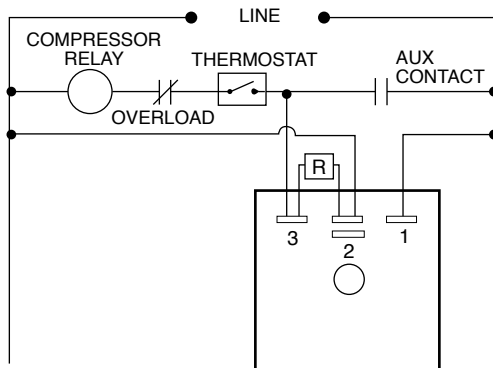


# TSA141300

## 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"); <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

