CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

SDM-SW8A
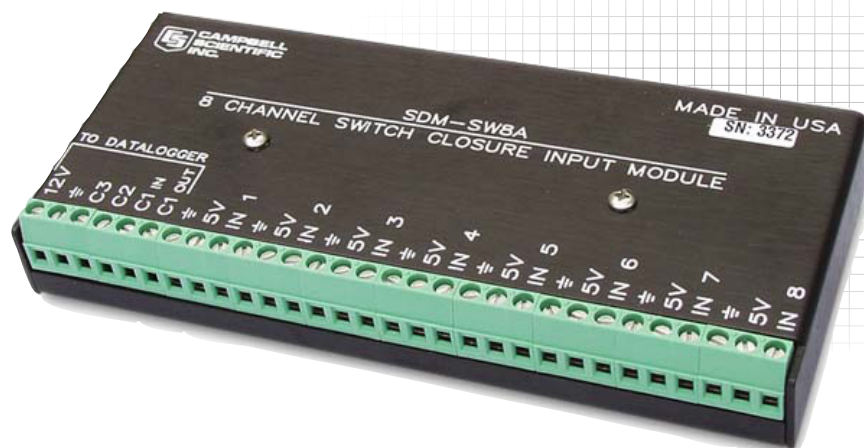*8-Channel Switch Closure Input Module*

Expands Datalogger Input Channels

For switch closure or voltage pulse sensors

Overview

The SDM-SW8A increases the number of switch closures or voltage pulses a datalogger can measure. Sensors that output a switch closure or voltage pulse signal include tipping bucket rain gages, flow meters, and anemometers.

The SDM-SW8A provides eight channels for connecting the sensors. Each channel is individually configured for single-pole double-throw (SPDT), single-pole single-throw (SPST), or voltage pulse measurements. Output options include counts, duty cycle, and state.

Benefits and Features

› Well suited for use in energy management studies
› Provides eight individually configured channels

› Measures a variety of signals: reed switches, dry contacts, or slow voltage pulses
› Allows up to four SDM-SW8As to be connected to one datalogger

Power Considerations

Due to the 3 mA continuous and 6 mA active current drain, an auxiliary 12 Vdc power supply is recommended for powering the SDM-SW8A in remote, long term applications. For some applications, it may be convenient to use the datalogger power supply. You can do this where ac power is available, or where a solar panel can be used for recharging the datalogger's sealed rechargeable battery.

SDM Operation

The datalogger enables individual modules through an addressing scheme; multiple SDMs (in any combination) can be connected to one datalogger. We recommend a maximum of four SDM-SW8As be connected to a single datalogger. After a module is enabled, it operates independently of the datalogger until additional commands are received or results are transmitted.

## Ordering Information

Synchronous Device for Measurement	
SDM-SW8A	8-Channel Switch Closure Input 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.

To Next SDM-SW8A
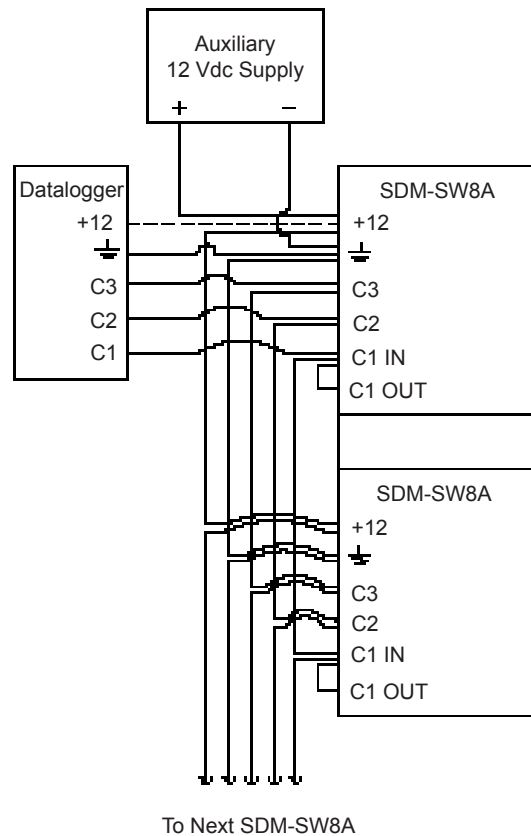
Specifications

› Measurement Types: switch closure (SPDT, SPST), dc voltage pulse

› Input Voltage Threshold: from below 0.9 to above 4.0 Vdc; ±20 Vdc maximum

› Maximum Input Frequency:100 Hz (50% duty cycle)

› Minimum Input Pulse Width: 5 ms high, 5 ms low

› Maximum Bounce Time: 3 ms open without counting

› Output Options: state, duty cycle, counts

› Internal Sampling Frequency: 500 Hz

› Maximum Count/Port: 65535

› Watchdog Reset: yes

› Operating Voltage Range: 9.6 to 16 V

› Typical Current Drain: 3 mA quiescent, 6 mA active (maximum)

› Operating Temperature Range: -25° to +55°C

› Relative Humidity: 0 to 90% RH, non-condensing

› Height: 2.3 cm (0.9 in)

› Length: 15.7 cm (6.2 in)

› Width: 6.9 cm (2.7 in)

› Maximum Cable Length: 6 m (20 ft) total to all SDM devices. Consult Campbell Scientific if longer lengths are necessary

› Weight: 0.23 kg (0.5 lb)