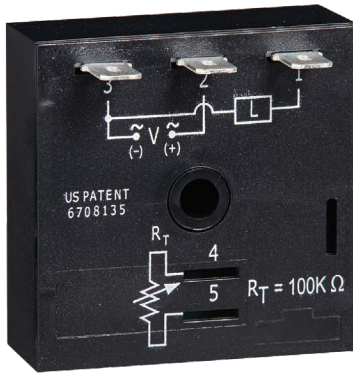
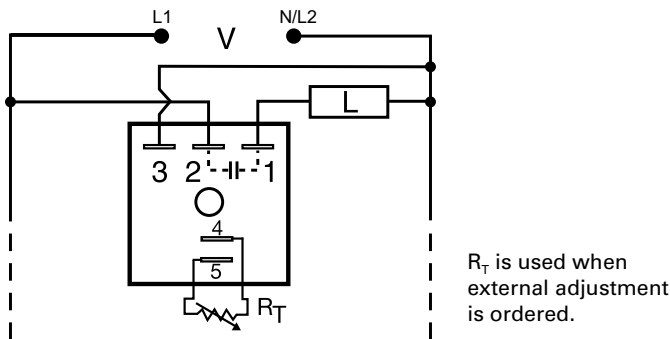


# TSD3411S

## Recycling Timer



### Wiring Diagram



### Description

The TSD3411S is a solid-state ON/OFF recycling timer with the on time always equal to the off time. When time delay is changed by the RT, both the ON and the OFF periods are changed. The TSD Series is designed for more demanding commercial and industrial applications where small size, and accurate performance is required. The factory calibration for fixed time delays is within 1% of the target time delay. The repeat accuracy, under stable conditions, is 0.1% of the time delay. The TSD3411S is rated to operate over an extended temperature range. Time delays of 0.1 seconds to 100 hours are available. The output is rated 1A steady and 10A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

### Operation (Recycling Flasher - ON Time First)

Upon application of input voltage, the output energizes and the T1, ON time begins. At the end of the ON time, the output de-energizes and the T2 OFF time begins. At the end of the OFF time, the output energizes and the cycle repeats as long as input voltage is applied.

**Reset:** Removing input voltage resets the output and time delays, and returns the sequence to the T1 ON time.

### Features & Benefits

| FEATURES  | BENEFITS   |
|---|--|
| <b>Microcontroller based</b>                    | Repeat Accuracy +/- 0.1%, +/- 1% time delay accuracy   |
| <b>Extended temperature range</b>               | Rated to 75°C operating temperature to withstand high heat applications.   |
| <b>Compact, low cost design</b>                 | Allows flexibility for OEM applications  |
| <b>1A Steady solid-state output, 10A inrush</b> | Provides 100 million operations in typical conditions.   |
| <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 |

### 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.



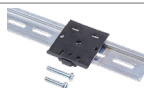
**P1015-64 (AWG 14/16) Female Quick Connect**  
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**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.



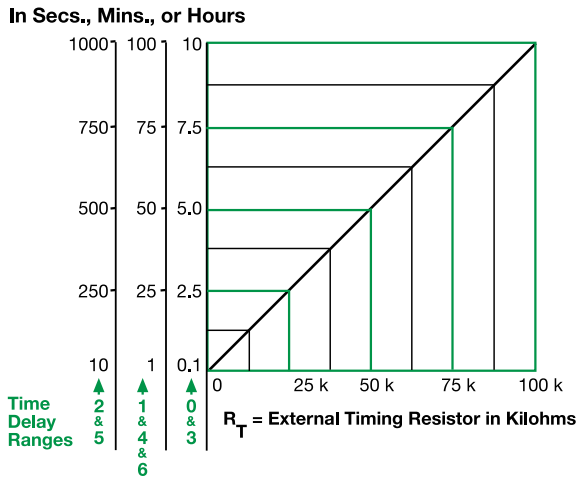
**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



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

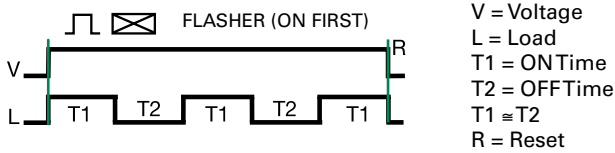
# TSD3411S

## External Resistance vs. Time Delay



This chart applies to externally adjustable part numbers. The time delay is adjustable over the time delay range selected by varying the resistance across the R<sub>T</sub> terminals; as the resistance increases the time delay increases. When selecting an external R<sub>T</sub>, add the tolerances of the timer and the R<sub>T</sub> for the full time range adjustment.  
**Examples:** 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm R<sub>T</sub>. For 1 to 100 S use a 100 K ohm R<sub>T</sub>.

## Function Diagram



ON time plus OFF time equals one complete flash.

## Specifications

|  |   |
|--|---|
| <b>Time Delay Range</b>                                | 0.1s - 100h in 7 adjustable ranges  |
| <b>Repeat Accuracy Tolerance (Factory Calibration)</b> | ±0.1% or 20ms, whichever is greater                                       |
| <b>Reset Time</b>                                      | ≤ 150ms   |
| <b>Time Delay vs. Temperature &amp; Voltage</b>        | ≤ ±1%   |
| <b>Input Voltage</b>                                   | 24, 120, or 230VAC  |
| <b>Tolerance</b>                                       | ±20%  |
| <b>AC Line Frequency</b>                               | 50/60 Hz  |
| <b>Power Consumption</b>                               | ≤ 2VA   |
| <b>Output Type</b>                                     | Solid state   |
| <b>Maximum Load Current</b>                            | 1A steady state, 10A inrush at 60°C                                       |
| <b>Off State Leakage Current</b>                       | ≈ 5mA @ 230VAC  |
| <b>Voltage Drop</b>                                    | ≈ 2.5V @ 1A   |
| <b>Protection</b>                                      |   |
| <b>Circuitry</b>                                       | Encapsulated  |
| <b>Dielectric Breakdown</b>                            | ≥ 2000V RMS terminals to mounting surface                                 |
| <b>Insulation Resistance</b>                           | ≥ 100 MΩ  |
| <b>Mechanical</b>                                      |   |
| <b>Mounting</b>  | Surface mount with one #10 (M5 x 0.8) screw                               |
| <b>Dimensions</b>                                      | <b>H</b> 50.8 mm (2"); <b>W</b> 50.8 mm (2");<br><b>D</b> 30.7 mm (1.21") |
| <b>Termination</b>                                     | 0.25 in. (6.35 mm) male quick connect terminals                           |
| <b>Environmental</b>                                   |   |
| <b>Operating/Storage Temperature</b>                   | -40° to 75°C / -40° to 85°C   |
| <b>Humidity</b>  | 95% relative, non-condensing  |
| <b>Weight</b>  | ≈ 2.4 oz (68 g)   |



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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