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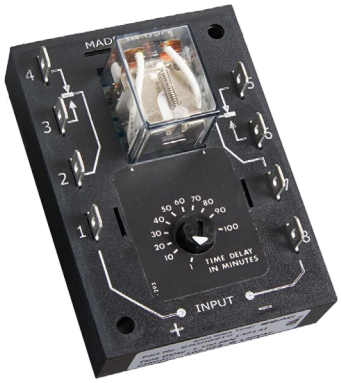
ERDI SERIES



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. The ERD Series is encapsulated to protect the circuitry from shock, vibration and humidity.

Operation (Interval)

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

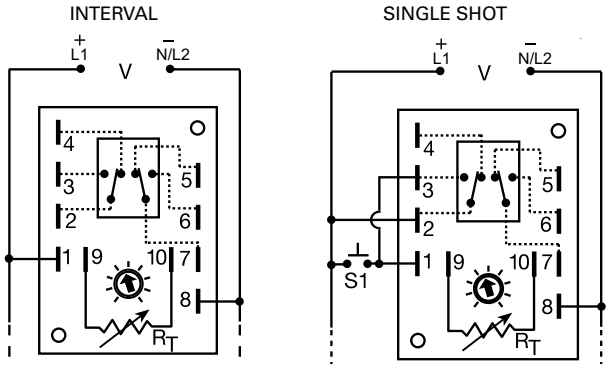
Reset: Removing input voltage resets the time delay and the output.

Operation (Single Shot)

Input voltage must be applied before and during timing. Upon momentary or maintained closure of initiate switch, output relay energizes for time delay. At the end of the delay, output de-energizes. Opening or reclosing initiate switch during timing has no affect 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 and output.

Wiring Diagram



2-3 & 7-6 are Normally Open Contacts (NO)

2-4 & 7-5 are Normally Closed Contacts (NC)

Features & Benefits

FEATURES	BENEFITS
Digital integrated circuitry	Repeat Accuracy + / - 0.5%, Factory calibration +/ - 10%
Isolated, 10A, DPDT output contacts	Allows control of loads for AC or DC voltages
Encapsulated	Protects against shock, vibration, and humidity

Accessories

P1004-16, P1004-16-X Versa-Pot
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.

P0700-7 Versa-Knob
Designed for 0.25 in (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.

P1015-64 (AWG 14/16)
Female Quick Connect
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.

P1015-18 Quick Connect to Screw Adapter
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
ERDI436	120VAC	External	0.6 - 60s
ERDI6210	230VAC	Onboard	1 - 100m

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ERDI SERIES

Specifications

Time Delay	
Type	Digital integrated circuitry
Range	0.1s - 500m in 11 adjustable ranges, 0.1s - 1000m fixed
Adjustment	External adjust or onboard
Repeat Accuracy	±0.5%
Tolerance (Factory Calibration)	≤ ±10%
Reset Time	≤ 150ms
Time Delay vs Temp. & Voltage	≤ ±2%
Input	
Voltage	120VAC or 230VAC
Tolerance	
12VDC & 24VDC/AC	-15% - 20%
120VDC/AC & 230VAC	-20% - 10%
AC Line Frequency	50/60 Hz
Output	
Type	Isolated relay contacts
Form	DPDT
Rating	10A resistive @ 120/240VAC & 28VDC; 1/3 hp @ 120/240VAC
Life	Mechanical - 1 x 10^7; Electrical - 1 x 10^6
Protection	
Isolation Voltage	≥ 1500V 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
Dimensions	**H** 88.9 mm (3.5"); **W** 63.5 mm (2.5"); **D** 43.2 mm (1.7")
Termination	0.25 in. (6.35 mm) male quick connect terminals
Environmental	
Operating/Storage Temperature	-40° to 65°C / -40° to 85°C
Weight	≅ 5.7 oz (162 g)

Selection Guides

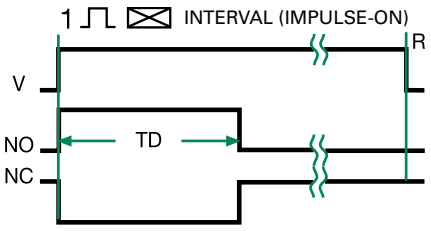
R_T Selection Chart						
Desired Time Delay* Seconds						R_T
1	2	3	4	5	6	Megohm
0.1	0.1	0.1	0.2	0.3	0.6	0.0
0.19	0.6	1	1.7	3	6	0.1
0.28	1.1	2	3.2	6	12	0.2
0.37	1.6	3	4.7	9	18	0.3
0.46	2.1	4	6.2	12	24	0.4
0.55	2.6	5	7.7	15	30	0.5
0.64	3.0	6	9.2	18	36	0.6
0.73	3.5	7	10.7	21	42	0.7
0.82	4.0	8	12.2	24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

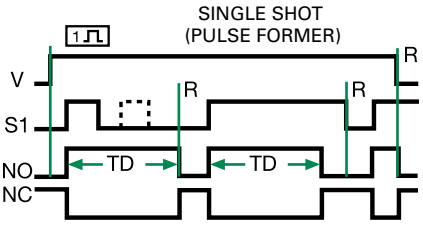
R_T Selection Chart					
Desired Time Delay* Minutes					R_T
7	8	9	10	11	Megohm
0.1	0.1	0.2	1	10	0.0
0.6	1	1.7	10	50	0.1
1.1	2	3.2	20	100	0.2
1.6	3	4.7	30	150	0.3
2.1	4	6.2	40	200	0.4
2.6	5	7.7	50	250	0.5
3.0	6	9.2	60	300	0.6
3.5	7	10.7	70	350	0.7
4.0	8	12.2	80	400	0.8
4.5	9	13.7	90	450	0.9
5.0	10	15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

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

Function Diagrams



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



V = Voltage
S1 = Initiate Switch
NO = Normally Open Contact
NC = Normally Closed Contact
TD = Time Delay
R = Reset

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