

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

Description

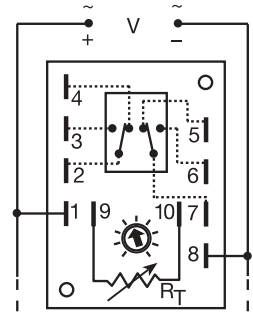
Econo-Timers are a combination of digital electronics and a reliable electromechanical relay. DPDT relay output for relay logic circuits, and isolation of input to output voltages. Cost effective for OEM applications such as duty cycling, drying, washing, signaling, and flashing.

Operation

Upon application of input voltage, the output is energized 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 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.

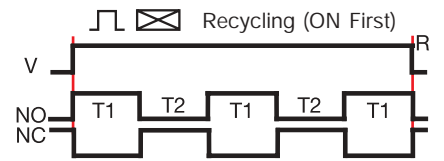
Reset: Removing input voltage resets the output and time delays, and returns the sequence to the first delay.

■ Approvals:



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

RT is used when external adjustment is ordered.



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

Ordering Table

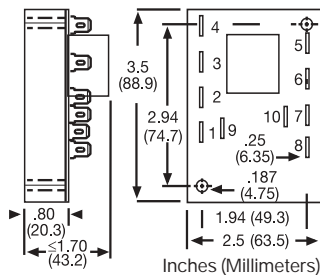
ERD3 Series	X Input	X Adjustment	X Time Delay *	X Operating Sequence
	-1 - 12 V DC	-1 - Fixed	-1 - 0.1 ... 1 s	-A - ON Time First
	-2 - 24 V AC	-2 - Knob on Unit	-2 - 0.1 ... 5 s	-B - OFF Time First
	-3 - 24 V DC	-3 - External Adjust	-3 - 0.1 ... 10 s	
	-4 - 120 V AC		-4 - 0.2 ... 15 s	
	-5 - 120 V DC		-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	

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

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

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%
Recycle 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 240 V AC 10 A resistive at 28 V DC 1/3 hp at 120 and 240 V-AC
Life	Mechanical--1 x 10 ⁷ ; Full Load--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)



R_T Selection Chart

Desired Time Delay*						R _T Megohm
Seconds						
1	2	3	4	5	6	
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%

R_T Selection Chart

Desired Time Delay*						R _T Megohm
Minutes						
7	8	9	10	11		
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

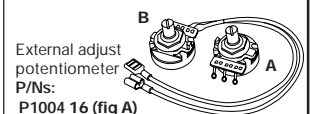
* When selecting an external R_T add at least 20% for tolerance of unit and the R_T.

Accessories

Female quick connect



P/N: P1015 64 (AWG 14/16)

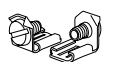


External adjust potentiometer
P/Ns: P1004 16 (fig A) P1004 16X (fig B)

Versa-knob
P/N: P07007



Quick connect to screw adaptor
P/N: P1015 18



See accessory pages at the end of this section.