

Recycling (Pulse Generator)

TSDR Digi-Timer

Timing Module



10 YEAR WARRANTY

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- Fixed or Adjustable
0.1 s ... 1000 m in 6 Ranges
- +/- 0.5% Repeat Accuracy
- +/- 5% Factory Calibration
- 24, 120, or 230 V AC
- 1 A Solid State Output
- Encapsulated

Approvals:

Description

The TSDR Digi-Timer is an ON/OFF or OFF/OFF recycling timing module designed to control metering pumps, chemical valves, flash lamps, or use in energy saving or duty cycling applications. It may be ordered with both time delays factory fixed, or one delay fixed and the other delay external or onboard adjustable. 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 $\leq \pm 5\%$. The repeat accuracy, under stable conditions, is 0.5% of the time delay. The TSD Series is rated to operate over an extended temperature range. Time delays of 0.1 seconds to 1000 minutes 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.

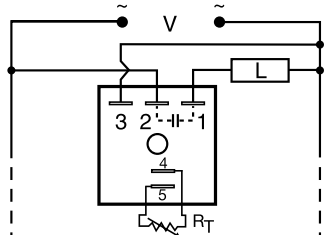
Operation (ON Time First)

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.

Operation (OFF Time First)

Upon application of input voltage, the T2, OFF time begins. At the end of the OFF time, the T1, ON time begins and the load energizes. At the end of the T1, T2 begins and the load de-energizes. This cycle repeats until input voltage is removed. **Reset:** Removing input voltage resets the output and the sequence to T2, OFF time.

Connection



R_T is used when external adjustment is ordered. Dashed lines are internal connections. An onboard adjustment, or terminals 4 & 5 are only included on adjustable units.

Available Models-

TSDR2150MA5M
TSDR410.4SB4S
TSDR415SB18M
TSDR453SB2
TSDR612.5SA4.5S
TSDR631A105S

TSDR215SB18M
TSDR411MB60M
TSDR4412SA1
TSDR610.2SA0.2S
TSDR615SB18M
TSDR6412SA1

TSDR410.1SA0.3S
TSDR4140MA20M
TSDR4430SA2
TSDR6110SA30S
TSDR630A45S

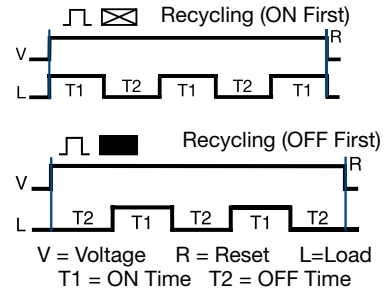
Don't see what you need? Call us for a minimum quantity and price quote!

Ordering Table

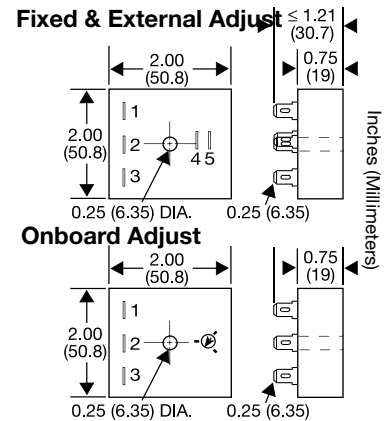
TSDR Series	X Input	X Adjustment	X T1, ON Time *	X First Delay	X T2, OFF Time *
	-2 - 24 V AC	-1 - Fixed	-0 - 0.1 ... 10 s	-A - ON Time	-0 - 0.1 ... 10 s
	-4 - 120 V AC	-2 - ON Time Onboard adj./ OFF Time Fixed	-1 - 1 ... 100 s	-B - OFF Time	-1 - 1 ... 100 s
	-6 - 230 V AC	-3 - ON Time Ext. adj./ OFF Time Fixed	-2 - 10 ... 1000 s		-2 - 10 ... 1000 s
		-4 - ON Time Fixed/OFF Time Ext. adj.	-3 - 0.1 ... 10 m		-3 - 0.1 ... 10 m
		-5 - ON Time Fixed/OFF Time Onboard adj.	-4 - 1 ... 100 m		-4 - 1 ... 100 m
			-5 - 10 ... 1000 m		-5 - 10 ... 1000 m

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

Function



Mechanical View



Recycling (Pulse Generator)

Dedicated
timers

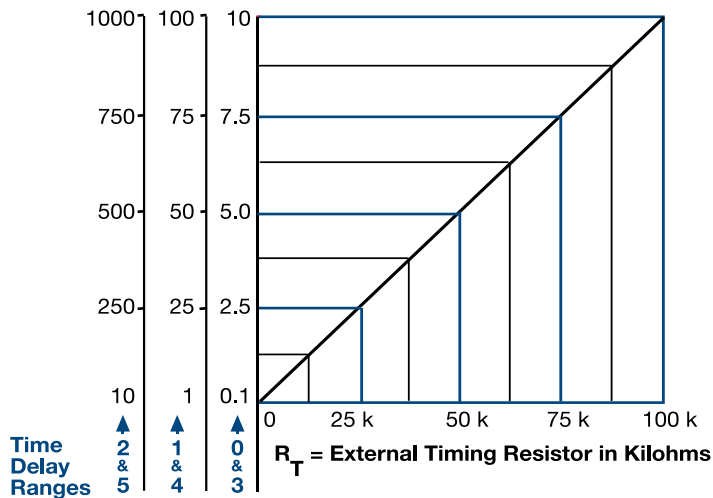
Technical Data

Time Delay	
Range	0.1 s ... 1000 m in 6 adjustable ranges or fixed
Repeat Accuracy	+/-0.5% or 20 ms, whichever is greater
Tolerance (Factory Calibration)	≤ +/-5%
Reset Time	≤ 150 ms
Time Delay vs. Temperature & Voltage	≤ +/-5%
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)

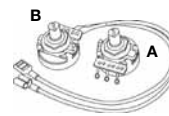
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External Resistance vs Time Delay

In Secs. or Mins.



Accessories



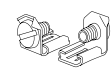
External adjust potentiometer
P/Ns:
P1004-95 (fig A)
P1004-95-X (fig B)



Mounting bracket
P/N: **P1023-6**



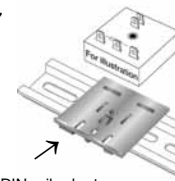
Female quick connect
P/Ns:
P1015-64 (AWG 14/16)
P1015-13 (AWG 10/12)
P1015-14 (AWG 18/22)



Quick connect to screw adaptor
P/N: **P1015-18**



Versa-knob
P/N: **P0700-7**



DIN rail adaptor
P/N: **P1023-20**

DIN rail P/Ns:
C103PM (Al)

See accessory pages for specifications.

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 .