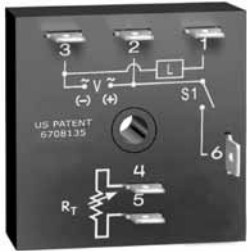


# Single Shot (Pulse Former)

## KSDS Digi-Timer

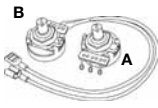
### Timing Module



- Fixed or Adjustable Delays  
0.1 s ... 1000 min in 6 Ranges
- +/-0.5% Repeat Accuracy
- +/- 5% Factory Calibration
- 12 ... 230 V in 5 Ranges
- 1 A Solid State Output
- Encapsulated

Approvals:

#### Accessories



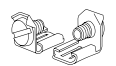
External adjust potentiometer  
P/Ns:  
P1004-95 (fig A)  
P1004-95-X (fig B)



Mounting bracket  
P/N: P1023-6



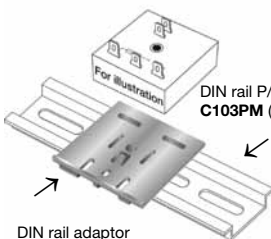
Female quick connect  
P/N:  
P1015-64 (AWG 14/16)



Quick connect to screw adaptor  
P/N: P1015-18



Versa-knob  
P/N: P0700-7



DIN rail adaptor  
P/N: P1023-20

DIN rail P/Ns:  
C103PM (Al)

See accessory pages for specifications.

#### Description

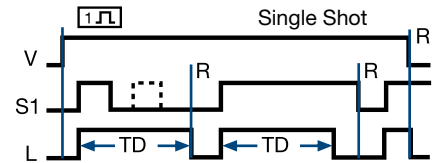
The KSDS Series is ideal for applications that require momentary start interval timing including dispensing, exposure timing, or pulse shaping. This series is available for both AC and DC voltages. This series is designed for general purpose commercial and industrial applications where a small, cost 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. Time delays of 0.1 seconds to 1000 minutes are available in 6 ranges. The output is rated 1 A steady and 10 A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

#### Operation

Input voltage must be applied before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), the output 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 not energize if the initiate switch is closed when input voltage is applied.

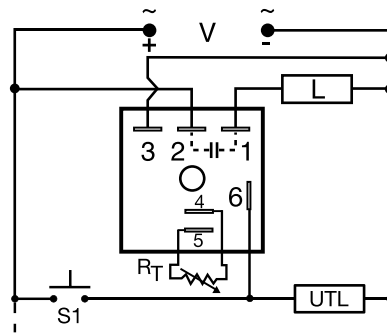
**Reset:** Reset occurs when the time delay is complete and the initiate switch is opened. Loss of input voltage resets the time delay and output.

#### Function

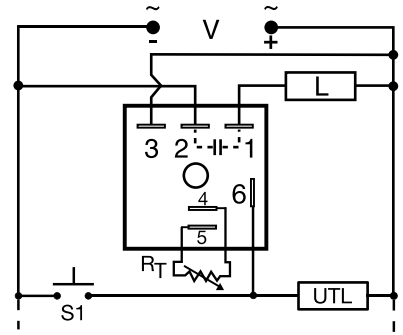


V = Voltage L = Load S1 = Initiate Switch  
TD = Time Delay R = Reset

#### Connection



Positive Switching



Negative Switching

R<sub>T</sub> is used when external adjustment is ordered.

Dashed lines are internal connections.

UTL = Optional Untimed Load L = Timed Load S1 = Initiate Switch

#### Available Models-

KSDS1115MP	KSDS1115SP	KSDS120P
KSDS121P	KSDS130P	KSDS220
KSDS230	KSDS310.1SP	KSDS320P
KSDS330P	KSDS415M	KSDS4160M
•KSDS420		

**Don't see what you need? Call us for a minimum quantity and price quote!**

#### Ordering Table

KSDS Series	X Input	X Adjustment	X Time Delay*	X Switching Mode
	-1 - 12 V DC	-1 - Fixed	-0 - 0.1 ... 10 s	V DC Only
	-2 - 24 V AC	-2 - External Adjust	-1 - 1 ... 100 s	-P - Positive
	-3 - 24 V DC	-3 - Onboard Adjust	-2 - 10 ... 1000 s	-N - Negative
	-4 - 120 V AC		-3 - 0.1 ... 10 m	
	-6 - 230 V AC		-4 - 1 ... 100 m	
			-5 - 10 ... 1000 m	

Example P/N: **KSDS421** Fixed – **KSDS410.1S**

\* If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) secs. or (M) mins.

# Single Shot (Pulse Former)

## KSDS Digi-Timer

### Timing Module

Dedicated  
timers

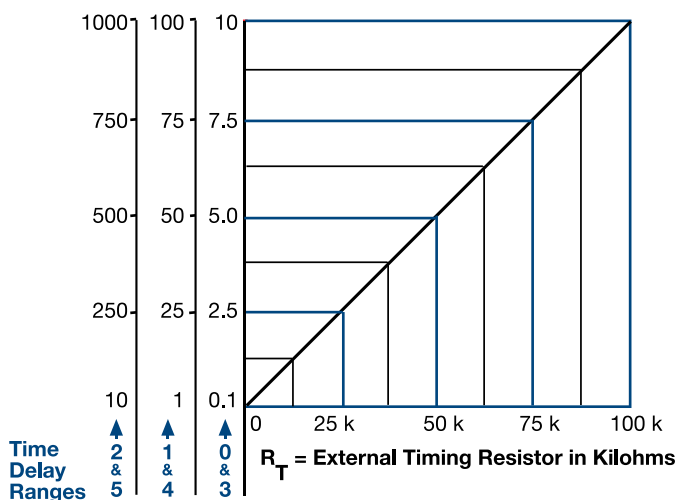
#### Technical Data

<b>Time Delay</b> Range Repeat Accuracy Tolerance (Factory Calibration) Reset Time Initiate Time Time Delay vs. Temperature & Voltage	0.1 s ... 1000 m in 6 adjustable ranges or fixed +/-0.5 % or 20 ms, whichever is greater ≤ +/-5% ≤ 150 ms ≤ 20 ms ≤ +/-10%
<b>Input</b> Voltage Tolerance Line Frequency DC Ripple Power Consumption	12 or 24 V DC; 24, 120, or 230 V AC +/-20% 50 ... 60 Hz ≤ 10 % AC ≤ 2 VA; DC ≤ 1 W
<b>Output</b> Type Form Maximum Load Current OFF State Leakage Current Voltage Drop DC Operation	Solid state Normally Open, closed during timing 1 A steady state, 10 A inrush at 60°C AC ≅ 5 mA at 230 VAC; DC ≅ 1 mA AC ≅ 2.5 V at 1 A; DC ≅ 1 V at 1 A Positive or negative switching
<b>Protection</b> Circuitry Dielectric Breakdown Insulation Resistance Polarity	Encapsulated ≥ 2000 V RMS terminals to mounting surface ≥ 100 MΩ DC units are reverse polarity protected
<b>Mechanical</b> Mounting Package Termination	Surface mount with one #10 (M5 x 0.8) screw 2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm) 0.25 in. (6.35 mm) male quick connect terminals
<b>Environmental</b> Operating/Storage Temperature Humidity Weight	-40°C ... +60°C / -40°C ... +85°C 95% relative, non-condensing ≅ 2.4 oz (68 g)

5

#### External Resistance vs Time Delay

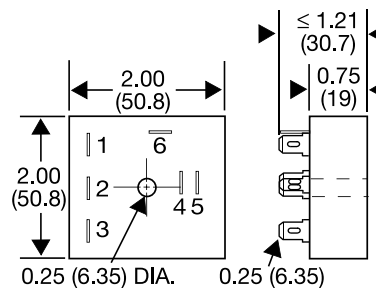
In Secs. or Mins.



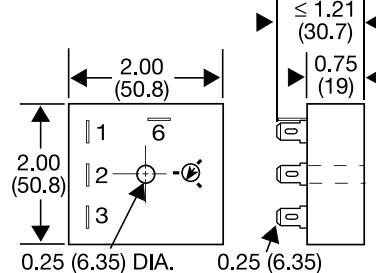
This chart applies to externally adjustable part numbers. The time delay is adjustable over the time delay range selected by varying the resistance across the  $R_T$  terminals; as the resistance increases the time delay increases. When selecting an external  $R_T$ , add the tolerances of the timer and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

#### Mechanical View

##### Fixed and External Adjust



##### Onboard Adjust



Inches (Millimeters)

KSDSGen 09.10