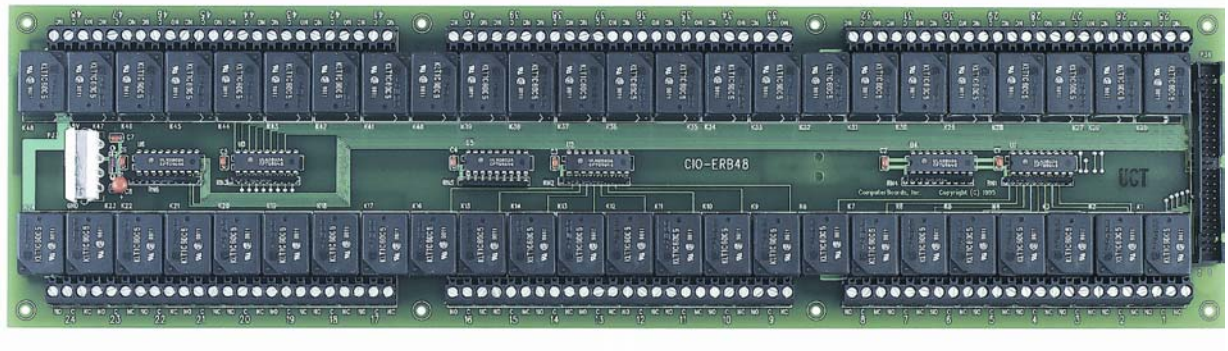
# CIO-ERB48 and CIO-SERB48

48 Electromechanical (Form C) Relay Mounting & Interface Rack




## Functional Description

The CIO-ERB48 provides 48 FORM C electromechanical relays on a 17" x 4.5" circuit board. A single connector scheme allows interfacing to any Measurement Computing Corporation (MCC) digital I/O board with 50-pin or 100-pin connectors.

The CIO-SERB48 provides similar functionality, but includes 10-amp, socketed/removable relays in place of the standard 5-amp relays on the CIO-ERB48 board.

## Interface to any DIO Board

The CIO-ERB48 and CIO-SERB48 are fully compatible with all MCC 50-pin and 100-pin based digital I/O boards, including the following:

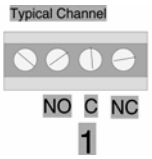
- PCI-DIO48H, PCI-DIO96H
- PCI-DDA08/12, PCI-DDA04/12, PCI-DDA02/12
- CIO-DIO48, CIO-DIO96, CIO-DIO192
- CIO-DO48H, CIO-DO96H, CIO-DIO192H
- PC104-DIO48, PC104-DO48H

## Powered from the PC

The CIO-ERB48 and SERB48 do not require 110 VAC power. They run on the computer's 5V power supply or an external 5V supply. Power is connected through a four-pin MOLEX connector, just like that found on all PC power supplies!

## Control Wiring

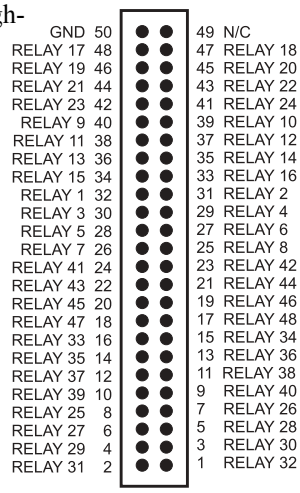
The CIO-ERB48 has screw terminals for connecting your field wiring to the relays. Each relay has three terminals; COMMON, NORMALLY OPEN and NORMALLY CLOSED. The screw terminals are high-quality jaw types that do not bind when removing wires. Wire gauges 12-22 AWG may be used.




## CIO-ERB48/SERB48 50-Pin Connector

The CIO-ERB48 is designed for high-density applications. Because 48 electromechanical relays fit on one CIO-ERB48, all 48 digital I/O lines of a DIO48 are needed to switch the relays. It would not make economic sense to use the CIO-ERB48 with a 24-bit digital I/O board, so there is no provision for 37-pin connectors.

The 50-pin connector is laid out in the style of all MCC 50-pin and 100-pin digital connectors, so you can use the CIO-ERB48 with a large variety of digital I/O boards




## All Form C Relays

The CIO-ERB48 has FORM C relays. FORM C relays are single pole, double throw (SPDT) relays, with each relay having three terminals.

- The center terminal is the COMMON terminal. This terminal is switched between the other two.
- The NORMALLY CLOSED terminal is in contact with the COMMON terminal whenever the CIO-ERB48 is powered up, reset, or when a 0 is written to the controlling bit of the digital I/O board.
- The NORMALLY OPEN terminal is in contact with the COMMON terminal whenever a 1 is written to the controlling bit of the digital I/O board.

## Buffers and Pull-Downs

The CIO-ERB inputs from the digital I/O board are pulled to a steady state by circuitry on the board, so they do not randomly open or close on power-up. Also, buffer/ drivers on board accept signals from simple 8255 type digital I/O boards.