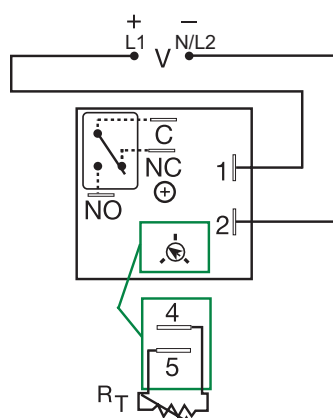


## KRDI SERIES



### Wiring Diagram



V = Voltage  
C = Common, Transfer Contact  
NO = Normally Open  
NC = Normally Closed

A knob is supplied for adjustable units, or  $R_T$  terminals 4 & 5 for external adjust. See external adjustment vs time delay chart.

Relay contacts are isolated.

### Ordering Information

| MODEL     | INPUT VOLTAGE | ADJUSTMENT   | TIME DELAY |
|-----------|---------------|--------------|------------|
| KRDI120   | 12VDC         | Onboard knob | 0.1 - 10s  |
| KRDI121   | 12VDC         | Onboard knob | 1 - 100s   |
| KRDI122   | 12VDC         | Onboard knob | 10 - 1000s |
| KRDI2110S | 24VAC/VDC     | Fixed        | 10s        |
| KRDI2160S | 24VAC/VDC     | Fixed        | 60s        |
| KRDI220   | 24VAC/VDC     | Onboard knob | 0.1 - 10s  |
| KRDI320   | 24VDC         | Onboard knob | 0.1 - 10s  |
| KRDI420   | 120VAC        | Onboard knob | 0.1 - 10s  |
| KRDI424   | 120VAC        | Onboard knob | 1 - 100m   |

If you don't find the part you need, call us for a custom product 800-843-8848

### Description

The KRDI Series is a compact time-delay relay measuring only 2 in. (50.8 mm) square. Its solid-state timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The KRDI Series is a cost effective approach for OEM applications that require small size, isolation, reliability, and long life.

#### Operation (Interval)

Upon application of input voltage, the time delay begins. The output relay energizes during the time delay. At the end of the time delay, the output de-energizes and remains de-energized until input voltage is removed.

**Reset:** Removing input voltage resets the time delay and the output.

### Features & Benefits

| FEATURES                                                        | BENEFITS                                                    |
|-----------------------------------------------------------------|-------------------------------------------------------------|
| <b>Compact, low cost design measuring 2 in. (50.8mm) square</b> | Allows flexibility for OEM applications                     |
| <b>Microcontroller based</b>                                    | Repeat Accuracy + / - 0.5%,<br>Factory calibration + / - 5% |
| <b>Isolated, 10A, SPDT output contacts</b>                      | Allows control of loads for AC or DC voltages               |
| <b>Encapsulated</b>                                             | Protects against shock, vibration, and humidity             |

### Accessories

|  |                                                                                                                                                                                        |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>P1004-95, P1004-95-X Versa-Pot</b><br>Panel mountable, industrial potentiometer recommended for remote time delay adjustment.                                                       |
|  | <b>P1023-6 Mounting bracket</b><br>The 90° orientation of mounting slots makes installation/removal of modules quick and easy.                                                         |
|  | <b>P0700-7 Versa-Knob</b><br>Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.                                                                   |
|  | <b>P1015-13 (AWG 10/12), P1015-64 (AWG 14/16) Female Quick Connect</b><br>These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief. |
|  | <b>P1015-18 Quick Connect to Screw Adapter</b><br>Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.                       |

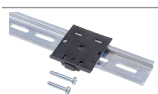
## KRDI SERIES

### Accessories



#### C103PM (AL) DIN Rail

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



#### P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

### Specifications

#### Time Delay

**Range** 0.1s - 100m in 5 adjustable ranges or fixed

**Repeat Accuracy**  $\pm 0.5\%$  or 20ms, whichever is greater

#### Tolerance

(Factory Calibration)  $\leq \pm 5\%$

**Reset Time**  $\leq 150\text{ms}$

#### Time Delay vs Temp.

& Voltage  $\leq \pm 5\%$

#### Input

**Voltage** 12, 24 or 110VDC; 24, 120 or 230VAC

#### Tolerance

**12VDC & 24VDC/AC** -15% - 20%

**110VDC, 120VAC or 230VAC** -20% - 10%

**AC Line Frequency/DC Ripple** 50/60 Hz /  $\leq 10\%$

**Power Consumption** AC  $\leq 2\text{VA}$ ; DC  $\leq 2\text{W}$

#### Output

**Type** Isolated relay contacts

**Form** SPDT

**Rating (at 40°C)** 10A resistive @ 125VAC;

5A resistive @ 230VAC & 28VDC;

1/4 hp @ 125VAC

250VAC

#### Max. Switching Voltage

**Life (Operations)** Mechanical -  $1 \times 10^7$ ; Electrical -  $1 \times 10^5$

#### Protection

**Circuitry** Encapsulated

**Isolation Voltage**  $\geq 1500\text{V RMS}$  input to output

**Insulation Resistance**  $\geq 100\text{ M}\Omega$

#### Polarity

DC units are reverse polarity protected

#### Mechanical

**Mounting** Surface mount with one #10 (M5 x 0.8) screw

**Dimensions** **H** 50.8 mm (2"); **W** 50.8 mm (2");

**D** 30.7 mm (1.21")

**Termination** 0.25 in. (6.35 mm) male quick connect terminals

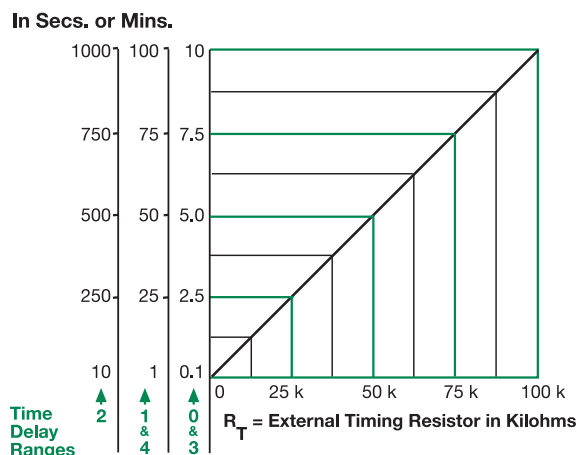
#### Environmental

**Operating/Storage Temperature** -20° to 60°C / -40° to 85°C

**Humidity** 95% relative, non-condensing

**Weight**  $\cong 2.6\text{ oz}$  (74 g)

### External Resistance vs. Time Delay



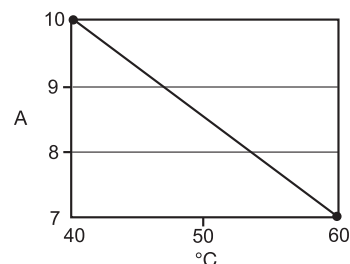
This chart applies to externally adjustable part numbers.

The time delay is adjustable over the time delay range selected by varying the resistance across the  $R_T$  terminals; as the resistance increases the time delay increases.

When selecting an external  $R_T$ , add the tolerances of the timer and the  $R_T$  for the full time range adjustment.

**Examples:** 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm  $R_T$ . For 1 to 100 S use a 100 K ohm  $R_T$ .

### Output Current/Ambient Temperature



### Function Diagram

