

# TMV8000 / TSU2000 SERIES

## Universal Voltage Delay-on-Make Timer

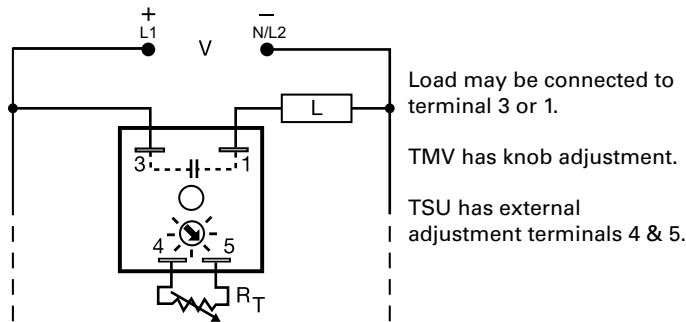


TMV8000



TSU2000

### Wiring Diagram



### Description

The TMV and TSU Series are universal voltage delay-on-make timers. Two models cover all the popular voltages and time delays. Available with knob or external adjust time delay. Its simple two terminals can easily be connected in series with a relay coil, contactor coil, solenoid, lamps, small motor, etc., to delay their energization, prevent short cycling or to sequence on various loads.

#### 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
<b>Universal AC/DC operating voltage</b>	Provides flexibility for use in all systems
<b>Totally solid-state and encapsulated</b>	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity
<b>Two terminal series connection with the load</b>	Provides quick and easy installation for new or existing systems
<b>1A steady, 10A inrush solid-state output</b>	Provides 100 million operations in typical conditions

### Accessories



**P1004-95, P1004-95-X Versa-Pot**  
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



**P1023-6 Mounting bracket**  
The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



**P0700-7 Versa-Knob**  
Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.



**P1015-64 (AWG 14/16) Female Quick Connect**  
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**P1015-18 Quick Connect to Screw Adapter**  
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
TMV8000	24 to 240VAC/DC	Onboard	0.1 - 8m
TSU2000	24 to 240VAC/DC	External	5 - 480s

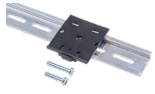
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## Accessories



**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



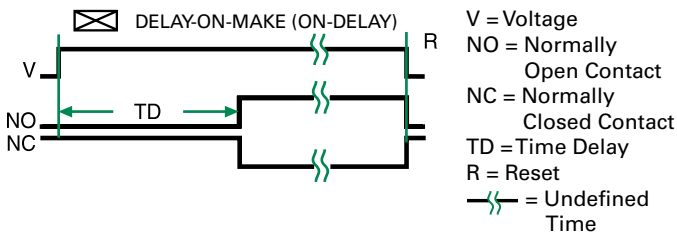
**P1023-20 DIN Rail Adapter**  
Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.

## Selection Guide

R <sub>T</sub> Selection Chart	
Time Delay*	
Seconds	R <sub>T</sub>
	Megohm
5	0.0
85	0.5
163	1.0
240	1.5
320	2.0
400	2.5
480	3.0

\* When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.

## Function Diagram



## Specifications

### Time Delay

**Type**  
**Range**

Analog circuitry  
5 - 480s (TSU2000)  
0.1 - 8m (TMV8000)  
±2%

**Repeat Accuracy**  
**Tolerance**  
**(Factory Calibration)**

≤ ±10%

**Reset Time**

≤ 100ms

### Input

**Voltage**

24 to 240VAC/DC ±20%

**AC Line Frequency**

50/60 Hz

### Output

**Type**

Solid State

**Form**

NO, open during timing

**Maximum Load Current**

1A steady state, 10A inrush at 55°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**

-20° to 70°C / -30° to 85°C

**Humidity**

95% relative, non-condensing

**Weight**

≈ 2.4 oz (68 g)