# Littelfuse® Expertise Applied | Answers Delivered

## KRPD SERIES

## Relay Output Timer



## 

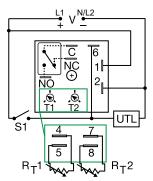
## **Description**

The KRPD Series is a factory programmed time delay relay available with 1 of 12 standard dual functions. The time delays can be factory fixed, onboard or externally adjustable or a combination of fixed and adjustable. The SPDT output relay contacts offer a full 10A rating with complete isolation. Its microcontroller timing circuit provides excellent repeat accuracy and stability. Encapsulation protects against shock, vibration, and humidity. The KRPD Series is a cost effective approach for OEM applications that require small size, isolation, accuracy and long life.

#### **Features & Benefits**

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

## Wiring Diagram



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

A knob is supplied for adjustable units or  $R_{\text{T}}$  terminals for external adjust. The untimed load is optional. S1 is not used for some functions.

#### **Accessories**



#### P1004-95, P1004-95-X Versa-Pot

Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



#### 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.



#### 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.

## **Ordering Information**

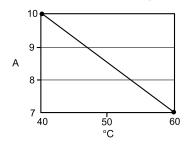
| MODEL           | INPUT           | ADJUSTMENT 1 | TIME DELAY 1 | ADJUSTMENT 2 | TIME DELAY 2 | FUNCTION                     |
|-----------------|-----------------|--------------|--------------|--------------|--------------|------------------------------|
| KRPD215S190SMB  | 24VAC           | Fixed        | 5s           | Fixed        | 90s          | Delay-on-Make/Delay-on-Break |
| KRPD417M113MRXD | 120VAC          | Fixed        | 7m           | Fixed        | 13m          | Recycling/Off Time First     |
| KRPDA175S130SMI | 24 to 240VAC/DC | Fixed        | 75s          | Fixed        | 30s          | Delay-on-Make/Interval       |
| KRPDA2129RXE    | 24 to 240VAC/DC | Onboard      | 0.1 - 10s    | Onboard      | 10 - 1000h   | Recycling                    |
| KRPDD2121MB     | 12 to 48VDC     | Onboard      | 0.1-10s      | Onboard      | 0.1-10s      | Delay-on-Make/Delay-on-Break |

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

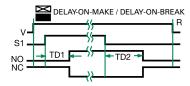


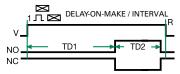
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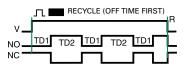
## **Output Current/Ambient Temperature**

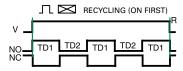


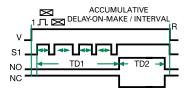
## **Function Diagrams**











V = Voltage

S1 = Initiate Switch

NO = Normally Open Contact

NC = Normally Closed Contact

TD1,TD2 = Time Delay

R = Reset

#### **Specifications**

**Time Delay** 

**Type** Microcontroller circuitry

**Range** 0.1s - 1000h in 9 adjustable ranges or fixed

(to 999)

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

**Tolerance** 

(Factory Calibration)  $\leq \pm 2\%$ Reset Time  $\leq 150$ ms

**Initiate Time** ≤ 40ms; 750 operations per minute

Time Delay vs. Temperature

& Voltage  $\leq \pm 2\%$ 

Input

**Voltage** 12 to 48VDC; 24 to 240VAC/DC

Tolerance

 $\begin{array}{lll} \textbf{12 to 48VDC} & -15\% - 20\% \\ \textbf{24 to 240VAC/DC} & -20\% - 10\% \\ \textbf{AC Line Frequency/DC Ripple} & 50/60 \ \text{Hz} \ / \ 10\% \\ \textbf{Power Consumption} & AC \le 2VA; \ DC \le 2W \\ \end{array}$ 

Output

Type Isolated relay contacts

Form SPDT

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

5A resistive @ 230VAC & 28VDC

1/4 hp @ 125VAC

250VAC

**Life (Operations)** Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>5</sup>

**Protection** 

Max. Switching Voltage

**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 connects

**Environmental** 

Operating/Storage

Temperature -40° to 60°C / -40° to 85°C Humidity 95% relative, non-condensing

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

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