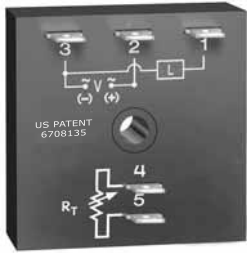


Recycling (Flasher)

TSD3 Digi-Timer Timing Module

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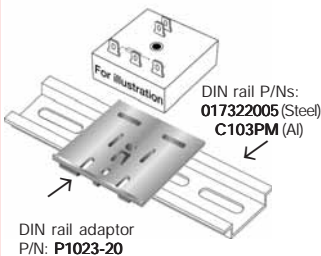


- Fixed or Adjustable Delays From 0.1 s... 100 h
- Equal ON and OFF Delays
- +/-0.1% Repeat Accuracy
- +/-1% Factory Calibration
- 24, 120, or 230 V AC
- 1A Solid State Output
- Encapsulated

Approvals:

Accessories

- External adjust potentiometer
P/Ns: **P1004-95** (fig A)
P1004-95-X (fig B)
- Mounting bracket
P/N: **P1023-6**
- Female quick connect
P/N: **P1015-64** (AWG 14/16)
- Quick connect to screw adaptor
P/N: **P1015-18**
- Versa-knob
P/N: **P0700-7**



See accessory pages for specifications.

Description

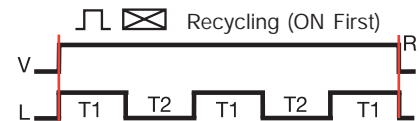
The TSD3 is a solid state ON/OFF recycling timer with the ON time always equal to the OFF time. When time delay is changed by the R_T , both the ON and the OFF periods are changed. The TSD Series is designed for more demanding commercial and industrial applications where small size, and accurate performance 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 TSD Series is rated to operate over an extended temperature range. Time delays of 0.1 seconds to 100 hours are available. The output is rated 1 A steady and 10 A inrush. The modules are totally solid state and encapsulated to protect the electronic circuitry.

Operation

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.

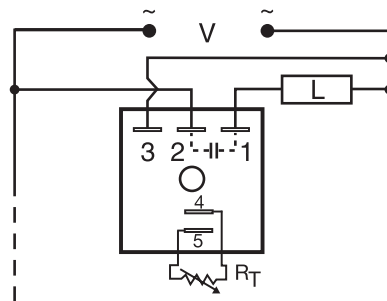
Reset: Removing input voltage resets the output and time delays, and returns the sequence to the T1, ON time.

Function



V = Voltage R = Reset L = Load
T1 = ON Time T2 = OFF Time
T1 \equiv T2

Connection



R_T is used when external adjustment is ordered.
Dashed lines are internal connections.

Ordering Table

| TSD3 Series | X Input | X Adjustment | X Time Delay * |
|-------------|---------------|----------------------|--------------------|
| | -2 - 24 V AC | -1 - Fixed | -0 - 0.1 ... 10 s |
| | -4 - 120 V AC | -2 - External Adjust | -1 - 1 ... 100 s |
| | -6 - 230 V AC | -3 - Onboard Adjust | -2 - 10 ... 1000 s |
| | | | -3 - 0.1 ... 10 m |
| | | | -4 - 1 ... 100 m |
| | | | -5 - 10 ... 1000 m |
| | | | -6 - 1 ... 100 h |

Example P/N: **TSD3421** Fixed – **TSD3410.5S**

*If Fixed Delay is selected, insert delay [0.1...1000] followed by (S) sec. or (M) min., or [0.1 ... 100] (H) hours.

Recycling (Flasher) TSD3 Digi-Timer Timing Module

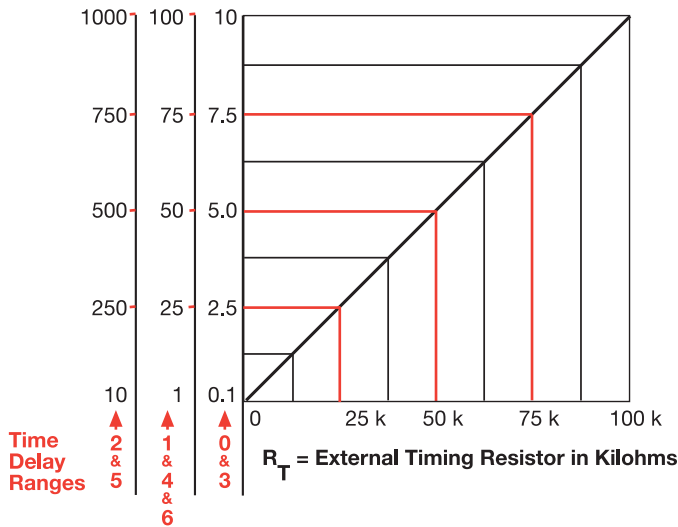
Technical Data

| | |
|--------------------------------------|---|
| Time Delay | |
| Range | 0.1 s ... 100 h in 7 adjustable ranges or fixed |
| Repeat Accuracy | +/-0.1% or 20 ms, whichever is greater |
| Tolerance (Factory Calibration) | ≤ +/-1% |
| Reset Time | ≤ 150 ms |
| Time Delay vs. Temperature & Voltage | ≤ +/-1% |
| Input | |
| Voltage | 24, 120, or 230 V AC |
| Tolerance | +/-20% |
| Line Frequency | 50 ... 60 Hz |
| Power Consumption | ≤ 2 VA |
| Output | |
| Type | Solid state |
| Maximum Load Current | 1 A steady state, 10 A inrush at 60°C |
| Off State Leakage Current | ≅ 5 mA at 230 V AC |
| 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 ... +75°C |
| Storage Temperature | -40°C ... +85°C |
| Humidity | 95% relative, non-condensing |
| Weight | ≅ 2.4 oz (68 g) |

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External Resistance vs Time Delay

In Secs., Mins., or Hours



This chart applies to externally adjustable part numbers.

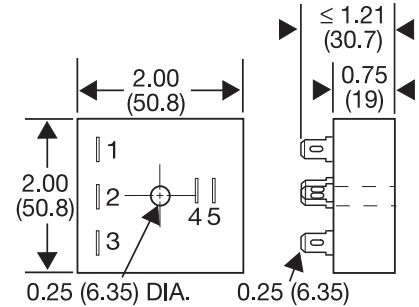
The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the time delay increases.

When selecting an external R_T , add the tolerances of the timer and the R_T for the full time range adjustment.

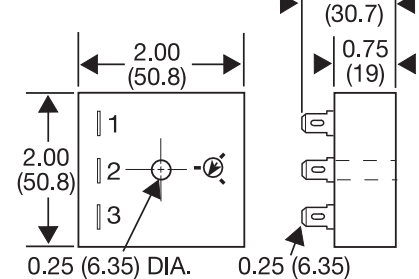
Examples: 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm R_T . For 1 to 100 S use a 100 K ohm R_T .

Mechanical View

Fixed & External Adjust



Onboard Adjust



Inches (Millimeters)