver up to 1.0 A per channel with a maximum of 6 A total for all channels.

The SDM-CD8S has eight DC voltage outputs and returns that can be switched on and off manually or under datalogger control. The power input (8 to 26 Vdc) powers both the outputs and the SDM-CD8S logic. LEDs allow a visual indicator of active outputs.

The outputs can be controlled by a datalogger or controlled manually with an override switch and individual rocker switches for each of the outputs. When the manual

control switch is in the ON position, outputs are controlled by the position of the individual rocker switches. In the OFF position the state of the relays is controlled by the SDM commands from the datalogger.

### SDM Operation

The SDM-CD8S is a synchronously addressed datalogger peripheral. Datalogger control ports 1, 2 and 3 are used to address the SDM-CD8S, then clock out the desired state of each of the 8 control ports. Up to 15 SDM-CD8S Controllers may be addressed, making it possible to control a maximum of 120 ports from the first three datalogger control ports.

### Benefits and features

- › Compatible with CR800/850, CR1000, CR3000, CR5000 and CR9000X dataloggers
- › Ideal for applications requiring only a few control ports
- › Outputs can be controlled by datalogger or manually
- › Possible to control a maximum of 120 ports
- › LEDs allow a visual indicator of active outputs



## Datalogger Connection

The CABLE5CBL is recommended for connecting the module to the datalogger. A 30 cm cable length should be sufficient when both datalogger and SDM-CD8S are housed within an ENC12/14 enclosure; a 60 cm length may be required if the datalogger and SDM-CD8S are housed at opposite ends of an ENC16/18 Enclosure.

Cable lengths should be as short as possible. CRBasic dataloggers should use the SDMSpeed instruction if the cable length is longer than 6 m. The maximum recommended length for the CR7 is 150 m. For other Edlog dataloggers, the maximum recommended cable length is 6 m.

## Power Considerations

The SDM-CD8S power requirements may be large compared to most Campbell Scientific products. For most applications, an external power supply is recommended to power the SDM-CD8S.

For some applications, it may be convenient to use the data-logger's sealed-rechargeable battery. If the datalogger's rechargeable batteries are used, the batteries need to be float charged via a wall charger or solar panel. The current available from the wall charger limits the SDM continuous output current. Campbell Scientific does not recommend using the datalogger's alkaline power supply.

## SDM-CD8S Specifications

<b>Supply Voltage:</b>	8 to 26 Vdc
<b>Logic current drain at 12 Vdc:</b>	15 mA quiescent; 2.5 mA per active LED (manual or auto)
<b>Toggle switch:</b>	MANUAL, OFF, AUTO individual dip switches for manual
<b>Maximum current per channel:</b>	1 Amp
<b>Maximum current all channels:</b>	6 Amps
<b>Actuation/release times:</b>	8 $\mu$ s/200 $\mu$ s
<b>Operating Temperature:</b>	-40° to +70°C
<b>Dimensions:</b>	11.1 x 8.6 x 2.4 cm (4.4 x 3.4 x 0.9 in)

