TAC1 SERIES

Delay-on-Make

Description

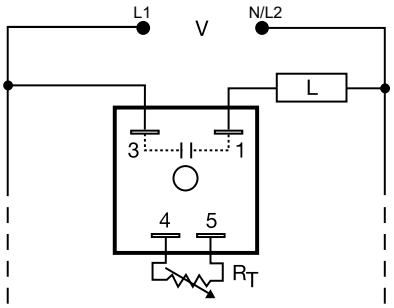
The TAC1 Series was designed to delay the operation of a compressor relay. It eliminates the possibility of relay chatter due to half-wave failure of the output. It connects in series with the load relay coil and provides a delay-on-make time delay each time input voltage is applied. It can be used for 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.

Wiring Diagram



V = Voltage
L = Load

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

Features & Benefits

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

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

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.

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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

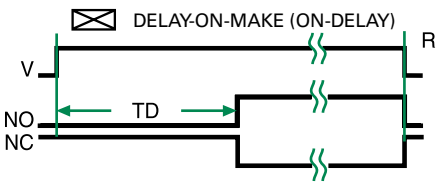
Time Delay	VTP P/N
1 - 0.05-3s	VTP4B
2 - 0.5-60s	VTP4F
3 - 2-180s	VTP4J
4 - 5-600s	VTP5N

Selection Guide

R_T Selection Chart				
Desired Time Delay*				R_T
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_T add at least 30% for tolerance of unit and the R_T.

Function Diagram



V = Voltage
NO = Normally Open Contact
NC = Normally Closed Contact
TD = Time Delay
R = Reset
—⌇— = Undefined Time

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)