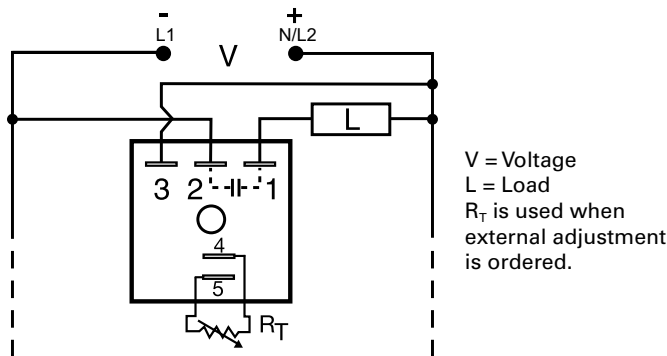


## KSD3 SERIES

### Recycling Flasher



### Wiring Diagram



### Description

The KSD3 Series Digi-Timer is a cost effective approach for ON/OFF recycling applications. The on time is equal to the off time. An adjustment of the R<sub>T</sub> will change the time delays of both on and off times. This series is designed for general purpose commercial and industrial applications where a small, cost effective, reliable, solid-state timer is required. The factory calibration for fixed time delays is within 5% of the target time delay. The repeat accuracy, under stable conditions, is 0.5% of the selected time delay. This series is designed for popular AC and DC voltages. Time delays of 0.1 seconds to 1000 minutes are available in 6 ranges. The output is rated 1A steady and 10A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

#### 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 the ON time.

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

Upon application of input voltage, the T2 OFF time begins. At the end of the OFF time, the T1 ON time begins and the load energizes. At the end of the ON time the load de-energizes, and the cycle repeats until input voltage is removed.

Reset: Removing input voltage resets the output and time delays and the sequence to the OFF time.

### Features & Benefits

FEATURES	BENEFITS
<b>Microcontroller based</b>	Repeat Accuracy +/- 0.5%, +/- 5% time delay accuracy
<b>Compact, low cost design</b>	Allows flexibility for OEM applications
<b>1A Steady solid-state output, 10A inrush</b>	Provides 100 million operations in typical conditions.
<b>Totally solid state and encapsulated</b>	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY	OPERATING SEQUENCE
KSD3120A	12VDC	External	0.1 - 10s	ON time first
KSD3310.1SA	24VDC	Fixed	0.1s	ON time first
KSD3415MA	120VAC	Fixed	5m	ON time first
KSD3432A	120VAC	Onboard	10 - 1000s	ON time first

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

### 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.

# KSD3 SERIES

## Accessories



**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.

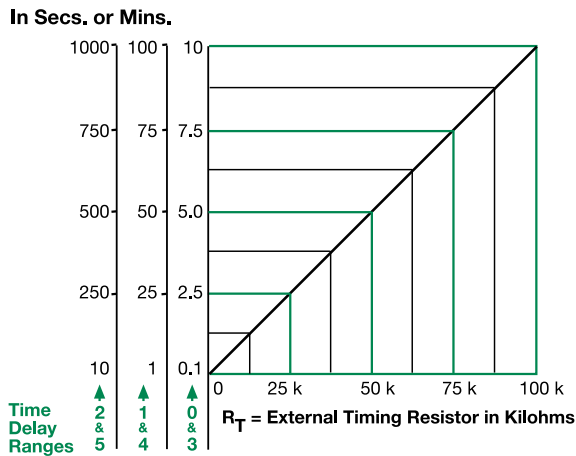


**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



**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

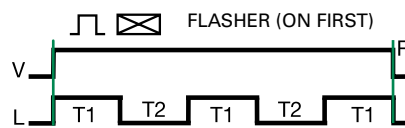


**This chart applies to externally adjustable part numbers.**  
The time delay is adjustable over the time delay range selected by varying the resistance across the  $R_T$  terminals; as the resistance increases the time delay increases.  
When selecting an external  $R_T$ , add the tolerances of the 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  $R_T$ .

## Specifications

<b>Time Delay Range</b>	0.1s - 1000m in 6 adjustable ranges or fixed
<b>Repeat Accuracy Tolerance ( Factory Calibration)</b>	$\pm 0.5\%$ or 20ms, whichever is greater
<b>Reset Time</b>	$\leq \pm 5\%$
<b>Time Delay vs. Temperature &amp; Voltage</b>	$\leq 150\text{ms}$
<b>Input Voltage</b>	$\leq \pm 10\%$
<b>Tolerance</b>	24 or 120VAC; 12 or 24VDC
<b>AC Line Frequency</b>	$\pm 20\%$
<b>Power Consumption</b>	50/60 Hz
<b>Output Type</b>	AC $\leq 2\text{VA}$ ; DC $\leq 1\text{W}$
<b>Maximum Load Current</b>	Solid state
<b>OFF State Leakage Current</b>	1A steady state, 10A inrush at 60°C
<b>Voltage Drop</b>	AC $\approx 5\text{mA}$ @ 230VAC; DC $\approx 1\text{mA}$
<b>DC Operation</b>	AC $\approx 2.5\text{V}$ @ 1A; DC $\approx 1\text{V}$ @ 1A
<b>Protection</b>	Negative switching only
<b>Circuitry</b>	Encapsulated
<b>Dielectric Breakdown</b>	$\geq 2000\text{V RMS}$ terminals to mounting surface
<b>Insulation Resistance</b>	$\geq 100\text{M}\Omega$
<b>Polarity</b>	DC units are reverse polarity protected
<b>Mechanical Mounting Dimensions</b>	Surface mount with one #10 (M5 x 0.8) screw <b>H</b> 50.8 mm (2"); <b>W</b> 50.8 mm (2"); <b>D</b> 30.7 mm (1.21")
<b>Termination</b>	0.25 in. (6.35 mm) male quick connect terminals
<b>Environmental Operating/Storage Temperature</b>	-40° to 60°C / -40° to 85°C
<b>Humidity</b>	95% relative, non-condensing
<b>Weight</b>	$\approx 2.4\text{ oz}$ (68 g)

## Function Diagrams



ON time plus OFF time equals one complete flash.

V = Voltage  
L = Load  
T1 = ONTime  
T2 = OFFTime  
T1  $\approx$  T2  
R = Reset

