

# Delayed Interval ESD5 Series Timing Module



- Two Time Functions in One Easy-To-Use Package, Delay on Make with Interval Output
- Digital Circuitry Provides High Accuracy & Stability
- Factory Fixed or Remote Time Adjustments From 200 ms ... 1000 m
- Totally Solid State & Encapsulated

## Description

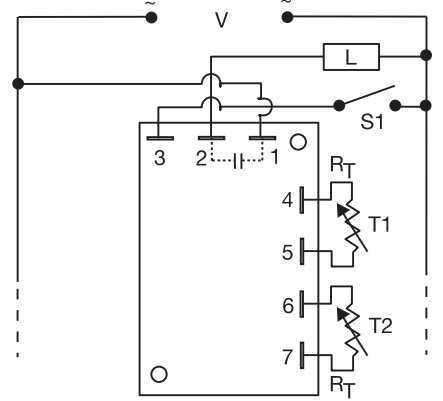
The ESD5 Series is a highly accurate solid state delayed interval timer. It offers a 1A steady/10A inrush output and is available with an adjustable or fixed time delay of 0.2 s to 100 m in six ranges. Input voltages of 24, 120, or 230 V AC are available. Encapsulation offers protection against shock and vibration.

## Operation

Upon application of input voltage, the delay on make time delay begins, the output is de-energized. At the end of this delay, the output is energized and the interval delay begins. At the end of the interval delay period, the output is de-energized.

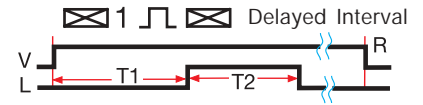
**Reset:** Removing input voltage resets the output and the time delays.

Approvals:



Note: Terminals 4, 5 and/or 6, 7 are included when an adjustable delay is ordered.

$R_T$  is used when external adjustment is ordered.



V = Voltage L = Load T1 = OFF Time  
T2 = ON Time R = Reset S1 = Initiate Switch  
— = Undefined time

## Ordering Table

ESD5 Series	X Input	X Adjustment	X Delay On Make *	X Interval *
	-2 - 24 V AC	-1 - Both Times Fixed	-0 - 0.2 ... 10 s	-0 - 0.2 ... 10 s
	-4 - 120 V AC	-2 - Both Times Adj.	-1 - 1 ... 100 s	-1 - 1 ... 100 s
	-6 - 230 V AC	-3 - Interval Time Adj., DOM Time Fixed	-2 - 10 ... 1000 s	-2 - 10 ... 1000 s
		-4 - DOM Time Adj., Interval Time Fixed	-3 - 0.1 ... 10 m	-3 - 0.1 ... 10 m
			-4 - 1 ... 100 m	-4 - 1 ... 100 m
			-5 - 10 ... 1000 m	-5 - 10 ... 1000 m

\*If Fixed Delay is selected, insert delay [0.2...1000] followed by (S) sec. or [0.1 ... 1000] (M) min.

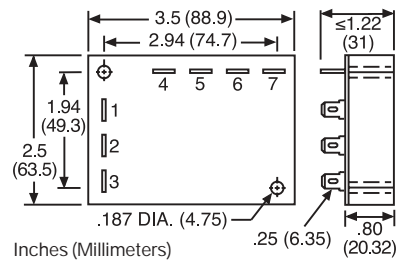
Example P/N: **ESD54200** Fixed – **ESD544310S**

## Technical Data

<b>Time Delay</b>	
Type	Digital integrated circuitry
Range	200 ms ... 1000 m in 6 adjustable ranges or fixed
Repeat Accuracy	+/-0.1% or 16 ms, whichever is greater
Tolerance (Factory Calibration)	+/-10%
Recycle Time	≤400 ms during timing, 200 ms after timing
Time Delay vs. Temperature & Voltage	≤ +/-1%
<b>Input</b>	
Voltage	24, 120, or 230 V AC
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
<b>Output</b>	
Type	Solid state
Rating	1 A steady state, 10 A inrush at 60°C
Minimum Load Current	40 mA
Voltage Drop	≅ 2.5 V at 1 A
<b>Protection</b>	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
<b>Mechanical</b>	
Mounting	Surface mount with two #6 (M3.5 x 0.6) screws
Package	3.5 x 2.5 x 1.22 in. (88.9 x 63.5 x 31 mm)
Termination	0.25 in. (6.35 mm) male quick connect terminals
<b>Environmental</b>	
Operating Temperature	-40°C ... +80°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 4.8 oz (136 g)

R <sub>T</sub> Selection Chart						
Desired Time Delay*						R <sub>T</sub> Megohm
Seconds			Minutes			
0	1	2	3	4	5	
0.2	1	10	0.1	1	10	0.0
1	10	100	1	10	100	0.5
2	20	200	2	20	200	1.0
3	30	300	3	30	300	1.5
4	40	400	4	40	400	2.0
5	50	500	5	50	500	2.5
6	60	600	6	60	600	3.0
7	70	700	7	70	700	3.5
8	80	800	8	80	800	4.0
9	90	900	9	90	900	4.5
10	100	1000	10	100	1000	5.0

\* When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.



## Accessories

Female quick connect	External adjust potentiometer  P/Ns: P1004-13 (fig A) P1004-13-X (fig B)
Quick connect to screw adaptor  P/N: P1015-18	Plug-on adjustment module  P/N: VTP(X)(X)
Versa-knob  P/N: P0700-7	

See accessory pages at the end of this section.

Delay On Make		Interval	
Time Delay	VTP P/N	Time Delay	VTP P/N
0 - 0.2 ... 10 s	VTP5C	0 - 0.2 ... 10 s	VTP5C
1 - 1 ... 100 s	VTP5G	1 - 1 ... 100 s	VTP5G
2 - 10 ... 1000 s	VTP5K	2 - 10 ... 1000 s	VTP5K
3 - 0.1 ... 10 m	VTP5N	3 - 0.1 ... 10 m	VTP5N
4 - 1 ... 100 m	VTP5P	4 - 1 ... 100 m	VTP5P
5 - 10 ... 1000 m	VTP5R	5 - 10 ... 1000 m	VTP5R