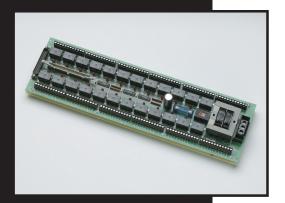
## **ERB-24**

# 24-Channel Relay Output Accessory Board



Keithley's 24-Channel Relay Output Board, the ERB-24, consists of 24 electromechanical dual form C (Double-Pole, Double-Throw) relays for efficient switching of loads by programmed control. Each relay contains two normally closed and two normally open contacts for controlling up to a 3 Amp load (resistive) at 120 or 125Vrms per contact. These relays feature zero-leakage output currents as compared to the higher leakage current of the solidstate relay alternative.

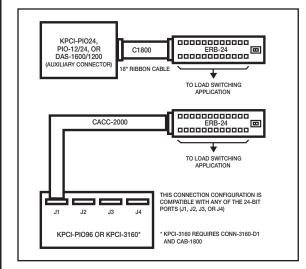
The relays are energized by applying a 5V signal level to the appropriate relay channel on either the 37-pin D connector or 50-pin header. Onboard relay drivers allow the ERB-24 to be controlled by any LSTTL or NMOS/CMOS compatible digital output board.

Annunciator LEDs, one for each relay, light when their associated relays are activated. This feature aids in troubleshooting and ease of use. Screw terminals on the board allow easy connection and accept wire sizes 12-22 AWG. The board can also be rack mounted.

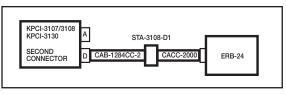
- 24 Dual Form C (DPDT) relays
- 8 Form C relays (1 NC and 1 NO contact per relay)
- 3 Amp contact rating (120 or 125Vrms)
- Screw terminals accept 12–22 **AWG** wire
- Easy to use
- LEDs indicate status of relays

### **Ordering Information**

ERB-24 24-Channel Relay **Output Accessory Board** 



ERB-24 Configuration Guide



**ERB-24 Configuration Example** 

### **ACCESSORIES AVAILABLE**

C1800 ERB-24 to PIO-12/24 cable (18 in), KPCI-PIO24 CACC-2000 ERB-24 to PIO-96 cable (24 in), KPCI-PIO96

1.888.KEITHLEY (U.S. only)

www.keithley.com



### **APPLICATIONS**

- Energy management
- Laboratory automation
- Product testing
- Process control
- Activate alarms
- Annunciator lights

# **ERB-24**

# 24-Channel Relay Output Accessory Boards

### **Connector Pin Assignments**

All digital inputs to the ERB-24 are through either a 37-pin D-type male connector or a 50-pin header, both which reside on the printed circuit board. For soldered connections, a standard 37-pin D-female connector is the correct mating part and can be ordered from Keithley as part number SFC-37.

N/C 12 31 RELAY 6 N/C 12 30 RELAY 7 RELAY 16 10 29 RELAY 8 RELAY 17 9 27 RELAY 18 8 27 RELAY 10 RELAY 19 7 25 RELAY 11 RELAY 20 6 24 RELAY 12 RELAY 21 5 23 RELAY 13 RELAY 23 3 21 N/C 2 20 N/C	ERB-24 TOP VIEW J14	N/C 19 N/C 18 N/C 17 N/C 16 N/C 15 N/C 14	36 35 34 33	RELAY 0 RELAY 1 RELAY 2 RELAY 3 RELAY 4 RELAY 5
		N/C 13 N/C 12 DIG COM 11 RELAY 16 9 RELAY 17 9 RELAY 18 8 RELAY 19 7 RELAY 20 6 RELAY 21 6 RELAY 21 4 RELAY 22 4	32 31 30 29 28 27 26 25 24 23 22 21	RELAY 5 RELAY 6 RELAY 7 RELAY 8 RELAY 9 RELAY 10 RELAY 11 RELAY 12 RELAY 13 RELAY 14 RELAY 15 DIG COM

ERB-24	RELAY 7	1		GND
			2	
I TOP VIEW J15	RELAY 6	3	4	GND
	RELAY 5	5	6	GND
l	RELAY 4	7	8	GND
l	RELAY 3	9	10	GND
l	RELAY 2	11	12	GND
	RELAY 1	13	14	GND
l	RELAY 0	15	16	GND
	RELAY 15	17	18	GND
l	RELAY 14	19	20	GND
	RELAY 13	21	22	GND
	RELAY 12	23	24	GND
1	RELAY 11	25	26	GND
	RELAY 10	27	28	GND
	RELAY 9	29	30	GND
	RELAY 8	31	32	GND
1	RELAY 23	33	34	GND
1	RELAY 22	35	36	GND
1	RELAY 21	37	38	GND
1	RELAY 20	39	40	GND
1	RELAY 19	41	42	GND
1	RELAY 18	43	44	GND
1	RELAY 17	45	46	GND
1	RELAY 16	47	48	GND
1	N/C	49	50	GND
1	.,,,,	70	00	GIND
1				

### RELAYS

QUANTITY AND TYPE: 24 dual form C (DPDT). CONTACT RATING: 3A at 28VDC, resistive

3A at 120VAC, resistive 1.6A at 220VAC.

OPERATE TIME: 20ms max at rated voltage.

RELEASE TIME: 10ms max.

MECHANICAL LIFE: 10 million operations min.

ELECTRICAL LIFE: 100 thousand operations min at rated load.

#### POWER REQUIREMENTS

INPUT POWER: 115/230VAC ±15%, 50/60Hz, 14.5VA max.

### **ENVIRONMENTAL**

**OPERATING TEMPERATURE RANGE:** 0° to 60°C.

STORAGE TEMPERATURE RANGE: -40° to +100°C.

HUMIDITY: 0 to 90% non-condensing.

EMC: Conforms to European Union Directive 89/336/EEC.

**SAFETY:** IEC Installation Category I. (Voltage source must be isolated from the mains by a transformer.)

**DIMENSIONS:** 16in L  $\times$  4.75in W  $\times$  2in H (40.6cm  $\times$  12.1cm  $\times$  5.1cm).

**WEIGHT:** 2.2lb (1kg).

 $\begin{tabular}{ll} \textbf{SCREW TERMINAL WIRE SPACING: } 0.197 in (5mm). \end{tabular}$ 

SCREW TERMINAL WIRE SIZES: 12–22 AWG.

MOUNTING SCREW SIZE: 4-40.

