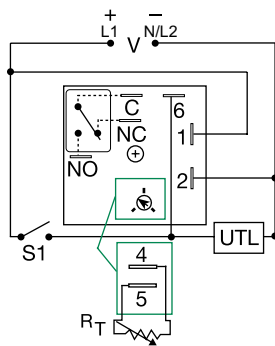


KRDS SERIES

Single Shot



Wiring Diagram



V = Voltage
S1 = Initiate Switch
C = Common, Transfer Contact
NO = Normally Open
NC = Normally Closed
UTL = Untimed Load

R_T is used when external adjustment is ordered. A knob is supplied for adjustable units. The untimed load is optional. Relay contacts are isolated.

Description

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

Operation (Single Shot)

Input voltage must be applied before and during timing. Upon momentary or maintained closure of the initiate switch, the output relay energizes for a measured interval of time. At the end of the delay, the output de-energizes. Opening or reclosing the initiate switch during timing has no effect on the time delay. The output will energize if the initiate switch is closed when input voltage is applied.

Reset: Reset occurs when the time delay is complete and the initiate switch is opened. Loss of input voltage resets the time delay and output.

Features & Benefits

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

Accessories

P1004-95, P1004-95-X Versa-Pot
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.

P1023-6 Mounting bracket
The 90° orientation of mounting slots makes installation/removal of modules quick and easy.

P0700-7 Versa-Knob
Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.

P1015-64 (AWG 14/16) Female Quick Connect
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.

P1015-18 Quick Connect to Screw Adapter
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

Ordering Information

| MODEL | INPUT VOLTAGE | ADJUSTMENT | TIME DELAY |
|-----------|---------------|------------|------------|
| KRDS1135M | 12VDC | Fixed | 35m |
| KRDS120 | 12VDC | Onboard | 0.1 - 10s |
| KRDS221 | 24VAC/DC | Onboard | 1 - 100s |
| KRDS420 | 120VAC | Onboard | 0.1 - 10s |
| KRDS421 | 120VAC | Onboard | 1 - 100s |
| KRDS424 | 120VAC | Onboard | 1 - 100m |
| KRDS430 | 120VAC | External | 0.1 - 10s |

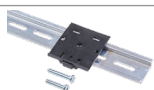
If desired part number is not listed, please call us to see if it is technically possible to build.

KRDS SERIES

Accessories

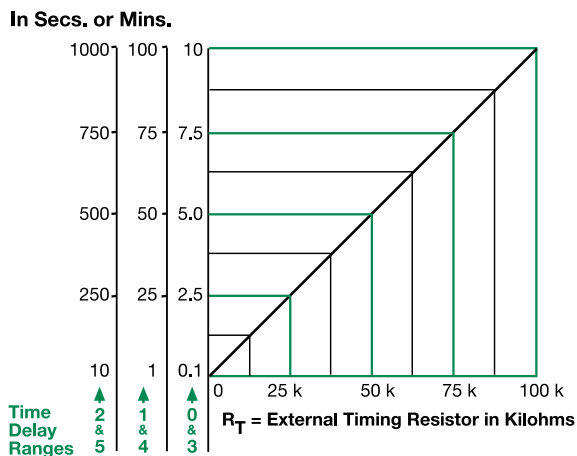


C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



P1023-20 DIN Rail Adapter
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

External Resistance vs. Time Delay

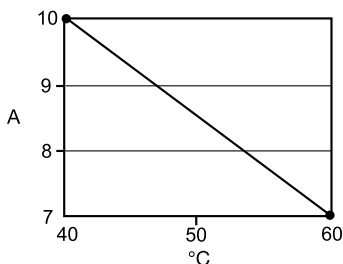


This chart applies to externally adjustable part numbers.
The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the tie delay increases.

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



Specifications

| | |
|--|---|
| Time Delay | Microcontroller with watchdog circuitry |
| Type | 0.1s - 1000m in 6 adjustable ranges or fixed |
| Range | ±0.5% or 20ms, whichever is greater |
| Repeat Accuracy | |
| Tolerance | |
| (Factory Calibration) | ≤ ±5% |
| Reset Time | ≤ 150ms |
| Initiate Time | ≤ 40ms |
| Time Delay vs Temp. & Voltage | ≤ ±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 / ≤ 10% |
| Power Consumption | AC ≤ 2VA; DC ≤ 2W |
| Output | |
| Type | Isolated relay contacts |
| Form | SPDT |
| Rating (at 40°C) | 10A resistive @ 125VAC; 5A resistive @ 230VAC & 28VDC; 1/4 hp @ 125VAC |
| Life (Operations) | Mechanical - 1 x 10 ⁷ ; Electrical - 1 x 10 ⁵ |
| Protection | |
| Circuitry | Encapsulated |
| Isolation Voltage | ≥ 1500V RMS input to output |
| Insulation Resistance | ≥ 100 MΩ |
| Polarity | DC units are reverse polarity protected |
| Mechanical | |
| Mounting | Surface mount with one #10 (M5 x 0.8) screw |
| Dimensions | H 50.8 mm (2.0"); W 50.8 mm (2.0"); D 30.7 mm (1.21") |
| Termination | 0.25 in. (6.35 mm) male quick connect terminals |
| Environmental | |
| Operating/Storage | |
| Temperature | -40° to 60°C/-40° to 85°C |
| Humidity | 95% relative, non-condensing |
| Weight | ≈ 2.6 oz (74 g) |

Function Diagram

