

KRDM SERIES



Description

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

Operation (Delay-on-Make)

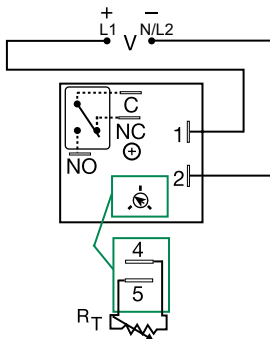
Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output relay energizes and remains energized until input voltage is removed.

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

Features & Benefits

| FEATURES | BENEFITS |
|--|---|
| Microcontroller based | Repeat Accuracy + / - 0.5% |
| Compact, low cost design | Allows flexibility for OEM applications |
| Isolated, 10A, SPDT output contacts | Allows control of loads for AC or DC voltages |
| Encapsulated | Protects against shock, vibration, and humidity |

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.

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.

Ordering Information

| MODEL | INPUT VOLTAGE | ADJUSTMENT | TIME DELAY | MODEL | INPUT VOLTAGE | ADJUSTMENT | TIME DELAY |
|------------|---------------|--------------|------------|-----------|---------------|--------------|------------|
| KRDM1110S | 12VDC | Fixed | 10s | KRDM4110M | 120VAC | Fixed | 10m |
| KRDM1130S | 12VDC | Fixed | 30s | KRDM4110S | 120VAC | Fixed | 10s |
| KRDM120 | 12VDC | Onboard knob | 0.1 - 10s | KRDM4145S | 120VAC | Fixed | 45s |
| KRDM121 | 12VDC | Onboard knob | 1 - 100s | KRDM420 | 120VAC | Onboard knob | 0.1 - 10s |
| KRDM2110M | 24VAC/DC | Fixed | 10m | KRDM421 | 120VAC | Onboard knob | 1 - 100s |
| KRDM215M | 24VAC/DC | Fixed | 5m | KRDM424 | 120VAC | Onboard knob | 1 - 100m |
| KRDM220 | 24VAC/DC | Onboard knob | 0.1 - 10s | KRDM430 | 120VAC | External | 0.1 - 10s |
| KRDM221 | 24VAC/DC | Onboard knob | 1 - 100s | KRDM433 | 120VAC | External | 0.1 - 10m |
| KRDM223 | 24VAC/DC | Onboard knob | 0.1 - 10m | KRDM6115M | 230VAC | Fixed | 15m |
| KRDM310.2S | 24VDC | Fixed | 0.2s | | | | |

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

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Accessories



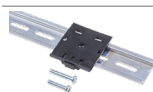
P1015-13 (AWG 10/12), **P1015-64** (AWG 14/16) **Female Quick Connect**
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



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.

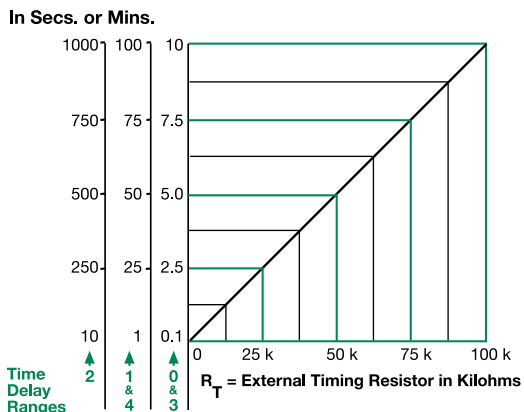


C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



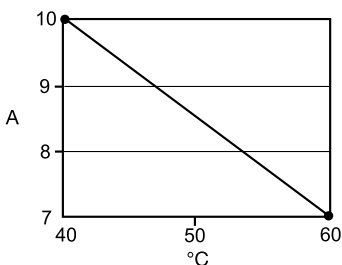
P1023-20 DIN Rail Adapter
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

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 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



Specifications

| | |
|--|---|
| Time Delay Range | 0.1s - 100m in 5 adjustable ranges or fixed $\pm 0.5\%$ or 20ms, whichever is greater |
| Repeat Accuracy Tolerance | |
| Factory Calibration) | $\leq \pm 5\%$ |
| Recycle 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 & 24VAC/DC | -15% - 20% |
| 110VDC 120 & 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 |
| Max. Switching Voltage | 250VAC |
| Life (Operations) | Mechanical - 1×10^7 ; Electrical - 1×10^5 |
| Protection | Encapsulated |
| Circuitry | |
| Insulation 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 (2.0"); 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 | -20° to 60°C / -40° to 85°C |
| Humidity | 95% relative, non-condensing |
| Weight | $\approx 2.6 \text{ oz (74 g)}$ |

Function Diagram

