

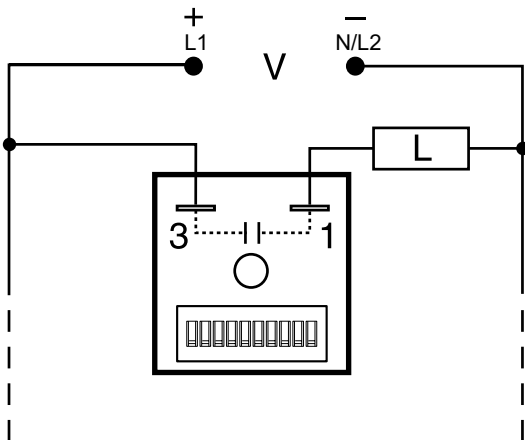
Time Delay Relays

Delay-on-Make

Encapsulated Solid-State, Delay-on-Make Timers



Wiring Diagram



Load may be connected to terminal 3 or 1.

Description

The TDU 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. This series is an excellent choice for process control systems and OEM equipment.

Operation (Delay-on-Make)

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.

Features & Benefits

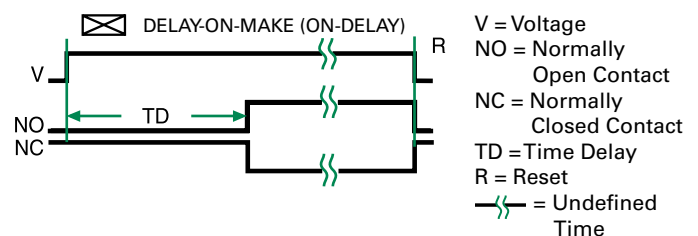
FEATURES	BENEFITS
Universal input voltage	Meets wide application needs
Microcontroller based	Repeat Accuracy +/- 0.5% or 20ms, whichever is greater
Totally solid state and encapsulated	No moving parts to arc and wear out over time, and encapsulated to protect against shock, vibration, and humidity
3 time ranges available (0.1s to 2.8h)	Makes it versatile for use in many applications
DIP switch adjustment	Provides first time setting accuracy

Binary Switch Operation

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

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

Function Diagram



Time Delay Relays

Delay-on-Make

Specifications

Time Delay

Type	Digital integrated circuitry
Range*	0.1 - 102.3s in 0.1s increments 1 - 1,023s in 1s increments 10 - 10,230s in 10s increments
Repeat Accuracy	±0.5% or 20ms, whichever is greater

Tolerance	±10%
(Factory Calibration)	
Recycle Time	≤ 150ms
Time Delay vs Temp. & Voltage	±5%

Input

Voltage	24 to 120VAC/DC; 100 to 240VAC/DC
AC Line Frequency	50/60 Hz
Tolerance	±20%

Output

Type	Solid state
Form	NO, open during timing
Maximum Load Current	1A steady state, 10A inrush at 60°C
Minimum Holding Current	40mA
Voltage Drop	≅ 2.5V @ 1A

Protection

Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000V RMS terminals to mounting surface
Insulation Resistance	≥100 MΩ

Mechanical

Mounting	Surface mount with one #10 (M5 x 0.8) screw
Dimensions	H 50.8 mm (2"); W 50.8 mm (2"); D 30.7 mm (1.21")
Termination	0.25 in. (6.35 mm) male quick connect terminals

Environmental

Operating/Storage Temperature	-40° to 60°C / -40° to 85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)