

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 solves 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 (Pilot Circuit)
- 1.0 Amp rating
- · Varying models work with or without anticipator circuit.
- Terminal or wire connections available
- Compact size

TD60 Series

Delay on Make Timers

APPLICATION

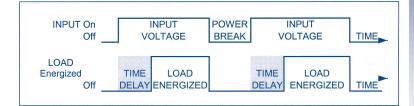
"ON" Delay On Make

- 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.

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.

TIMING DIAGRAM





SPECIFICATIONS

Delay Range (Adjustable) 6 sec. to 8 min. Delay Range (Fixed) 3 or 5 minutes Initiate Timer 70 milliseconds Input Voltage* 19 to 250 VAC/VDC, 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. TD68** TD69 TD693 TD695 TD69W TD693W | DELAY PERIOD Adj. 6 Sec. to 8 Min. Adj. 6 Sec. to 8 Min. Fixed 3 Min. Fixed 5 Min. Adj. 6 Sec. to 8 Min. Fixed 3 Min. Fixed 3 Min. | CONNECTIONS (2) 1/4" Male Terminals - " " - (2) 6" LG. Wire Leads - " - |
|---|--|---|
| TD695W | Fixed 5 Min. | - " - |

^{**} This timer is not for use with Cooling anticipator.

TD70 Series

Delay on Break Timers

MODE OF OPERATION

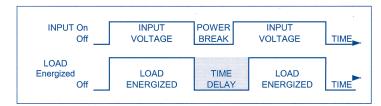
Upon application of power, Load is energized immediately. When Thermostat opens or on Power interruption, Load is de-energized and time delay initiates. Load will be energized again after delay time has elapsed.

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 $0^{\circ}F$ to $+160^{\circ}F$ (-18°C to $+71^{\circ}C$) 2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm) Dimensions 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*** | Adi. 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)

Initiate Timer

Input Voltage

Input Voltage (H Series)

Maximum Load

Minimum Load

Operating Temperature

Delay Range (Adjustable)

6 sec. to 5 min.

70 milliseconds.

19 to 30 VAC. 50/60Hz

110 to 250 VAC. 50/60Hz

1 amp., 10 amp. Inrush.

40 milliamps.

O°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

1/4" quick male terminals.

All Parameters are subject to change as per special requirements.

SELECTION GUIDE

 PART NO.
 DELAY PERIOD
 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

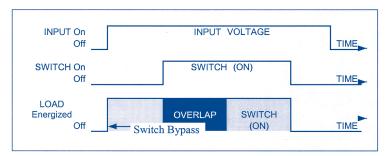
"ON delay interval timer"

- "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

10 - 1,000 sec. $\pm 20\%$ Delay Range (Adjustable) Initiate Timer 70 milliseconds 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) 2" x 2" x 0.75", (5.08 x 5.08 x 1.9 cm) Dimensions 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