



## TIME DELAYS

# TD Series

*For protection of HVAC/R equipment, the TD Series of Time Delays provide the solution. Choose the Delay on Make, Delay on Break or By-pass Timer that solve the problem.*

### APPLICATIONS

- Protection from short cycling of compressor
- Ideal for compressor staging
- By-pass a control or device during start-up

### BENEFITS

- Fixed or adjustable Delay Ranges
- Broad input voltage range
- 1.0 Amp rating
- Varying models work with or without anticipator circuit.
- Terminal or wire connections available
- Compact size Electronic Potential Relay Technology

# TD60 Series

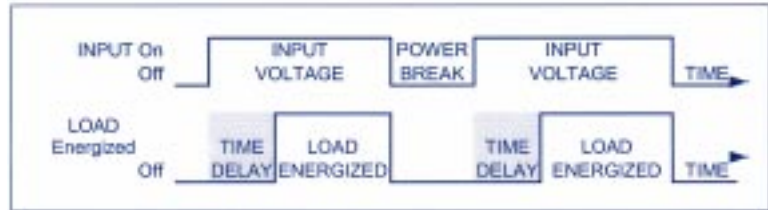
## Delay on Make Timers

### APPLICATION

"ON" Delay On Make

- Multi Purpose "delay on Make" timing.
- Protects Air-conditioning, Refrigeration and Heat pumps from damage which may be caused by short cycling of compressor.
- For compressor staging and stagger starting multiple units.
- Helps to reduce power surges in multiple compressor applications.

### TIMING DIAGRAM



### MODE OF OPERATION

Upon application of power, the time delay initiates. On completion of selected delay period, the load is energized. Timer will reset on power interruption or when thermostat disconnects.



### SPECIFICATIONS

Delay Range (Adjustable)	6 sec. to 8 min.
Delay Range (Fixed)	3 or 5 minutes
Initiate Timer	70milliseconds
Input Voltage*	19 to 250 VAC. 50/60Hz
Maximum Load	1 amp. 10 amp. inrush
Operating Temperature	0°F to +160°F (-18°C to +71°C)
Dimensions	2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm)
Mounting	Nonpositional: single hole mounting
Connections	1/4" quick male terminals or 6" long leads

All Parameters are subject to change as per special requirements.

\* In TD69 Series, For 110/240 Volt application cut jumper.

### SELECTION GUIDE

PART NO.	DELAY PERIOD	CONNECTIONS
<b>TD68**</b>	Adj. 6 Sec. to 8 Min.	(2) 1/4" Male Terminals
<b>TD69</b>	Adj. 6 Sec. to 8 Min.	- " -
<b>TD693</b>	Fixed 3 Min.	- " -
<b>TD695</b>	Fixed 5 Min.	- " -
<b>TD69W</b>	Adj. 6 Sec. to 8 Min.	(2) 6" LG. Wire Leads
<b>TD693W</b>	Fixed 3 Min.	- " -
<b>TD695W</b>	Fixed 5 Min.	- " -

\*\* This timer is not for use with Cooling anticipator.

# TD70 Series

## Delay on Break Timers

### MODE OF OPERATION

Upon application of power, Load is energized immediately. When Thermostat opens or on Power interruption, Load is de-energized and time delay initiates. Load will be energized again after delay time has elapsed.

### APPLICATION

"OFF" Delay On Break

Protects Air-conditioning, Refrigeration and Heat pumps from damage which may be caused by short cycling of compressor.

### TIMING DIAGRAM



### SPECIFICATIONS

Delay Range (Adjustable)	6 sec. to 5 min.
Delay Range (Fixed)	3 or 5 minutes.
Initiate Timer	70 milliseconds.
Input Voltage*	19 to 250 VAC. 50/60Hz
Maximum Load	1 amp., 10 amp. Inrush.
Operating Temperature	0°F to +160°F (-18°C to +71°C)
Dimensions	2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm)
Mounting	Nonpositional: single hole mounting
Connections	1/4" quick male terminals or 6" long leads.

All Parameters are subject to change as per special requirements.  
 \* In TD73 Series, For 110/240 Volt application cut jumper.

### SELECTION GUIDE

PART NO.	DELAY PERIOD	CONNECTIONS
TD72**	Adj. 6 Sec. to 5 Min.	(2) 1/4" Male Terminals
TD73	Adj. 6 Sec. to 5 Min.	- " -
TD733	Fixed 3 Min.	- " -
TD735	Fixed 5 Min.	- " -
TD73W	Adj. 6 Sec. to 5 Min.	(2) 6" LG. Wire Leads
TD733W	Fixed 3 Min.	- " -
TD735W	Fixed 5 Min.	- " -
TD74***	Adj. 6 Sec. to 5 Min.	(4) 1/4" Male Terminals

\*\* This timer is not for use with Cooling anticipator.

\*\*\* 4 Terminals Timer – see information below.

# TD74



### SPECIFICATIONS

Delay Range (Adjustable)	6 sec. to 5 min.
Initiate Timer	70 milliseconds.
Input Voltage	19 to 30 VAC. 50/60Hz
Input Voltage (H Series)	110 to 250 VAC. 50/60Hz
Maximum Load	1 amp., 10 amp. Inrush.
Minimum Load	40 milliamps.
Operating Temperature	0°F to +160°F (-18°C to +71°C)
Dimensions	2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm)
Mounting	Nonpositional: single hole mounting
Connections	1/4" quick male terminals.

All Parameters are subject to change as per special requirements.

### SELECTION GUIDE

PART NO.	INPUT	VOLTAGE
TD74	Adj. 6 Sec. to 5 Min.	19 to 30 Vac 50/60Hz
TD74H*	Adj. 6 Sec. to 5 Min.	110 to 250 Vac 50/60Hz

\* This timer is not for use with Cooling anticipator.

# TD32

## By Pass Timer

### APPLICATION

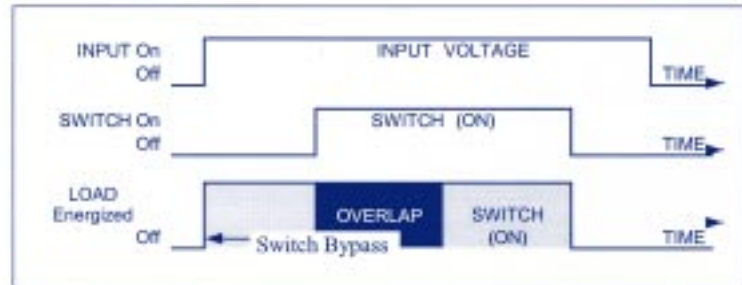
“ON delay interval timer”

- “Normally closed delay on make”
- Designed to bypass a control or device during startup.
- Typical use to bypass a low-pressure switch during compressor startup or to bypass an oil pressure switch upon startup.
- Helps to eliminate nuisance lockouts.

### MODE OF OPERATION

With power applied to the input, the load is energized immediately and remains energized for the length of the time delay, regardless of the state of the switch being bypassed. This Timer is essential for bypassing low-pressure refrigeration controls during cold startup condition.

### TIMING DIAGRAM



### SPECIFICATIONS

Delay Range (Adjustable)	10 – 1,000 sec. ± 20%
Initiate Timer	70milliseconds
Input Voltage	19 to 250 Volts AC/DC 50/60Hz.
Maximum Load	1 amp., 10 amp. inrush
Operating Temperature	0° F to +160° F (-18° C to +71° C)
Dimensions	2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm)
Mounting	Nonpositional: single hole mounting
Connections	1/4" quick male terminals
All Parameters are subject to change as per special requirements.	

### SELECTION GUIDE

PART NO.	DELAY PERIOD	CONNECTIONS
TD32	Adj. 10 to 1000 Sec.	(3) 1/4" Male Terminals

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