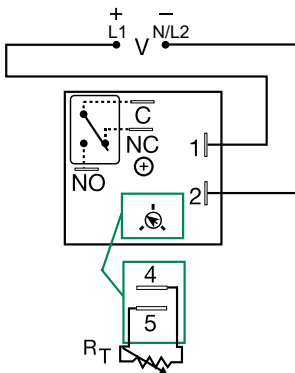


## KRD3 SERIES



### 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 | OPERATING SEQUENCE |
|----------|---------------|--------------|------------|--------------------|
| KRD3420A | 120VAC        | Onboard knob | 0.1 - 10s  | On time first      |
| KRD3421A | 120VAC        | Onboard knob | 1 - 100s   | On time first      |
| KRD3434A | 120VAC        | External     | 1 - 100m   | On time first      |

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

### Description

The KRD3 Series measures 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 KRD3 Series is a cost effective approach for OEM applications that require small size, isolation, reliability, and long life.

#### Operation (Recycling Flasher - ON Time First)

Upon application of input voltage, the output energizes and the T1 ON time begins. At the end of the ON time, the output de-energizes and the T2 OFF time begins. At the end of the OFF time, the output energizes and the cycle repeats as long as input voltage is applied.

**Reset:** Removing input voltage resets the output and time delays, and returns the sequence to T1 ON time.

### Features & Benefits

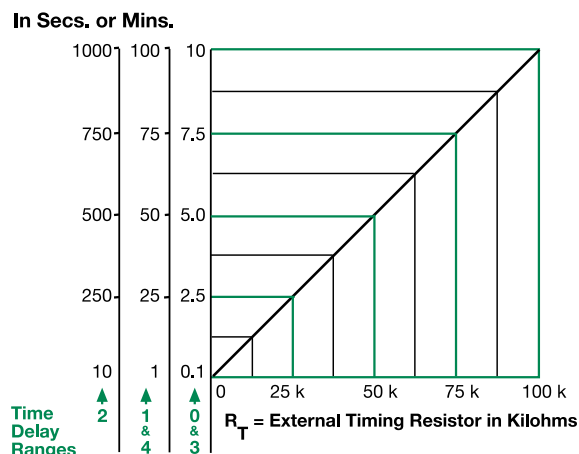
| FEATURES                                                        | BENEFITS                                                                                |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Compact, low cost design measuring 2 in. (50.8mm) square</b> | Provides greater flexibility for OEM applications and reduces component and labor costs |
| <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.                       |
|  | <b>C103PM (AL) DIN Rail</b><br>35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.                                                                                         |
|  | <b>P1023-20 DIN Rail Adapter</b><br>Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.                                                                          |

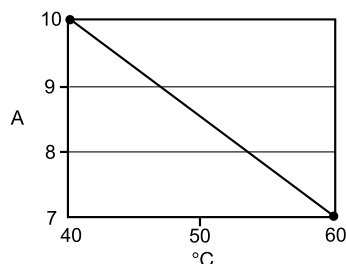
## KRD3 SERIES

### External Resistance vs. Time Delay

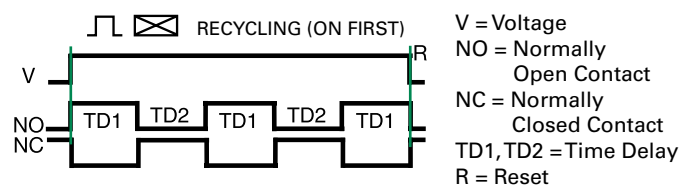


This chart applies to externally adjustable part numbers. The time delay is adjustable over the time delay range selected by varying the resistance across the RT terminals; as the resistance increases the time delay increases. When selecting an external RT, add the tolerances of the timer and the RT for the full time range adjustment.  
**Examples:** 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm RT. For 1 to 100 S use a 100 K ohm RT.

### Output Current/Ambient Temperature



### Function Diagram



### Specifications

|                                          |                                                                                        |
|------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Time Delay</b>                        | 0.1s - 100m in 5 adjustable ranges or fixed                                            |
| <b>Range</b>                             | ±0.5% or 20ms, whichever is greater                                                    |
| <b>Repeat Accuracy</b>                   |                                                                                        |
| <b>Tolerance (Factory Calibration)</b>   | ≤ ± 5%                                                                                 |
| <b>Reset Time</b>                        | ≤ 150ms                                                                                |
| <b>Time Delay vs Temp. &amp; Voltage</b> | ≤ ± 5%                                                                                 |
| <b>Input Voltage</b>                     | 12, 24 or 110VDC; 24, 120, or 230VAC                                                   |
| <b>Tolerance</b>                         |                                                                                        |
| <b>12VDC &amp; 24VDC/AC</b>              | -15% - 20%                                                                             |
| <b>110VDC, 120 or 230VAC</b>             | -20% - 10%                                                                             |
| <b>AC Line Frequency/DC Ripple</b>       | 50/60 Hz / ≤ 10%                                                                       |
| <b>Power Consumption</b>                 | AC ≤ 2VA; DC ≤ 2W                                                                      |
| <b>Output Type</b>                       | Isolated relay contacts                                                                |
| <b>Form</b>                              | SPDT                                                                                   |
| <b>Rating (at 40°C)</b>                  | 10A resistive @ 125VAC;<br>5A resistive @ 230VAC & 28VDC;<br>1/4 hp @ 125VAC<br>250VAC |
| <b>Max. Switching Voltage</b>            | Mechanical - 1 x 10 <sup>7</sup> ; Electrical - 1 x 10 <sup>5</sup>                    |
| <b>Life (Operations)</b>                 |                                                                                        |
| <b>Protection</b>                        | Encapsulated                                                                           |
| <b>Circuitry</b>                         | ≥ 1500V RMS input to output                                                            |
| <b>Isolation Voltage</b>                 | ≥ 100 MΩ                                                                               |
| <b>Insulation Resistance</b>             | DC units are reverse polarity protected                                                |
| <b>Polarity</b>                          |                                                                                        |
| <b>Mechanical</b>                        |                                                                                        |
| <b>Mounting</b>                          | Surface mount with one #10 (M5 x 0.8) screw                                            |
| <b>Dimensions</b>                        | <b>H</b> 50.8 mm (2"); <b>W</b> 50.8 mm (2");<br><b>D</b> 30.7 mm (1.21")              |
| <b>Termination</b>                       | 0.25 in. (6.35 mm) male quick connect terminals                                        |
| <b>Environmental</b>                     |                                                                                        |
| <b>Operating/Storage Temperature</b>     | -20° to 60°C / -40° to 85°C                                                            |
| <b>Humidity</b>                          | 95% relative, non-condensing                                                           |
| <b>Weight</b>                            | ≈ 2.6 oz (74 g)                                                                        |