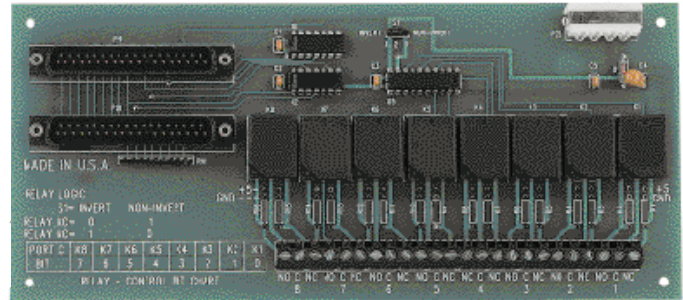# Electromechanical Relay Racks for the CIO-DIO Family of Digital I/O Boards
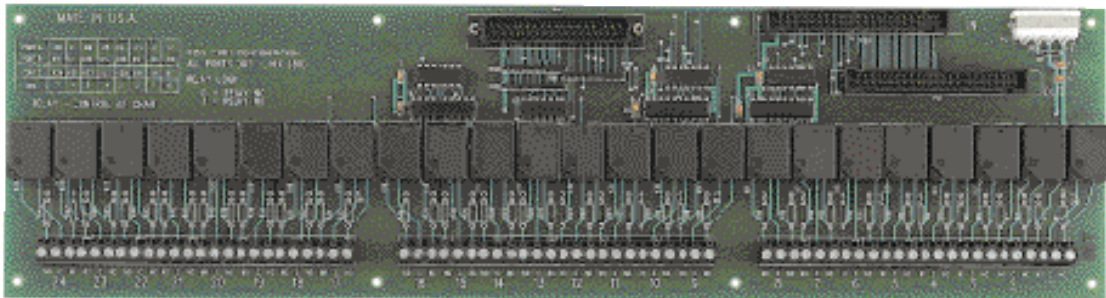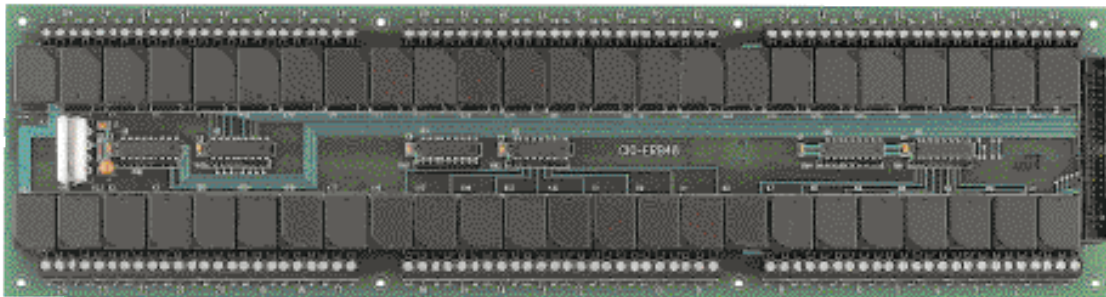
CIO-ERB Series

$109
Basic Unit

CIO-ERB08

CIO-ERB24

CIO-ERB48

✔ **48, 24 and 8 Channel Models**
✔ **Direct Connection to the CIO Family of Plug-in Boards**
✔ **On-Board Buffers**
✔ **Powered by 5 Vdc**

The CIO-ERB is a family of electromechanical relay racks designed to be compatible with the CIO-DIO family of digital I/O plug-in boards. There are three models in the family: the CIO-ERB48 contains 48 relays, the CIO-ERB24 contains 24 relays and the CIO-ERB08 contains 8 relays. All relays are form C electromechanical capable of handling 6 A at 24 Vdc or 3 A at 120 Vac. Field wiring is accomplished using screw terminals for each relay. The screw terminals allow you to connect signals via 12-22 AWG wire. The digital I/O board connects to the CIO-ERB racks via a standard 37 conductor cable, or 50 conductor cable depending on the CIO-ERB model.

CIO-ERB08

The CIO-ERB08 is an 8 channel electromechanical relay board. It features 8 form C relays. Field connections are made through screw terminals. The connection to the digital I/O board is through a standard 37 pin D connector. A second connector is provided as a pass through. The CIO-ERB08 can connect directly to a CIO-DIO24, CIO-DIO24H or CIO-DIO24/CTR3 using a C37FF-2 cable.

CIO-ERB24

The CIO-ERB24 is a 24 channel electromechanical relay board. It provides connection to the digital I/O board using either a 37 or 50 pin connector. The 37 pin connector is used to connect to 24 channel digital I/O boards such as the CIO-DIO24, CIO-DIO24H and CIO-DIO24/CTR3. The C37FF-2 cable may be used for connection to these boards. The 50 pin connector is used to connect to the CIO-DIO48, 96 and 192. The C50FF cable is used for the connection. Since the 50 pin connectors on the digital I/O boards

carry 48 digital I/O lines, a second 50 pin connector is located on the CIO-ERB24 to connect a second CIO-ERB24. The second connector, labeled "OUT", swaps the digital I/O lines so they are in the correct position for the next CIO-ERB24.

CIO-ERB48

The CIO-ERB48 is a 48 channel relay board designed for high density applications. The 50 pin connector is laid out to connect directly to the CIO-DIO48, 96 & 192 with a C50FF-2 cable.

BUFFERS & 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 will not randomly open or close on power-up. Also, buffer/drivers on board accept signals from simple 8255 type digital I/O boards.

POWERED FROM THE PC

The CIO-ERB racks do not require 110 Vac power. They run on the personal computer's 5 V power supply or an external 5 V supply. Power is connected through a 4 pin connector, just like that found on all PC power supplies.

CONTROL WIRING

The CIO-ERB racks have screw terminals for connecting your field wiring to the relays. Each relay has three connections; Common, Normally Open and Normally Closed. The screw terminals are high-quality jaw type that will not bind when removing wires. Wire gauges 12-22 AWG may be used.

INDUCTIVE LOAD WARNING!

The CIO-ERB boards are excellent for switching inductive loads, but only with the correct DIO board. Do not use 82C55 based DIO boards because these may be reset by the 'inductive kick'. Choose instead the new CIO-DO48, 96 or 196, which cannot be reset.

SPECIFICATIONS

Relays: 48, 24 or 8 SPDT, FORM C
Contact Material: Gold overlay silver
Contact Rating:
28 Vdc @ 6 A, 120 Vac @ 5 A
Operate Time: 20 mSec.
Release Time: 10 mSec.
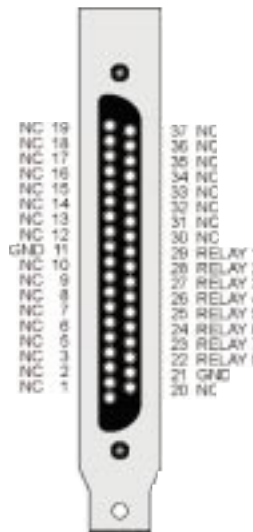**Power Consumption
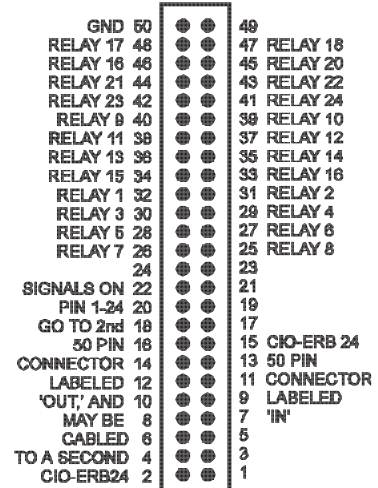(max with all relays active):**
CIO-ERB08 = 0.5 A @5 V,
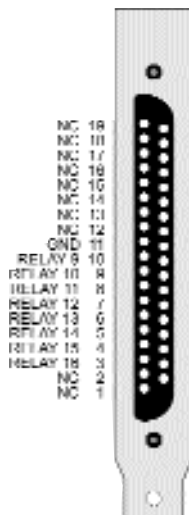CIO-ERB24 = 1.45 A @5 V,
CIO-ERB48 = 2.95 A @5 V
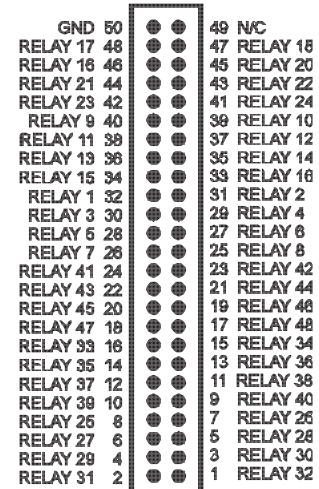**Dimensions:** 17" x 4.50" (43.20 x 11.43 cm) (CIO-ERB48 & 24), 9" x 4" (22.86 x 10.16 cm) (CIO-ERB08)

37 PIN CONNECTOR ON CIO-ERB08

50 PIN CONNECTOR ON CIO-ERB24

37 PIN CONNECTOR ON CIO-ERB24

50 PIN CONNECTOR ON CIO-ERB48

Digital I/O Board Compatibility Guide

Rack	Digital I/O Boards	Cable
CIO-ERB48	CIO-DIO192, CIO-DIO96, CIO-DIO48	C50FF-2
CIO-ERB24	CIO-DIO192, CIO-DIO96, CIO-DIO48	C50FF-2
CIO-ERB24	CIO-DIO24, CIO-DIO24H, CIO-DIO24/CTR3	C37FF-2
CIO-ERB08	CIO-DIO24, CIO-DIO24H, CIO-DIO24/CTR3	C37FF-2

To Order *(Specify Model Number)*

Model No.	Price	Description
CIO-ERB48	$299	48 channel electromechanical relay board
CIO-ERB24	199	24 channel electromechanical relay board
CIO-ERB08	109	8 channel electromechanical relay board

All CIO-ERB boards include a 10' power adapter cable.
***Ordering Example:** CIO-ERB48 with C50FF-2 cable: $299 + 25 = **$324**.*

Accessories

Model No.	Price	Description
C37FF-2	$25	2' cable, 37 pin D connectors
C50FF-2	25	2' cable, 50 pin header connectors