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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

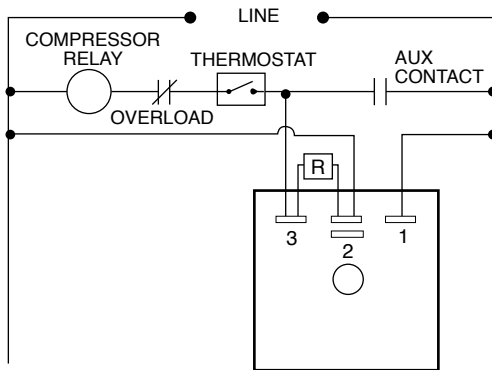


# TSA141300

## Anti-Short Cycle, Solid State Timer



### Wiring Diagram



### Description

The TSA141300 utilizes unique circuitry to provide random start and lockout delay in one small, rugged, inexpensive package. When connected as shown, the TSA141300 in a multiple unit situation, prevents all units from starting at one time with its random start feature. The TSA141300 also prevents the compressor from recycling rapidly which could result in a lock rotor condition. This lockout delay is initiated at the end of each operation of the compressor. A momentary loss of power would also initiate the lockout delay.

#### Operation

**Random Start:** With the thermostat closed, when line voltage is applied to system, a time delay is initiated. At the end of this delay, the compressor relay will be energized. (Random Start delay is equal to lockout delay.)

**Anti-Short Cycle:** At the end of each cycle, when the thermostat opens, a lockout delay is initiated which prevents re-energization of the compressor relay during this period. If the thermostat is closed after the time delay is completed, the compressor relay will energize immediately.

**Loss of Power:** If there is a momentary loss of power, the lockout will again be initiated preventing the compressor relay from energizing for the duration of the delay.

### Features & Benefits

- Lockout Delay—prevents rapid recycling of compressor in air conditioning, refrigeration, and heat pump equipment
- Random Start Delay—provides staggered start up of multiple units
- Fast response time
- All Solid State with Encapsulated Circuitry

### Specifications

#### Time Delay

|                                   |  |
|-----------------------------------|--|
| <b>Type</b>                       | Factory fixed 5 minutes                          |
| <b>Repeat Accuracy</b>            | ± 5% under fixed conditions                      |
| <b>Tolerance</b>                  | Factory calibration: ± 15%                       |
| <b>Time Delay vs. Temperature</b> | ± 10% max.                                       |
| <b>Input</b>                      |  |
| <b>Voltage</b>                    | 120 volts AC                                     |
| <b>Tolerance</b>                  | ± 20% of nominal                                 |
| <b>AC Line Frequency</b>          | 50/60 Hz   |
| <b>Output</b>                     |  |
| <b>Type</b>                       | Solid State                                      |
| <b>Maximum Load Current</b>       | 1 ampere steady state, 10 amperes inrush at 60°C |
| <b>Voltage Drop</b>               | 2.5 volts typical at 1 ampere                    |
| <b>Protection</b>                 |  |
| <b>Transient</b>                  | Protected  |
| <b>Dielectric Breakdown</b>       | Greater than 1500 volts RMS                      |
| <b>Insulation Resistance</b>      | 100 megohms min.                                 |

#### Mechanical

|                    |  |
|--------------------|--|
| <b>Mounting</b>    | Surface mount with one #8 or #10 screw   |
| <b>Package</b>     | Molded housing with encapsulated circuitry                                       |
| <b>Termination</b> | 0.25 in. (6.35 mm) male quick connect terminals                                  |
| <b>Dimensions</b>  | <b>H</b> 50.80 mm (2.0"); <b>W</b> 50.80 mm (2.0");<br><b>D</b> 30.70 mm (1.21") |

#### Environmental

|                                      |                               |
|--------------------------------------|-------------------------------|
| <b>Operating/Storage Temperature</b> | -40°C to +80°C/-40°C to +85°C |
| <b>Humidity</b>                      | 95% relative, non-condensing  |

### Function Diagram

