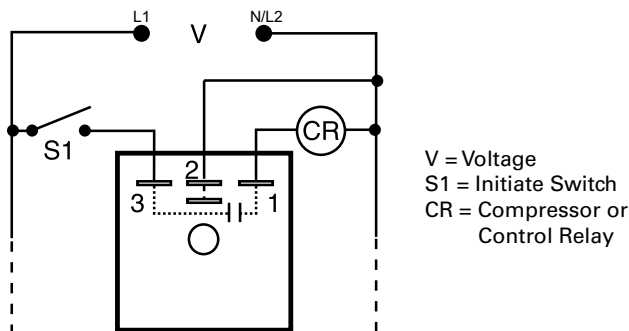


TL SERIES

Lockout



Wiring Diagram



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.



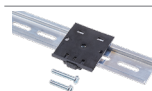
P1015-18 Quick Connect to Screw Adapter

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

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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Time Delay Relays

Dedicated - HVAC

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
Voltage Drop	24VAC - 2.5V @ 1A 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	Encapsulated
Dielectric Breakdown	≥ 2000V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ

Mechanical

Mounting Dimensions

Surface mount with one #10 (M5 x 0.8) screw
H 50.8 mm (2"); **W** 50.8 mm (2");
D 30.7 mm (1.21")
 0.25 in. (6.35 mm) male quick connect terminals

Termination

Environmental

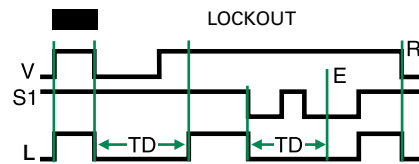
Operating/Storage

Temperature	-40° to 70°C / -40° to 85°C
Humidity	95% relative, non-condensing
Weight	≈ 2.4 oz (68 g)

*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.

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

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