

# Delay On Make (Operate) TDU Digi-Set Timing Module



- 3 Universal Voltage Ranges From 24 ... 277 V AC/DC
- Digital Integrated Circuitry
- Switch Selectable Delays From 0.1 s ... 2.8 h in 3 Ranges
- +/-0.5% Repeat Accuracy
- 1 A Steady - 10 A Inrush
- Totally Solid State and Encapsulated

### Description

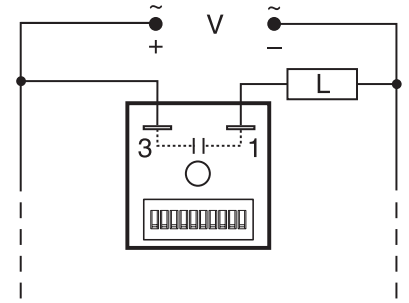
The TDU Series is an encapsulated solid state delay-on-make timer that combines digital timing circuitry with universal voltage operation. DIP switch adjustment allows accurate selection of the time delay over the full time delay range. The TDU Series is an excellent choice for process control systems and OEM equipment.

### Operation

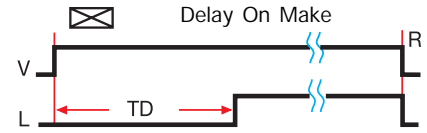
Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output is energized and remains energized until input voltage is removed.

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

■ Approvals:



Load may be connected to terminal 3 or 1.



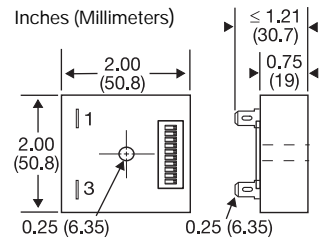
V = Voltage R = Reset TD = Time Delay  
L = Load — = Undefined time

Input Voltage Range - AC/DC	Time Range - Seconds	Part Number
24 ... 120	0.1 ... 102.3	TDUL3000A
100 ... 240	0.1 ... 102.3	TDUL3001A
120 ... 277	0.1 ... 102.3	TDUL3003A
24 ... 120	1 ... 1023	TDU3000A
100 ... 240	1 ... 1023	TDU3001A
120 ... 277	1 ... 1023	TDU3003A
24 ... 120	10 ... 10230	TDUH3000A
100 ... 240	10 ... 10230	TDUH3001A
120 ... 277	10 ... 10230	TDUH3003A

### Technical Data

Time Delay	
Type	Digital integrated circuitry
Range*	0.1 ... 102.3 s in 0.1 s increments 1 ... 1023 s in 1 s increments 10 ... 10230 s in 10 s increments
Repeat Accuracy	+/-0.5%
Tolerance (Factory Calibration)	+/-10%
Recycle Time	150 ms
Time Delay vs. Temperature & Voltage	+/-5%
Input	
Voltage	24 ... 120 V AC/DC 100 ... 240 V AC/DC 120 ... 277 V AC/DC
Line Frequency	50 ... 60 Hz
Tolerance	+/-20%
Output	
Type	Solid state
Form	Normally Open, open during timing
Maximum Load Current	1 A steady state, 10 A inrush at 60°C
Minimum Holding Current	40 mA for 24 ... 120 V & 100 ... 240 V models 20 mA for 120 ... 277 V models
Voltage Drop	≅ 2.5 V at 1 A
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)

Digi-Set Binary Switch Operation		
0.1...102.3	1...1023	10...10,230
OFF ▶ ON	OFF ▶ ON	OFF ▶ ON
0.1 0.2 0.4 0.8 1.6 3.2 6.4 12.8 25.6 51.2	1 2 4 8 16 32 64 128 256 512	10 20 40 80 160 320 640 1280 2560 5120
6.3 S	544 S	3000 S



### Accessories



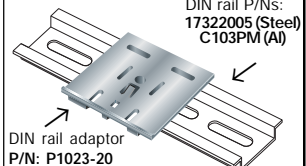
P/N: P1015-64 (AWG14/16)



P/N: P1015-18



P/N: P1023-6



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

See accessory pages at the end of this section.

\* For CE approved applications, power must be removed from the unit when a switch position is changed.