

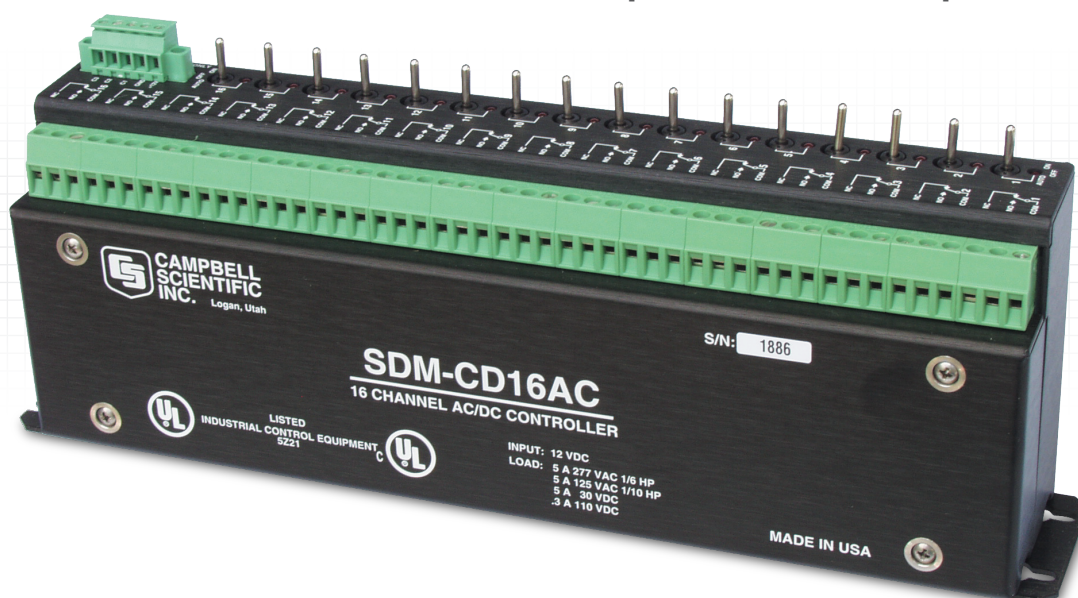


## SDM-CD16AC

16-Channel AC/DC Relay Controller

# Greatly Expands Control Capacity

Use multiple modules for up to 240 control ports



## Overview

The SDM-CD16AC allows a Campbell Scientific datalogger to automatically activate external ac or dc devices such as motors, pumps, heaters, valves, and fans. This ac/dc relay controller has

16 ports for connecting the ac or dc devices. Each port can be controlled automatically by the datalogger's program or controlled manually with an override toggle switch.

## Benefits and Features

- Allows the datalogger to automatically turn devices on or off when a threshold (e.g., temperature, water depth) has been reached
- Addresses up to 15 SDM-CD16ACs allowing up to 240 ports to be controlled by one datalogger
- Includes LEDs that indicate when a port is active
- Provides a manual override for each port
- UL/CUL approved product

## Technical Description

The SDM-CD16AC has toggle switches that provides three positions: ON and OFF for manual override, and AUTO for datalogger control. In the ON position, the common (COM) and normally open (NO) contacts are closed. In the OFF position, the normally

open contact is open. In the AUTO position, the state of the relay is controlled by the SDM command issued through the datalogger's control ports or SDM terminal.

### SDM Operation

The SDM-CD16AC is a synchronously addressed datalogger peripheral. Datalogger control ports 1, 2, and 3 are used to address the SDM-CD16AC, then clock out the desired state of each of

the 16 control ports. Up to 15 SDM-CD16ACs may be addressed, making it possible to control a maximum of 240 ports from the first three datalogger control ports.

questions & quotes: 435.227.9120

[www.campbellsci.com/sdm-cd16ac](http://www.campbellsci.com/sdm-cd16ac)



## Power Considerations

The datalogger's rechargeable power supply, connected to our newer 1.2 A wall charger, is sufficient for powering the SDM-CD16AC. The SDM-CD16AC's LEDs consume 45 mA each when active. If all 16 LEDs are active at once, a current drain of over 720 mA should be expected. If more than one SDM-CD16AC will be used, a deep-discharge external battery may be necessary. This external battery should share a common grounding point with the datalogger's ground.

Campbell Scientific does not recommended using the datalogger's alkaline batteries to power the SDM-CD16AC for long-term applications.

## Specifications

- › Operating Temperature Range: -25° to +50°C
- › Humidity: non-condensing
- › Contact Operation: Single pole double throw; break before make
- › Contact Material: Gold-clad silver
- › Coil Voltage: 9 to 18 Vdc
- › Coil Resistance: 360  $\Omega$   $\pm$ 10%
- › Expected Life (contact closures): Mechanical 10<sup>7</sup>
- › Actuation/Release Time: ~4 ms
- › Toggle Switch: ON/OFF manual override; AUTO for datalogger control
- › Operating Voltage: 12 Vdc nominal (9 to 18 Vdc)

## Ordering Information

### Synchronous Device for Measurement

**SDM-CD16AC** 16-Channel AC/DC Relay Controller Module

### 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.

- › Standards: Underwriters Laboratories (UL) listed product (E162021)
- › Dimensions: 24.6 x 5.1 x 8.6 cm (9.7. x 2.0 x 3.4 in)
- › Weight: 0.8 kg (1.8 lb)

### Individual Contact Ratings

- › DC Devices: 5 A @ 30 Vdc; 0.3 A @ 110 Vdc
- › AC Devices: 5 A (1/10 hp) @ 125 Vac; 5 A (1/6 HP) @ 277 Vac

### Current Drain @ 12 Vdc (see Power Considerations)

- › Quiescent: 6 mA
- › Per active LED (switch on or auto active): 45 mA



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