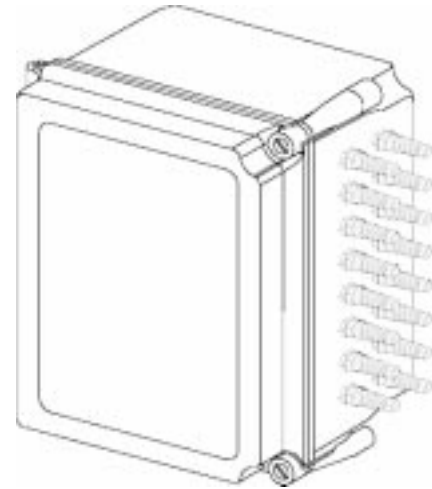


Instrument Multiplexer

Model MultiMux

Key Features

- Housed in a rugged NEMA 4X fiber/poly enclosure.
- Four different switching modes are supported.
- Compatible with multiplexers from other manufacturers.
- Quick release cover latches provide easy access.
- Large, easy to wire terminal board.
- Various cable entry options are available.
- Equipped with a connector for the datalogger connection.
- Clear cover available for wiring inspection (optional).
- Lightning protection components available (optional).
- Manual switch capability available (optional).
- Latches include knockout for padlocking enclosure.



Multiplexer shown with Standard Cable Fittings

The MultiMux expands the number of instruments that can be read by the CR10 or CR10X Controller to 16, 32 or 48 instruments. The multiplexer consists of a terminal board for making the instrument connections and a multiplexer board (installed underneath) to switch through the channels all housed in a rugged weather resistant NEMA 4X fiberglass/polyester enclosure.

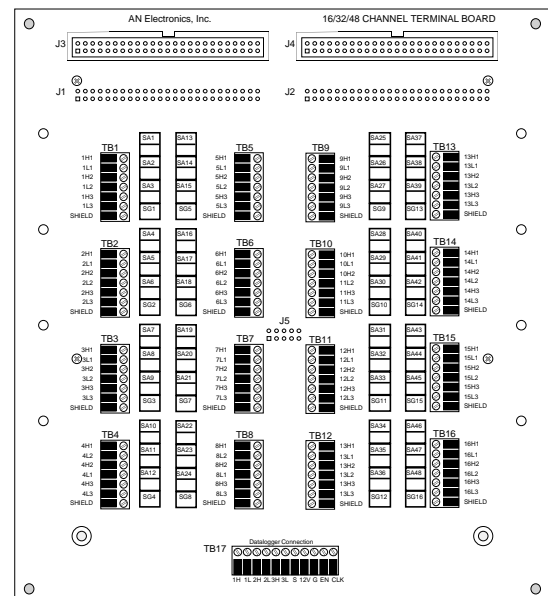
The MultiMux supports 4 different switching modes, a 16x4-wire mode for vibrating wire instruments (with thermistor or RTD), load cells and other 4 wire instruments, two 2-wire switching modes including 32x2 and 48x2 (optional) for thermocouples, thermistors, 4-20mA and other 2-wire instruments, and a 16x6-wire mode (optional) for reading instruments with 6 leads such as load cells with remote sense. The four different switching modes are selected via a 2 position DIP switch on the multiplexer board. Schematic representation for each of these modes follows on the reverse.

Lightning protection components may be installed to help prevent damage to the instruments, multiplexer and datalogging system in the event of a nearby strike. These components are optional and normally installed at the factory.

There are a number of cable entry options available including individual strain relieved glands, larger glands for multiconductor cables and connectors.

Contact Canary Systems to obtain your MultiMux Ordering Guide (pdf available at www.canarysystems.com) or if you require additional application information.

Specifications follow on the reverse.



View of the Terminal Board



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Specifications

General

Power requirements: 9-16 VDC (unregulated)
 Quiescent current: 100 μ A
 Channel activated current (2 or 4-wire): 40 mA
 Channel activated current (6-wire): 50 mA
 Control line input impedance: 10 kilohms
 Control line input levels: TTL or RS-232 (<9 VDC)
 Transient protection: 17 VDC, 1500W Transzorbs
 Operating temperature: -40 to +70° C (-40 to +160° F)

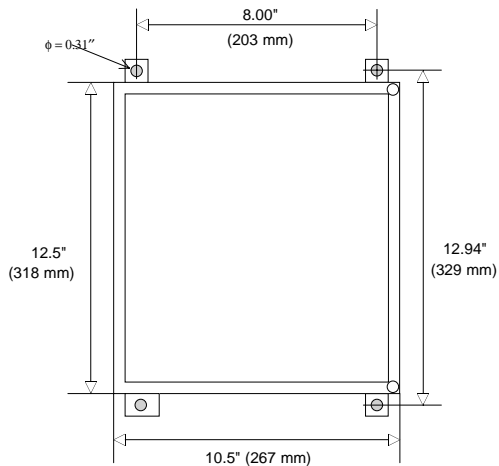
Relays

Power: 11 mA @ 12VDC (140 mW)
 Contact type: Gold-clad silver alloy
 Electrostatic capacitance: 3 picofarads
 On resistance: 50 milliohms
 Coil resistance: 1,028 ohms
 Maximum switching voltage: 125 VAC, 110 VDC
 Maximum switching power: 30 W (resistive load)
 Maximum switching current: 1 A
 Operate time: ~2 milliseconds
 Release time: ~1 milliseconds
 Initial contact bounce: ~1 millisecond
 Surge withstand (between open contacts): 1,500 V
 Switching life (mechanical): 100,000,000 operations

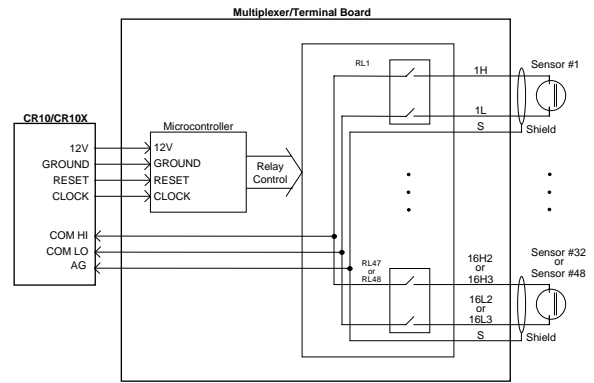
Lightning Protection Components (optional)

Tripolar Plasma Surge Arrestor (SA1-SA48)
 Nominal DC breakdown voltage: 250 V
 Surge life: 400 (10/1000 ms pulse @ 500 Amps)
 Maximum surge current: 10 kA per side (8/20 μ s pulse)
 Insulation resistance: 10,000 Megohms

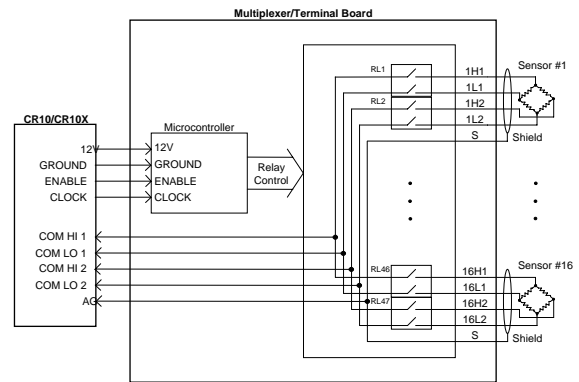
Bipolar Plasma Surge Arrestor (SG1-16)
 Nominal DC breakdown voltage: 230 V
 Surge life: 1,000 (10/1000 μ s pulse @ 500 Amps)
 Maximum surge current: 20 kA (8/20 μ s pulse)
 Insulation resistance: 10,000 Megohms



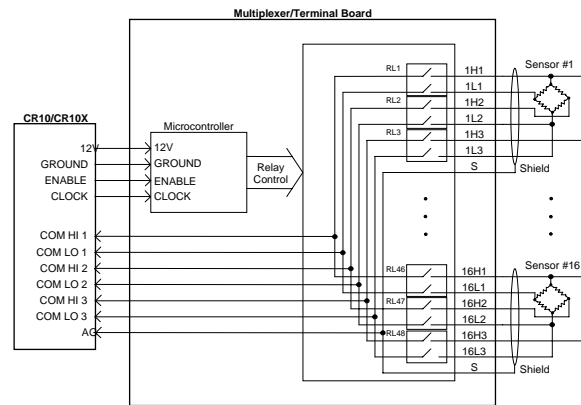
Overall Size and Mounting



32 or 48 Channel 2-wire Switching Schematic



16 Channel 4-wire Switching Schematic



16 Channel 6-wire Switching Schematic