

# SDM-CD8S

## 8-Channel Solid-State DC Controller



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 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 (6 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.

### 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-CD8S are housed within an ENC12/14 enclosure; a 2-ft length may be required if the datalogger and SDM-CD8S 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 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 datalogger'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.

### Ordering Information

#### Synchronous Device for Measurement

**SDM-CD8S** 8-Channel Solid State DC Relay Controller

#### SDM-to-Datalogger Cable

**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).

#### Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.
- PW** Cable terminates in connector for attachment to a prewired enclosure.

## Specifications

**Compatible Dataloggers:** CR9000(X), CR5000, CR3000, CR1000, CR850, CR800, CR7 CR23X, CR10(X), and 21X,

**Supply Voltage:** 8 to 26 Vdc

**Logic Current Drain @ 12 Vdc:** 15 mA quiescent; 2.5 mA per active LED (manual or auto)

**Toggle Switch:** MANUAL, OFF, AUTO; individual dip switches for manual

**Maximum Current**  
**Per Channel:** 1 A  
**All Channels Total:** 6 A

**Actuation/Release Times:** 8  $\mu$ s/200  $\mu$ s

**Operating Temperature:** -40° to +70°C

**Dimensions:** 11.1 x 8.6 x 2.4 cm  
(4.4 x 3.4 x 0.9 in.)

