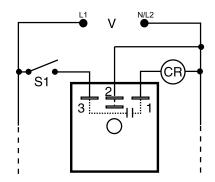
TL SERIES

Lockout





Wiring Diagram



V = VoltageS1 = Initiate Switch CR = Compressor or Control Relay

Ordering Information

	MODEL	INPUT VOLTAGE	LOCKOUT TIME	DELAY-ON-MAKE
	TL120A5T	120VAC	5m	1s
	TL230A5	230VAC	5m	No delay
	TL24A5T	24VAC	5m	1s

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Description

The TL Series provides protection against short cycling of a compressor. At the end of each operation, or whenever power is lost, a lockout delay is initiated. This lockout delay prevents restarting of the compressor until the head pressure has equalized. Compressor relay chatter due to thermostat bounce is eliminated by use of optional one second delay-on-make. The TL Series should not be used with cooling anticipator resistors or solid-state switches. (See the TA Series).

Operation (Lockout)

Lockout: On initial closure of S1, the compressor relay energizes immediately (or after an optional 1s delay). When the S1 opens or input voltage is interrupted, the output opens and remains open for the lockout time delay. During this lockout time delay period, the compressor relay cannot be re-energized.

Reset: The lockout time delay cannot be reset. After the time delay is completed, the unit automatically resets.

Features & Benefits

FEATURES	BENEFITS
Lockout delay	Prevents rapid cycling of compressor and eliminates nuisance service calls due to blown fuse or tripped breaker by locked rotor during short cycling.
One second Delay-on-Make (models ending in T)	Eliminates contactor chatter due to thermostat bounce
Totally solid state and encapsulated	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity
1A steady, 10A inrush, solid state output	Provides 100 million operations in typical conditions

Accessories



P1023-6 Mounting bracket

The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



P1015-64 (AWG 14/16)

Female Quick Connect

These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



P1015-18 Quick Connect to Screw Adapter

Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male guick connect terminals.



C103PM (AL) DIN Rail

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.



TL SERIES

Specifications

Input

Voltage 24, 120, or 230VAC **AC Line Frequency** 50/60 Hz Tolerance ±20%

Output

Minimum Load Current ≤ 40mA **Maximum Load Current** 1A @ 24VAC; 0.5A @ 120 & 230VAC at 60°C Inrush Current 10A at 60°C

24VAC - 2.5V @ 1A Voltage Drop 120 & 230VAC - 4.2V @ 0.5A

Time Delay

Initiate Time ≅8ms Lockout Time* Fixed 2, 3, or 5m Tolerance -15% - 35%

Option 1s delay-on-make eliminates contactor chatter

due to thermostat bounce

Protection

Circuitry Dielectric Breakdown

Insulation Resistance

Encapsulated

≥ 2000V RMS terminals to mounting surface

 $\geq 100~M\Omega$

Mechanical

Mounting Surface mount with one #10 (M5 x 0.8) screw

H 50.8 mm (2"); **W** 50.8 mm (2"); **Dimensions**

D 30.7 mm (1.21") **Termination** 0.25 in. (6.35 mm) male quick connect terminals

Environmental

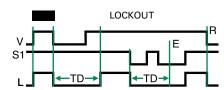
Operating/Storage

Temperature -40° to 70°C / -40° to 85°C **Humidity** 95% relative, non-condensing

Weight $\approx 2.4 \text{ oz } (68 \text{ g})$

NOTE: Cooling anticipator resistor or leakage may cause erratic operation. See TA Series for use with 24VAC systems that include anticipator resistors or use solid-state switches.

Function Diagram



V = Voltage

S1 = Initiate Switch

L = Load (CR) E = Ready

TD = Time Delay

R = Reset

^{*}Power must be applied for at least 15 s to achieve a full lockout delay. Less than 15 s will result in proportionally shorter delay periods.

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