Recycling (Flasher)
ERD3 Econo-Timer
Time Delay Relay

- Knob, External Adjust or Factory Fixed
- Delays From 0.1 s ... 1000 m
- +/-0.5% Repeat Accuracy
- Encapsulated Digital Circuitry
- 10 A, Isolated, DPDT Output Contacts

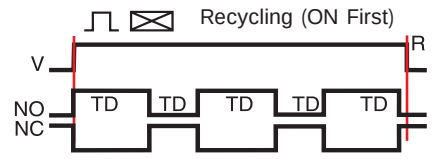
Approvals:

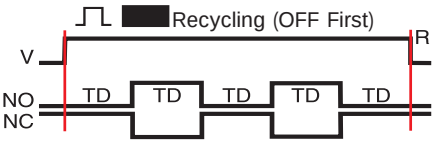
Description
Econo-Timers are a combination of digital electronics and a reliable electromechanical relay. DPDT relay output for relay logic circuits, and isolation of input to output voltages. Cost effective for OEM applications such as duty cycling, drying, washing, signaling, and flashing.

Operation
Upon application of input voltage, the output energizes and the ON time begins. At the end of the ON time, the output de-energizes and the OFF time begins. At the end of the OFF time, the output energizes 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.

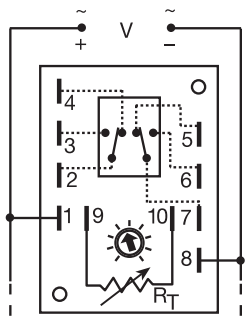
Function





V = Voltage R = Reset TD = Time Delay
NO = Normally Open NC = Normally Closed

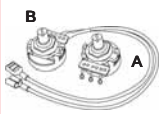
Connection



A knob, or terminals 9 & 10 are only included on adjustable units. Relay contacts are isolated. Dashed lines are internal connections.

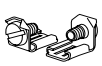
R_T is used when external adjustment is ordered.

Accessories



External adjust potentiometer
P/Ns:
P1004-16 (fig A)
P1004-16-X (fig B)

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.

Ordering Table

ERD3 Series	X Input	X Adjustment	X Time Delay *	X Operating Sequence
	1 - 12 V DC	1 - Fixed	1 - 0.1 ... 1 s	A - ON Time First
	2 - 24 V AC	2 - Knob on Unit	2 - 0.1 ... 5 s	B - OFF Time First
	3 - 24 V DC	3 - External Adjust	3 - 0.1 ... 10 s	
	4 - 120 V AC		4 - 0.2 ... 15 s	
	5 - 120 V DC		5 - 0.3 ... 30 s	
	6 - 230 V AC		6 - 0.6 ... 60 s	
			7 - 0.1 ... 5 m	
			8 - 0.1 ... 10 m	
			9 - 0.2 ... 15 m	
			10 - 1 ... 100 m	
			11 - 10 ... 500 m	

Example P/N: ERD3426A Fixed – ERD3410.1SA

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

ERD32B01 07.01.04

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Time Delay Relay

Technical Data

Time Delay		
Type		Digital integrated circuitry
Range		100 ms ... 500 m in 11 adjustable ranges 100 ms ... 1000 m fixed
Adjustment		Knob, external adjust, or fixed
Repeat Accuracy		+/-0.5%
Tolerance (Factory Calibration)		≤ +/-10%
Reset Time		≤ 150 ms
Time Delay vs. Temperature & Voltage		≤ +/-2%
Input		
Voltage		12, 24, or 120 V DC; 24, 120, or 230 V AC
Tolerance	12 V DC & 24 V DC/AC	-15% ... +20%
	120 V AC/DC & 230 V AC	-20% ... +10%
Line Frequency		50 ... 60 Hz
Output		
Type		Isolated relay contacts
Form		Double pole double throw (DPDT)
Rating		10 A resistive at 120/240 V AC & 28 V DC 1/3 hp at 120/240 V AC
Life		Mechanical--1 x 10^7; Electrical--1 x 10^6
Protection		
Isolation Voltage		≥ 1500 V RMS input to output
Insulation Resistance		≥ 100 MΩ
Polarity		DC units are reverse polarity protected
Mechanical		
Mounting		Surface mount with two #6 (M3.5 x 0.6) screws
Termination		0.25 in. (6.35 mm) male quick connect terminals
Operating/Storage Temperature		-40°C ... +65°C / -40°C ... +85°C
Weight		≅ 5.7 oz (162 g)

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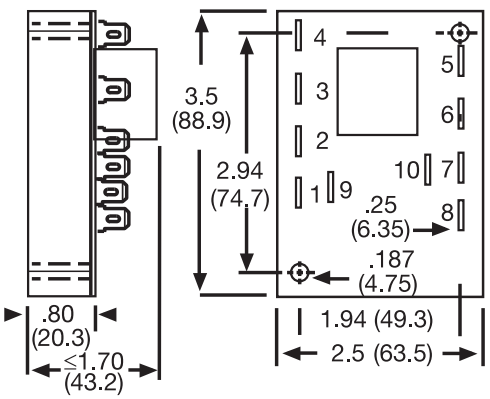
R_T Selection Chart						
Desired Time Delay*						R_T
Seconds						
1	2	3	4	5	6	Megohm
0.1	0.1	0.1	0.2	0.3	0.6	0.0
0.19	0.6	1	1.7	3	6	0.1
0.28	1.1	2	3.2	6	12	0.2
0.37	1.6	3	4.7	9	18	0.3
0.46	2.1	4	6.2	12	24	0.4
0.55	2.6	5	7.7	15	30	0.5
0.64	3.0	6	9.2	18	36	0.6
0.73	3.5	7	10.7	21	42	0.7
0.82	4.0	8	12.2	24	48	0.8
0.91	4.5	9	13.7	27	54	0.9
1.0	5.0	10	15	30	60	1.0

* When selecting an external R_T add at least 20% for tolerance of unit and the R_T.

R_T Selection Chart					
Desired Time Delay*					R_T
Minutes					
7	8	9	10	11	Megohm
0.1	0.1	0.2	1	10	0.0
0.6	1	1.7	10	50	0.1
1.1	2	3.2	20	100	0.2
1.6	3	4.7	30	150	0.3
2.1	4	6.2	40	200	0.4
2.6	5	7.7	50	250	0.5
3.0	6	9.2	60	300	0.6
3.5	7	10.7	70	350	0.7
4.0	8	12.2	80	400	0.8
4.5	9	13.7	90	450	0.9
5.0	10	15	100	500	1.0

* When selecting an external R_T add at least 20% for tolerance of unit and the R_T.

Mechanical View



Inches (Millimeters)