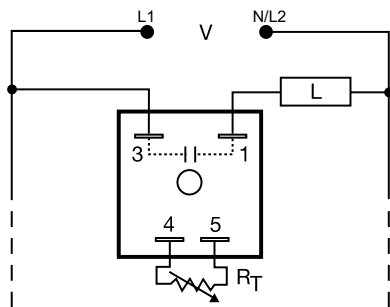


# TAC1 SERIES

## Delay-on-Make



### Wiring Diagram



V = Voltage  
L = Load

Load may be connected to terminals 3 or 1.  
RT is used when external adjustment is ordered.

### Description

The TAC1 Series was designed to delay the operation of a compressor relay. It eliminates the possibility of relay chatter due to half-wave failure of the output. It connects in series with the load relay coil and provides a delay-on-make time delay each time input voltage is applied. It can be used for random start, anti-short cycling, sequencing, and many other applications. It is an excellent choice for all air conditioning and refrigeration equipment.

#### Operation (Delay-on-Make)

Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output energizes and remains energized until input voltage is removed.

**Reset:** Removing input voltage resets the time delay and output.

### Features & Benefits

FEATURES	BENEFITS
<b>Analog circuitry</b>	Repeat accuracy + / - 2%, Factory calibration + / - 20%
<b>0.5A steady state, 10A inrush</b>	Provides 100 million operations in typical conditions.
<b>Connects in series with load relay coil</b>	Fail-safe design eliminates contactor chatter
<b>Meets UL 873</b>	UL Recognized for air conditioning and refrigeration equipment
<b>Fully encapsulated</b>	Protects against shock, vibration and humidity

### Accessories



#### P1004-XX, P1004-XX-X Versa-Pot

Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



#### P1023-6 Mounting bracket

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



#### P0700-7 Versa-Knob

Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.



#### 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.

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
TAC1223	24VAC	External	2 - 180s
TAC1411	120VAC	Fixed	1s
TAC1412	120VAC	Fixed	2s
TAC1413	120VAC	Fixed	3s
TAC14164	120VAC	Fixed	64s

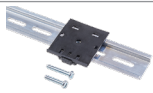
If you don't find the part you need, call us for a custom product 800-843-8848

# TAC1 SERIES

## Accessories



**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.



**VTP(X)(X) Plug-on Adjustment Module**  
Mounts on modules with in-line adjustment terminals. Rated at 0.25W at 55°C. Available in resistance values from 5KΩ to 5MΩ.

**Selection Table for VTP Plug-on Adjustment Accessory**

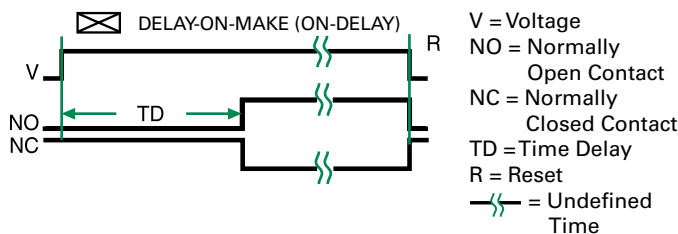
Time Delay	VTP P/N
1 - 0.05-3s	VTP4B
2 - 0.5-60s	VTP4F
3 - 2-180s	VTP4J
4 - 5-600s	VTP5N

## Selection Guide

R <sub>T</sub> Selection Chart				
Desired Time Delay*				R <sub>T</sub>
Seconds				
1	2	3	4	Megohm
0.05	0.5	2	5	0.0
0.5	10	30	60	0.5
1.0	20	60	120	1.0
1.5	30	90	180	1.5
2.0	40	120	240	2.0
2.5	50	150	300	2.5
3.0	60	180	360	3.0
			420	3.5
			480	4.0
			540	4.5
			600	5.0

\* When selecting an external R<sub>T</sub> add at least 30% for tolerance of unit and the R<sub>T</sub>.

## Function Diagram



## Specifications

### Time Delay

**Type** Analog circuitry  
**Range** 0.05 - 600s in 4 adjustable ranges or fixed  
**Repeat Accuracy** ±2%  
**Tolerance (Factory Calibration)** ±20%  
**Recycle Time** ≤ 20ms after timing, during timing - 0.1% of time delay or 75ms, whichever is greater

### Time Delay vs Temp. & Voltage

≤ ±10%

### Input

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

### Output

**Type** Solid state  
**Form** NO, open during timing  
**Rating** 0.5A steady state, 10A inrush at 60°C  
**Voltage Drop** 120 & 230VAC: ≈ 4.2V @ 0.5A  
 24VAC: ≈ 2.5V @ 0.5A

### Protection

**Circuitry** Encapsulated  
**Dielectric Breakdown** ≥ 2000V RMS terminals to mounting surface  
**Insulation Resistance** ≥ 100 MΩ

### Mechanical

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

### Environmental

**Operating/Storage Temperature** -40° to 80°C / -40° to 85°C  
**Humidity** 95% relative, non-condensing  
**Weight** ≈ 2.4 oz (68 g)