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TDR SERIES

Relay Output, Recycling Time Delay Relay

8-PIN

Description

The TDR Series of time-delay relays are comprised of digital circuitry and an isolated, 10A relay output. The ON and OFF delays are selected by means of two, ten position binary switches, which allow the setting of the desired delay to be precise every time.

Operation (Recycling - ON Time First)

Upon application of input voltage, the green LED glows, the output relay is energized, the red LED glows, and the T1 ON time begins. At the end of the ON time, the output de-energizes, the red LED turns OFF and the T2, OFF time begins. At the end of the OFF time, the output relay energizes and the cycle repeats as long as input voltage is applied.

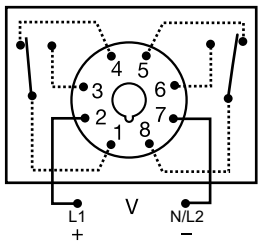
Reset: Removing input voltage resets the output and time delays, and returns the sequence to the first delay.

Operation (Recycling - OFF Time First)

Upon application of input voltage, the green LED glows, the T1 OFF time begins, the load is OFF. At the end of the OFF time, the T2 ON time begins, the load energizes, and the red LED glows. At the end of the ON time the load de-energizes and the red LED turns OFF. The cycle repeats until input voltage is removed.

Reset: Removing input voltage resets the output and the sequence to the OFF time.

Wiring Diagram



Relay contacts are isolated

Features & Benefits

FEATURES	BENEFITS
ON & OFF time delay settings	Independent adjustment allows for greater flexibility
3 Time Ranges Available (0.1s to 2.8h)	Makes it versatile for use in many applications
Microcontroller based	Repeat Accuracy + / - 0.1% or 20 ms, whichever is greater; Setting Accuracy + / - 2% or 50 ms, whichever is greater
DIP switch adjustment	Provides first time setting accuracy
Isolated output contacts	Allows control of loads for AC or DC voltages
LED indication (select models)	Provides visual indication of relay status

Ordering Information

MODEL	INPUT VOLTAGE	LED	SEQUENCE	ON TIME (SEC)	OFF TIME (SEC)
TDR1A22	12VDC		ON time first	1-1023 in 1s increments	1-1023 in 1s increments
TDR2A23	24VAC	X	ON time first	1-1023 in 1s increments	10-10230 in 10s increments
TDR4A11	120VAC	X	ON time first	0.1-102.3 in 0.1s increments	0.1-102.3 in 0.1s increments
TDR4A12	120VAC	X	ON time first	0.1-102.3 in 0.1s increments	1-1023 in 1s increments
TDR4A13	120VAC	X	ON time first	0.1-102.3 in 0.1s increments	10-10230 in 10s increments
TDR4A22	120VAC	X	ON time first	1-1023 in 1s increments	1-1023 in 1s increments
TDR4A23	120VAC	X	ON time first	1-1023 in 1s increments	10-10230 in 10s increments
TDR4A33	120VAC	X	ON time first	10-10230 in 10s increments	10-10230 in 10s increments
TDR4B22	120VAC	X	OFF time first	1-1023 in 1s increments	1-1023 in 1s increments
TDR4B23	120VAC	X	OFF time first	1-1023 in 1s increments	10-10230 in 10s increments
TDR6A22	230VAC	X	ON time first	1-1023 in 1s increments	1-1023 in 1s increments

If you don't find the part you need, call us for a custom product 800-843-8848

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Accessories

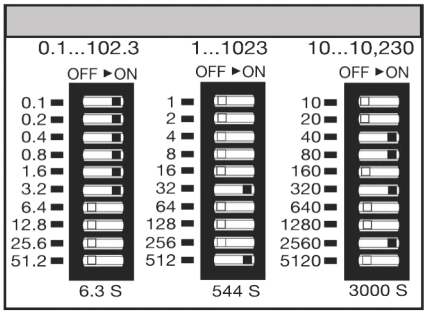
BZ1 Front Panel Mount Kit
Provides an easy method of through-the-panel mounting of 8- or 11-pin plug-in timers, flashers, and other controls.

NDS-8 Octal 8-pin Socket
8-pin 35mm DIN rail or surface mount. Rated at 10A @ 300VAC. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC8 hold-down clips.

PSC8 Hold-down Clips
Securely mounts plug-in controls in any position. Provides protection against vibration. Use with NDS-8 Octal Socket. Sold in pairs.

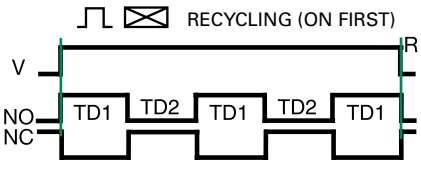
C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

Binary Switch Operation



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

Function Diagram



V = Voltage
NO = Normally Open Contact
NC = Normally Closed Contact
TD1, TD2 = Time Delay
R = Reset

Specifications

Time Delay

Type	Digital integrated circuitry
Range**	0.1 - 102.3s in 0.1s increments 1 - 1023s in 1s increments 10 - 10,230s in 10s increments
Repeat Accuracy	±0.1% or 20ms, whichever is greater
Setting Accuracy	±2% or 50ms, whichever is greater
Reset Time	≤ 50ms
Recycle Time	≤ 150ms
Time Delay vs Temp. & Voltage	±5%

Input

Voltage	12, 24/28, or 110VDC; 24, 120, or 230VAC
Tolerance	
12VDC & 24VDC/AC	-15% - 20%
110 to 230VAC/DC	-20% - 10%
AC Line Frequency/DC Ripple	50/60 Hz/<=10%
Power Consumption	≤ 3.25W
Input LED Indicator	Green; on when input voltage is applied

Output

Type	Electromechanical relay
Form	DPDT
Rating	10A resistive @ 120/240VAC & 28VDC; 1/3 hp @ 120/240VAC
Life	Mechanical - 1 x 10^7; Electrical - 1 x 10^6
Max. Switching Voltage	250VAC
Relay LED Indicator	Red; ON when output relay energizes

Protection

Isolation Voltage	≥ 1500V RMS input to output
Insulation Resistance	≥ 100 MΩ
Polarity	DC units reverse polarity protected

Mechanical

Mounting	Plug-in socket
Dimensions	**H** 81.3 mm (3.2"); **W** 60.7 mm (2.39"); **D** 45.2 mm (1.78")
Termination	Octal 8-pin plug-in

Environmental

Operating/Storage Temperature	-20° to 65°C/-30° to 85°C
Weight	≅ 6 oz (170 g)

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