

Interval & Single Shot ERDI Econo-Timer Time Delay Relay



- Knob or 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 an electromechanical relay. DPDT relay output for relay logic circuits, and isolation of input to output voltages. For applications such as interval on, pulse shaping, minimum run time, etc.

Operation - Interval

Upon application of input voltage, time delay begins, and output relay is energized. At the end of time delay, output is de-energized until input voltage is removed.

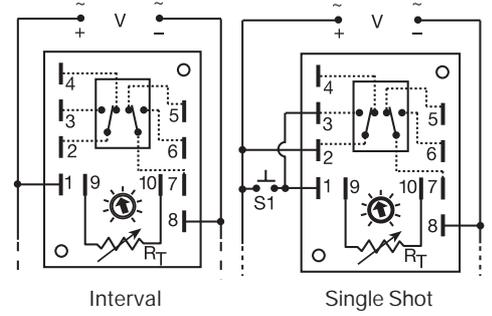
Reset: Removing input voltage resets the time delay and the output.

Operation - Single Shot

Input voltage must be applied before & during timing. Upon momentary or maintained closure of initiate switch, output relay is energized for time delay. At the end of the delay, output de-energizes. Opening or reclosing initiate switch during timing has no effect on time delay. Output will energize if initiate switch is closed when input voltage is applied.

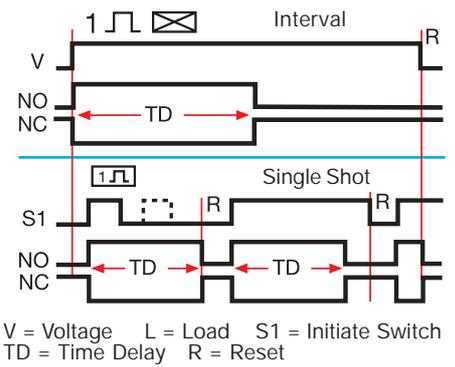
Reset: Reset occurs when time delay is complete & initiate switch is opened. Loss of input voltage resets time delay & output.

- Approvals:



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.



V = Voltage L = Load S1 = Initiate Switch
TD = Time Delay R = Reset

Ordering Table

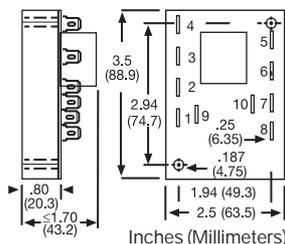
ERDI Series	X Input	X Adjustment	X Time Delay *
-1	12 V DC	-1 - Factory Fixed	-1 - 0.1 ... 1 s
-2	24 V AC	-2 - Knob on Unit	-2 - 0.1 ... 5 s
-3	24 V DC	-3 - External Adjust	-3 - 0.1 ... 10 s
-4	120 V AC		-4 - 0.2 ... 15 s
-5	120 V AC		-5 - 0.3 ... 30 s
-6	120 V DC		-6 - 0.6 ... 60 s
-7	120 V DC		-7 -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

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

Example P/N: ERDI426 Fixed - ERDI410.1S

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 DC/AC & 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, & 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
Package	3.5 x 2.5 x 1.7 in. (88.9 x 63.5 x 43.2 mm)
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)



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% for tolerance of unit and the R_T.

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.

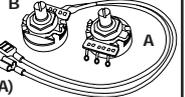
Accessories

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: P0700-7



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



See accessory pages at the end of this section.