

Recycling (Flasher) KSD3 Digi-Timer Timing Module



- Exact Equal ON and OFF Delays
- +/-0.5% Repeat Accuracy
- +/-10% Stability over Temperature & Voltage
- Fixed or Adjustable Delays from 0.1 s ... 500 m
- 12 ... 120 V

Description

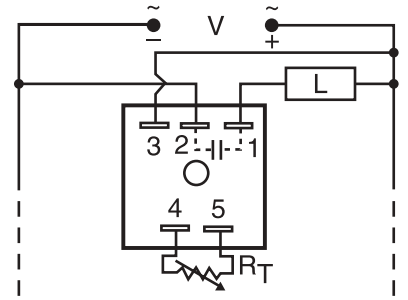
The KSD3 Digi-Timer is a cost effective approach for ON/OFF recycling applications. The ON time is always equal to the OFF time--an adjustment of a potentiometer will change the time delays of both ON and OFF times equally.

Operation

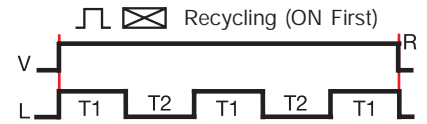
Upon application of input voltage, the output is energized and the ON time begins. At the end of the ON time, the output de-energizes and the OFF time begins. At the end of the OFF time, the output is energized and the cycle repeats as long as input voltage is applied. The OFF time may be the first delay in some recycling timers.

Reset: Removing input voltage resets the output and time delays, and returns the sequence to the first delay.

■ Approvals:



R_T is used when external adjustment is ordered.



V = Voltage R = Reset L = Load
T1 = ON Time T2 = OFF Time

Ordering Table

KSD3 Series	X Input	X Adjustment	X Time Delay*	X Operating Sequence
	-1 - 12 V DC	-1 - Fixed	-0 - 0.1 ... 10 s	-A - ON Time First
	-2 - 24 V AC	-2 - External Adjust	-1 - 1 ... 100 s	-B - OFF Time First
	-3 - 24 V DC		-2 - 10 ... 1000 s	
	-4 - 120 V AC		-3 - 0.1 ... 10 m	
			-4 - 1 ... 100 m	
			-5 - 5 ... 500 m	

Note: DC voltages available in negative switching only.

*If Fixed Delay is selected, insert delay [0.1 ... 1000] followed by (S) secs. or [0.1 ... 500] (M) mins.

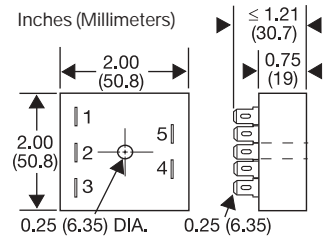
Example P/N: **KSD3421B** Fixed - **KSD34160MA**

Desired Time Delay*						R _T Megohm
Seconds			Minutes			
0	1	2	3	4	5	
0.1	1	10	0.1	1	5	0.0
1	10	100	1	10	50	0.1
2	20	200	2	20	100	0.2
3	30	300	3	30	150	0.3
4	40	400	4	40	200	0.4
5	50	500	5	50	250	0.5
6	60	600	6	60	300	0.6
7	70	700	7	70	350	0.7
8	80	800	8	80	400	0.8
9	90	900	9	90	450	0.9
10	100	1000	10	100	500	1.0

* When selecting an external R_T add at least 20% for tolerance of unit and the R_T.

Technical Data

Time Delay	
Type	Digital integrated circuitry
Range	0.1 s ... 500 m in 6 adjustable ranges or fixed
Repeat Accuracy	+/-0.5% or 16 ms, whichever is greater
Tolerance (Factory Calibration)	≤ +/-10%, ON to OFF time, +/-0%
Recycle Time	≤ 300 ms
Time Delay vs. Temperature & Voltage	≤ +/-10%
Input	
Voltage	24 or 120 V AC; 12 or 24 V DC
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
Power Consumption (DC Voltages)	≅ 30 mA at 12 V DC; ≅ 25 mA at 24 V DC
Output	
Type	Solid state
Maximum Load Current	1 A steady state, 10 A inrush at 55°C
Voltage Drop	≅ 2.5 V at 1 A
DC Operation	Negative switching only
Protection	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Mechanical	
Mounting	Surface mount with one #10 (M5 x 0.8) screw
Package	2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm)
Termination	0.25 in. (6.35 mm) male quick connect terminals
Environmental	
Operating Temperature	-40°C ... +60°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)



Accessories

Mounting bracket
P/N: P1023-6

Female quick connect
P/N: P1015-64 (AWG14/16)

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

Versa-knob
P/N: P0700-7

External adjust potentiometer
P/Ns: P1004-16 (fig A) P1004-16-X (fig B)

Plug-on adjustment module
P/N: VTP(X)(X)

DIN rail adaptor
P/N: P1023-20

DIN rail P/Ns: C103PM (Al) 17322005 (Steel)

See accessory pages at the end of this section.

Time Delay	VTP P/N
0 - 0.1 ... 10 s	VTP2C
1 - 1 ... 100 s	VTP2G
2 - 10 ... 1000 s	VTP2K
3 - 0.1 ... 10 m	VTP2N
4 - 1 ... 100 m	VTP2P
5 - 5 ... 500 m	VTP2R