

Delay On Make (Operate) TDU, KSDU Digi-Set Timing Modules

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- 2 Universal Voltage Ranges
From 24 ... 240 V AC/DC
- Digital Integrated Circuitry
- Switch Selectable Delays
From 0.1 s ... 2.8 h in 3
Ranges or Factory Fixed
- +/-0.5% Repeat Accuracy
- 1 A Steady - 10 A Inrush
- Totally Solid State and
Encapsulated

Approvals:

Accessories



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



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



Mounting bracket
P/N: **P1023-6**



DIN rail adaptor
P/N: **P1023-20**

DIN rail P/Ns:
017322005 (Steel)
C103PM (Al)

See accessory pages for specifications.

Description

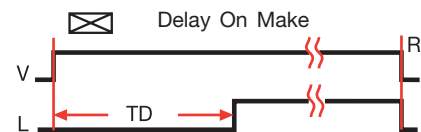
The TDU and KSDU Series are encapsulated solid state delay on make timers that combine digital timing circuitry with universal voltage operation. The TDU offers DIP switch adjustment allowing accurate selection of the time delay over the full time delay range. The KSDU is factory fixed from 0.1 s to 10,230 s and does not include the DIP switch. These series are excellent choices for process control systems and OEM equipment.

Operation

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 energizes and remains energized until input voltage is removed.

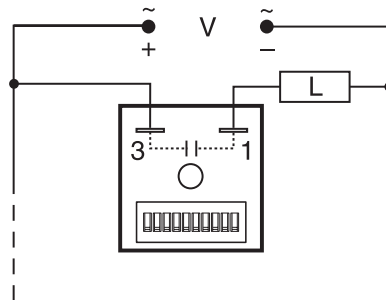
Reset: Removing input voltage resets the time delay and output.

Function



V = Voltage R = Reset TD = Time Delay
L = Load —||— = Undefined time

Connection



Dashed lines are internal connections.
Load may be connected to terminal 3 or 1.
TDU has DIP switch adjustment; KSDU is fixed.

Ordering Table

TDU Series	Input Voltage Range	Time Range - Seconds	Part Number
	24 ... 120 AC/DC	0.1 ... 102.3	TDUL3000A
	100 ... 240 AC/DC	0.1 ... 102.3	TDUL3001A
	24 ... 120 AC/DC	1 ... 1023	TDU3000A
	100 ... 240 AC/DC	1 ... 1023	TDU3001A
	24 ... 120 AC/DC	10 ... 10230	TDUH3000A
	100 ... 240 AC/DC	10 ... 10230	TDUH3001A

KSDU Series	X Input Voltage Range	X Type	X Time Delay (Seconds)
	-8 - 24 ... 120 V AC/DC	1 - Fixed	Specify fixed delay in seconds 0.1 ... 10230
	-9 - 100 ... 240 V AC/DC		

Example P/N: **KSDU81300**, **KSDU910.1**

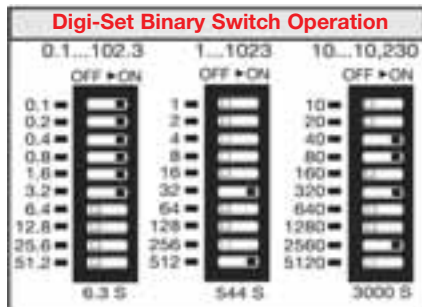
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Technical Data

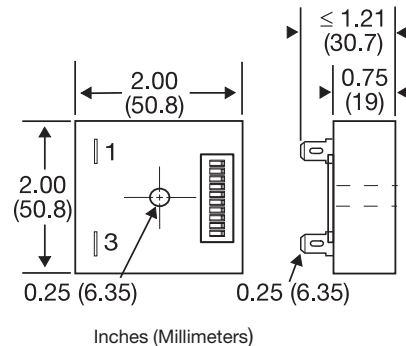
<p>Time Delay</p> <p>Type</p> <p>Range* Adjustable (TDU)</p> <p> Fixed (KSDU)</p> <p>Repeat Accuracy</p> <p>Tolerance (Factory Calibration)</p> <p>Recycle Time</p> <p>Time Delay vs. Temperature & Voltage</p> <p>Input</p> <p>Voltage</p> <p>Line Frequency</p> <p>Tolerance</p> <p>Output</p> <p>Type</p> <p>Form</p> <p>Maximum Load Current</p> <p>Minimum Holding Current</p> <p>Voltage Drop</p> <p>Protection</p> <p>Circuitry</p> <p>Dielectric Breakdown</p> <p>Insulation Resistance</p> <p>Mechanical</p> <p>Mounting</p> <p>Package</p> <p>Termination</p> <p>Environmental</p> <p>Operating Temperature</p> <p>Storage Temperature</p> <p>Humidity</p> <p>Weight</p>	<p>Digital integrated circuitry</p> <p>0.1 ... 102.3 s in 0.1 s increments</p> <p>1 ... 1023 s in 1 s increments</p> <p>10 ... 10230 s in 10 s increments</p> <p>Fixed from 0.1 s ... 10,230 s</p> <p>+/-0.5% or 20 ms, whichever is greater</p> <p>+/-10%</p> <p>≤ 150 ms</p> <p>+/-5%</p> <p>24 ... 120 V AC/DC</p> <p>100 ... 240 V AC/DC</p> <p>50 ... 60 Hz</p> <p>+/-20%</p> <p>Solid state</p> <p>Normally Open, open during timing</p> <p>1 A steady state, 10 A inrush at 60°C</p> <p>40 mA</p> <p>≅ 2.5 V at 1 A</p> <p>Encapsulated</p> <p>≥ 2000 V RMS terminals to mounting surface</p> <p>≥100 MΩ</p> <p>Surface mount with one #10 (M5 x 0.8) screw</p> <p>2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm)</p> <p>0.25 in. (6.35 mm) male quick connect terminals</p> <p>-40°C ... +60°C</p> <p>-40°C ... +85°C</p> <p>95% relative, non-condensing</p> <p>≅ 2.4 oz (68 g)</p>	<p>* For CE approved applications, power must be removed from the unit when a switch position is changed.</p>
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TDU Adjustment



Mechanical View



Adjustment Switches Shown Not Included on KSDU Series.

TDKSDUB1 06.09.04