

Key Features

- Supports 16, 32 or 48 channel expansion
- Supports 2, 4 or 6-wire switching
- Compatible with a wide variety of instrumentation
- Compatible with numerous control modules
- Transient protection on power and control inputs
- Transient protection on all instrument connections
- Very low operating and quiescent power

Specifications

General

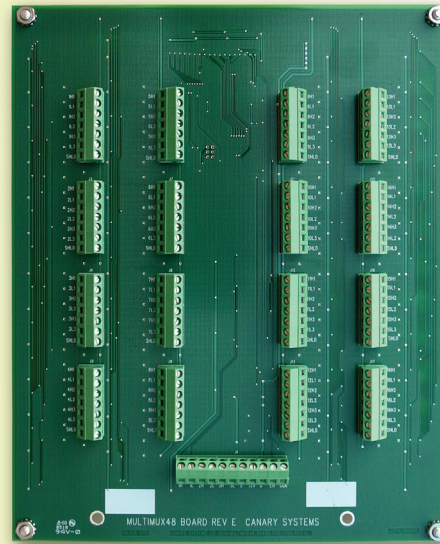
Power Requirements	9-16 VDC (unregulated)
Quiescent Current	100 μ A
Channel Activated Current (2 or 4-wire)	40 mA
Channel Activated Current (6-wire)	50 mA
Control Line Input Impedance	10 K Ω
Control Line Input Levels	TTL or RS-232 (<9 VDC)
Transient Protection	17 VDC, 1500 W Transzorb
Operating Temp	-40 to +70°C (-40 to +160°F)

Relays

Power	11 mA @ 12 VDC (140 mW)
Contact Type	Gold-clad silver alloy
On Resistance	50 milliohms
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

OVP Components

Type	Tripolar Plasma Surge Arrestor
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



The MultiMux is available in 2 versions, one that provides 16 channel by 4-wire switching (or 32 channel by 2-wire switching), a second that provides 16 channel by 6-wire switching (or 48 channel by 2-wire switching). Both products include integrated OVP on all channels thereby providing increased system reliability in areas prone to lightning or other transients. The channel switching mode is controlled by an easily accessible board mounted switch.

Low contact resistance relays provide compatibility with a wide range of instruments, including vibrating wire, resistance strain gage, thermocouples, linear potentiometers and 4-20 mA, among others.

Two control inputs provide for activating the MultiMux and then advancing through the channels. Logic levels for either the enable or clocking input can utilize 5 V to 12 V logic input, with a maximum input of 16 V. The control inputs are compatible with a wide variety of control modules including those manufactured by Campbell Scientific, Sutron and Datalogger. Contact Canary Systems for MCU support from other manufacturers.

Transient protection on the control inputs provides high reliability from electrical transients whether ESD or lightning. The power inputs are also equipped with transient protection and reverse-polarity protection.

The MultiMux also includes support for "Daisy-Chain" operation, where control inputs are shared amongst several MultiMux's (up to 8). The sequence of each MultiMux in the Daisy Chain is easily configured using a board mounted switch.

All components have been selected for ultra-high reliability and function in demanding environments that may include high heat, humidity and/or dust.

The MultiMux may be packaged directly into the Automatic Data Acquisition System (ADAS) enclosure or installed in a variety of standard enclosures. Contact Canary Systems for enclosure and cable entry options.