

# Hermetically Sealed Long-Lasting Relays



SDM8X50 (strain relief bracket not shown)

## Overview

The SDM8X50 is a 50 ohm, coaxial, 8:1 multiplexer used in a Campbell Scientific time-domain reflectometer system. It consists of a surge-protected multiplexer circuit board enclosed in a metal housing and a separate strain-relief bracket for the coaxial cables. Both the multiplexer housing and strain relief bracket have holes drilled at a 1-inch spacing that allow the SDM8X50 to be mounted to a wall or an enclosure backplate.

When purchased with the -E option, the SDM8X50 includes a 10-inch-by-12-inch-by-4.5-inch environmental enclosure and an enclosure supply kit. Other compatible Campbell Scientific enclosures that may be purchased separately include the ENCTDR100, ENC12/14, ENC 14/16, and ENC16/18.

## Benefits and Features

- Long lasting, 20 times more operations than SDMX50 relays
- Non-latching relays provide better surge protection
- Hermetically sealed relays that are more stable and do not become coated with a non-conducting film
- Quiet operation

## Ordering Information

### Coaxial Multiplexer

**SDM8X50** 8-Channel, Solid-State, 50 Ohm Coaxial Multiplexer

### Enclosure Options (choose one)

- N No Enclosure
- E 10-inch-by-12-inch Enclosure

### Cables

For the following cables, enter length, in feet, after the -L.

**COAXTDR-L** TDR Multiplexer RG8 Cable for connecting different levels of the SDM8X50s or connecting the Level 1 SDM8X50 to the TDR100.

**CABLE5CBL-L** 5-Conductor 22 AWG Cable for connecting the datalogger to the SDM8X50. Must choose a cable termination option.

### CABLE5CBL Cable Termination Options (choose one)

- PT Cable terminates in pigtailed for direct connection to the datalogger's terminals.
- PW Cable terminates in a connector for attachment to a prewired enclosure.

## Specifications

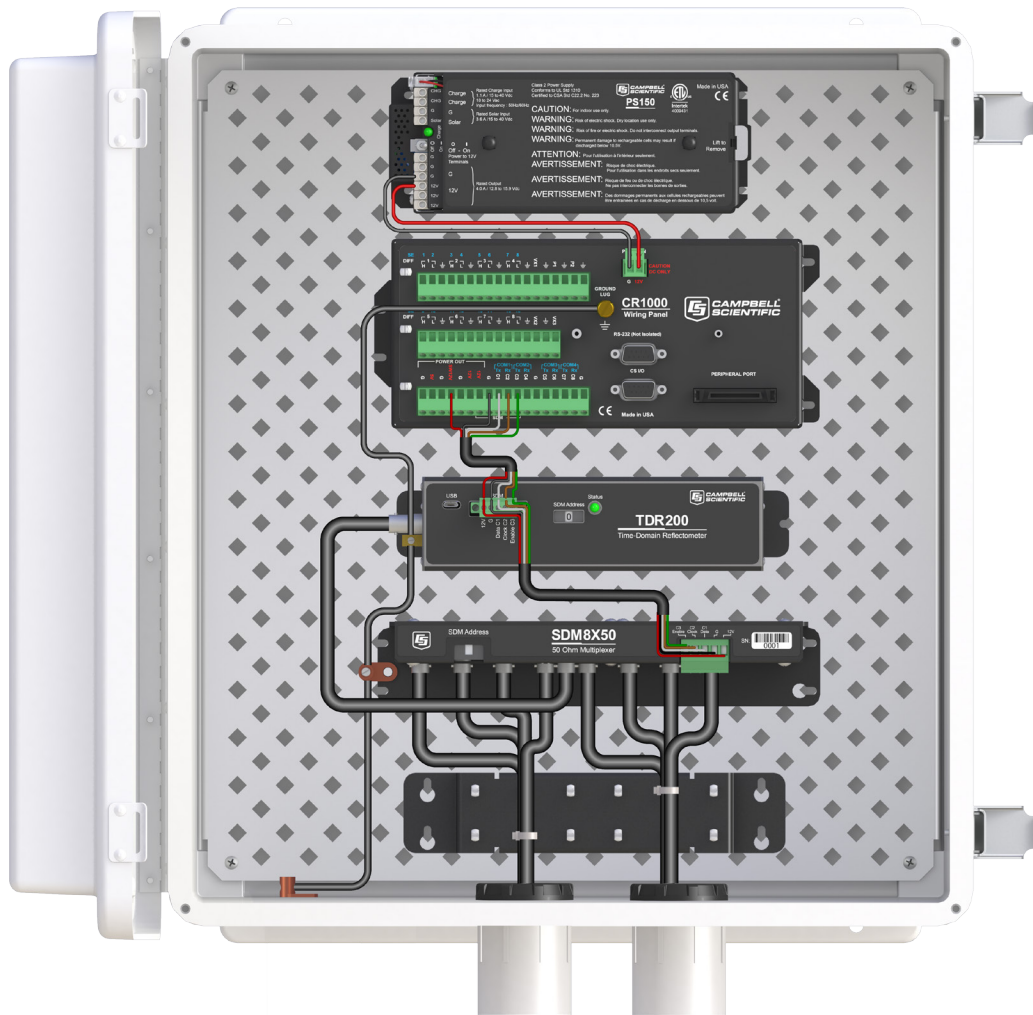
- Input Power: 12 Vdc
- Relay Contact Life Expectancy:  $100 \times 10^6$  operations at 5 V and 10 mA
- Weight: 590 g (1.3 lb)
- Multiplexer Housing Dimensions with Mounts: 24.9 x 12.2 x 4.6 cm (9.8 x 4.8 x 1.8 in)
- Strain Relief Bracket Dimensions: 20.3 x 4.3 x 1.3 cm (8.0 x 1.7 x 0.5 in)

## Current Drain

- Quiescent: < 1 mA
- During Switching: ~ 90 mA (all multiplexers of the same level switch simultaneously for less than 1 s)

## Enclosure (-E option)

- Weight: 4.1 kg (9.0 lb)
- Outside Dimensions with Mounts: 40.4 x 29.2 x 17.5 cm (15.9 x 11.5 x 6.9 in)
- Inside Dimensions: 25.4 x 30.4 x 11.4 cm (10 x 12 x 4.5 in)



SDM8X50 in an ENCTDR100 enclosure with the TDR200, CR1000, and PS150.