

Delay On Make (Operate)

ERDM Econo-Timer

Time Delay Relay



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- 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

Approvals:

Description

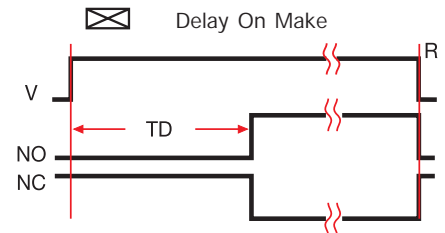
Econo-Timers are a combination of digital electronics and a reliable electromechanical relay. These devices offer a DPDT relay output for relay logic circuits, and isolation of input to output voltages. Cost effective for OEM applications such as random starting, sequencing ON, switch de-bouncing, anti-short cycling, and other common delay on make applications.

Operation

Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output energizes and remains energized until input voltage is removed.

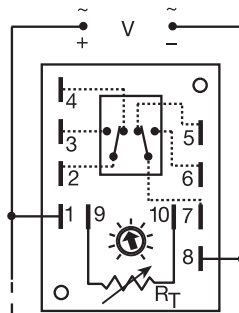
Reset: Removing input voltage resets the time delay and output.

Function



V = Voltage TD = Time Delay R = Reset
 NO = Normally Open NC = Normally Closed
 —||— = Undefined time

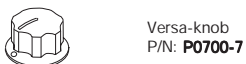
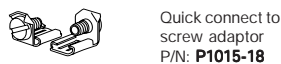
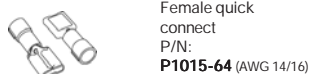
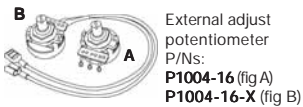
Connection



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



See accessory pages for specifications.

Ordering Table

ERDM 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 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: **ERDM426** Fixed – **ERDM410.1S**

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

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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 120/240 V AC & 28 V DC; 1/3 hp at 120/240 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)

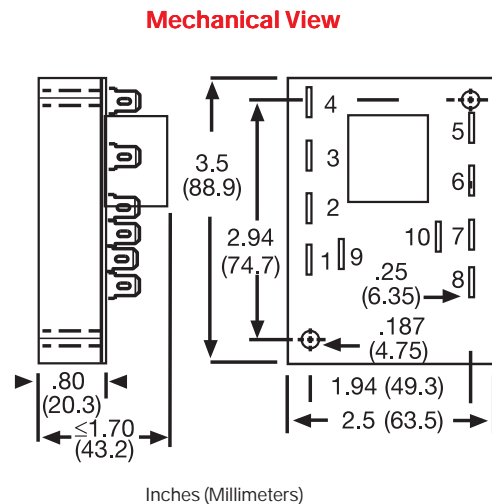
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R _T Selection Chart						
Desired Time Delay*						R _T
Seconds						
1	2	3	4	5	6	Megohm
0.1	0.1	0.1	0.2	0.3	0.6	0.0
0.19	0.6	1	1.7	3	6	0.1
0.28	1.1	2	3.2	6	12	0.2
0.37	1.6	3	4.7	9	18	0.3
0.46	2.1	4	6.2	12	24	0.4
0.55	2.6	5	7.7	15	30	0.5
0.64	3.0	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.



ERDMZB01 07.01.04