# **Recycling (Pulse Generator) TDR Digi-Set Time Delay Relay**



- Switch Settable Time Delays -Both Times Adjustable
  - 0.1 s ... 2.8 h in 3 Ranges
  - +/-0.1% Repeat Accuracy
  - +/-2% Setting Accuracy
  - 10 A DPDT Isolated Relay Contacts
  - Octal Plug-in Base Connection

Approvals: **A** 

### **Accessories**



Panel mount kit P/N: BZ1











5.166

The TDR Series of time delay relays are comprised of digital circuitry and a 10 A isolated 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 the first time and every time.

**Function** 

v

NO

NC

V

NO

NC

л

Τ1

□ □ □ Recycling (ON First)

V = Voltage R = Reset T1 = ON Time

T2 = OFF Time NO = Normally Open

V = Voltage R = Reset T1 = OFF Time T2 = ON Time NO = Normally Open NC = Normally Closed

Recycling (OFF First)

T2

NC = Normally Closed

Т2

Τ2

Т2

T1

R

### **Operation (ON Time First)**

Upon application of input voltage, the output relay is energized 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 relay is energized and the cycle repeats as long as input voltage is applied. The OFF time may be the first delay in some recycling timers.

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

#### **Operation (OFF Time First)**

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

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

# Connection



Relay contacts are isolated. Dashed lines are internal connections.

### **Ordering Table**



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**TDR02B01** 

## **Technical Data**

Time Delay Type Range** Repeat Accuracy Setting Accuracy Reset Time Recycle Time Time Delay vs. Temperature & Voltage	Digital integrated circuitry $0.1 \dots 102.3 \text{ s in } 0.1 \text{ s increments}$ $1 \dots 1023 \text{ s in } 1 \text{ s increments}$ $10 \dots 10,230 \text{ s in } 10 \text{ s increments}$ +/-0.1%  or  20  ms, whichever is greater +/-2%  or  50  ms, whichever is greater $\leq 150 \text{ ms}$ $\leq 500 \text{ ms}$ +/-5%	**For CE approved applications, power must be removed from the unit when a switch position is changed.
Input Voltage Tolerance 12 V DC & 24 V DC/AC 110 230 V AC/DC Line Frequency	12, 24, or 110 V DC; 24, 120, or 230 V AC -15% + 20% -20% +10% 50 60 Hz	
Output Type Form Rating Life	Electromechanical relay Double pole double throw (DPDT) 10 A resistive at 120/240 V AC & 28 V DC; 1/3 hp at Mechanical 1 x10 <sup>7</sup> ; Electrical 1 x 10 <sup>6</sup>	t 120/240 V AC
Protection Isolation Voltage Insulation Resistance Polarity	≥ 1500 V RMS input to output 100 M $\Omega$ DC units are reverse polarity protected	
Mechanical Mounting Package Termination	Plug-in socket 3.2 x 2.39 x 1.78 in. (81.3 x 60.7 x 45.2 mm) Octal plug (8 Pin)	
Environmental Operating Temperature Storage Temperature Weight	-20°C +60°C -30°C +85°C ≅ 6 oz (170 g)	

Digi-Set Binary Switch Operation						
0.1102.3		31	11023		1010,230	
OFF ►ON			OFF ►ON		OFF ►ON	
0.1 0.2 0.4 1.6 3.2 12.8 12.8 51.2		1 = 2 = 4 = 16 = 32 = 64 = 128 = 256 = 512 =		10 20 40 80 160 320 640 1280 2560 5120		
	635		544 S		3000 S	

### **Mechanical View**



Inches (Millimeters)

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