TDUS1A01 **ABB** 02.17.03

Single Shot (Pulse Former) TDUS Digi-Set Timing Module



- Switch Selectable Time Setting
- Three Time Ranges from 100 ms ... 10,230 s
 No First-Shot Effect
- Fully Solid State and Encapsulated
- Operates on Multiple Voltages

The TDUS Series combines digital timing circuitry with universal voltage operation. 24 to 240 V AC and 12 to 24 V DC are available in three ranges. The TDUS Series offers DIP switch selectable time delays ranging from 100 ms to 10,230 s in three ranges. Its 1 A rated output, its ability to operate on multiple voltages, and its wide range of switch selectable time delays make the TDUS Series an excellent choice for process control systems and OEM equipment.

Operation

Input voltage must be applied to the input before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), the output is energized for a measured interval of time. At the end of the delay, the output deenergizes. Opening or reclosing the initiate switch during timing has no affect on the time delay. The output will energize if the initiate switch is closed

when input voltage is applied.

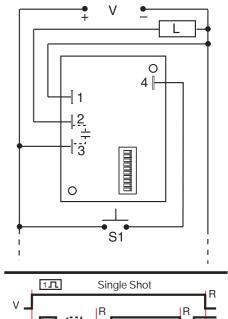
Reset: Reset occurs when the time delay is complete and the initiate switch is opened. Loss of input voltage resets the time delay and output.

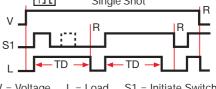
Approvals:





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Input Voltage Range	Time Range - Seconds	Part Number	
24 120 V AC	0.1 102.3	TDUSL3000A	
100 240 V AC	0.1 102.3	TDUSL3001A	
12 24 V DC	0.1 102.3	TDUSL3002A	
24 120 V AC	1 1023	TDUS3000A	
100 240 V AC	1 1023	TDUS3001A	
12 24 V DC	1 1023	TDUS3002A	
24 120 V AC	10 10230	TDUSH3000A	
100 240 V AC	10 10230	TDUSH3001A	
12 24 V DC	10 10230	TDUSH3002A	





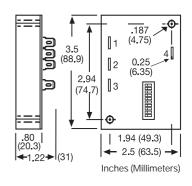
V = Voltage L = LoadS1 = Initiate Switch TD = Time Delay R = Reset

Technical Data

Time Delay		
Туре	Digital integrated circuitry	
Range*	0.1 102.3 s in 0.1 s increments	
	1 1023 s in 1 s increments	
	10 10,230 s in 10 s increments	
Repeat Accuracy	+/-0.5%	
Tolerance (Factory Calibration)	+/-10%	
Reset Time	150 ms	
Recycle Time	150 ms	
Time Delay vs. Temperature & Voltage	+/-5%	
Input		
Voltage	24 240 V AC, 12 24 V DC +/-20%	
Line Frequency	50 60 Hz	
DC Ripple	10%	
Output		
Туре	Solid state	
Form	Normally Open, closed during timing	
Rating	1 A steady state, 10 A inrush at 60°C	
Voltage Drop	≅ 2.5 V at 1 A	
Leakage	≤5 mA	
Protection		
Circuitry	Encapsulated	
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface	
Insulation Resistance	≥ 100 MΩ	
Mechanical		
Mounting	Surface mount with two #8 (M4 x 0.7) screv	
Package	3.5 x 2.5 x 1.2 in. (88.9 x 63.5 x 31 mm)	
Termination	0.25 in. (6.35 mm) male quick connect termina	
Environmental		
Operating Temperature	-40°C +80°C	
Storage Temperature	-40°C +85°C	
Humidity	95% relative, non-condensing	
Weight	$\approx 4.8 \text{ oz} (136.1 \text{ g})$	
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^{*}For CE approved applications, power must be removed from the unit when a switch position is changed.

Digi-Set Binary Switch Operation 0.1...102.3 1...1023 OFF ►ON 2 = 4 = 8 = 16 = 32 = 64 = 128 20= 40 = 80 = 160 = 320 = 640 **=** 1280 **=** 6.4 **=** 12.8 **=** 2560 **=** 5120 **=** 256 =



Accessories

Female quick connect

P/Ns: P1015-13 (AWG 10/12) P1015-64 (AWG 14/16) P1015-14 (AWG 18/22)



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

See accessory pages at the end of this section