

Delay on Make (Operate) TAC4 Bypass Timer Timing Module



- UL Approved for Air Conditioning & Refrigeration Equipment
- Delays from 0.05 ... 300 s
- 24, 120, or 230 V AC
- Redundant Circuitry Eliminates Chatter Problems

Ordering Table

TAC4 Series	X Input	X Adjustment	X Time Delay*
-2	24 V AC	-1 Fixed	-1 0.05 ... 3 s
-4	120 V AC	-2 External Adjust	-2 0.5 ... 60 s
-6	230 V AC		-3 2 ... 180 s
			-4 5 ... 300 s

Example P/N: **TAC4221** Fixed - **TAC441300**

*If Fixed Delay is selected, insert delay [0.05 ... 300] in seconds.

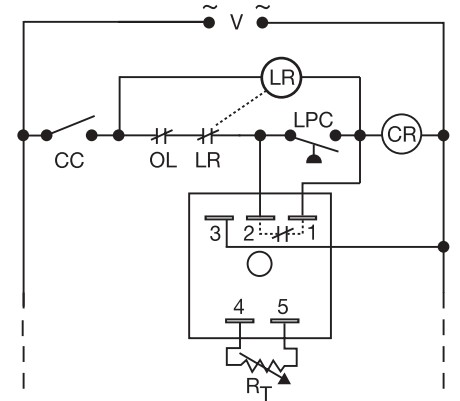
Description

Developed for the specific purpose of providing a closed contact across the low pressure switch during compressor startup. Its time delay circuit is totally solid state including the normally closed contact. The molded housing with encapsulation, the single hole mounting, and 0.25 in. (6.35 mm) termination makes the TAC4 easy to use, rugged, and reliable.

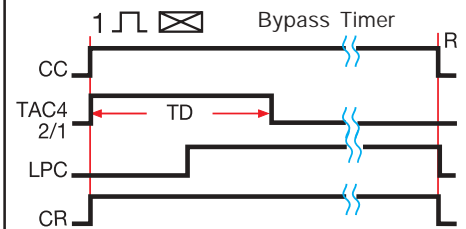
Operation (As shown in the connection & time diagrams) Upon application of input voltage and closure of controller contact, CC, the load, CR, energizes and the time delay begins. During the time delay, the TAC4's solid state output bypasses the LPC, low pressure switch. This allows the compressor controlled by CR to start and establish acceptable pressure. At the end of the time delay, TAC4's output de-energizes and remains de-energized until reset. The TAC4 may be used in other applications where a controlling contact must be bypassed for a specified period of time.

Reset: Removing input voltage or opening CC resets the output and time delay.

■ Approvals:



R_T is used when external adjustment is ordered.



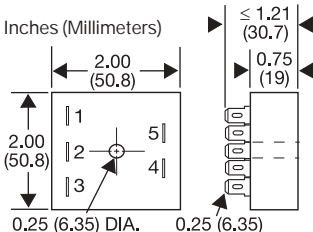
V = Voltage LR = Lockout Relay
OL = Overload or High Pressure Output
CC = Controller Contact CR = Compressor Relay
LPC = Low Pressure Cutout
—||— = Undefined time

Technical Data

Time Delay	
Type	Analog circuitry
Range	0.05 ... 300 s in 4 adjustable ranges or fixed
Repeat Accuracy	+/-2%
Tolerance (Factory Calibration)	+/-20%
Time Delay vs. Temperature & Voltage	≤ +/-10%
Recycle Time	≤150 ms
Input	
Voltage	24, 120, or 230 V AC
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
Output	
Type	Solid state
Form	Normally Closed, closed during timing
Rating	0.5 A steady state, 10 A inrush at 60°C
Voltage Drop	120 & 230 V AC ≅ 4.2 V at 0.5 A 24 V AC ≅ 2.5 V at 0.5 A
Protection	
Circuitry	Encapsulated
Dielectric Breakdown	≥2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Mechanical	
Mounting	Surface mount with one #10 (M5 x 0.8) screw
Termination	0.25 in. (6.35 mm) male quick connect terminals
Package	2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm)
Environmental	
Operating Temperature	-40°C ... +75°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)

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	30	0.5
1.0	20	60	60	1.0
1.5	30	90	90	1.5
2.0	40	120	120	2.0
2.5	50	150	150	2.5
3.0	60	180	180	3.0
			210	3.5
			240	4.0
			270	4.5
			300	5.0

* When selecting an external R_T add at least 30% for tolerance of unit and the R_T.



Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N
1 - 0.05 ... 3 s	VTP4B	P1004 12	P1004 12X
2 - 0.5 ... 60 s	VTP4F	P1004 12	P1004 12X
3 - 2 ... 180 s	VTP4J	P1004 12	P1004 12X
4 - 5 ... 300 s	VTP5T	P1004 13	P1004 13X

Accessories

<p>Mounting bracket P/N: P1023 6</p>	<p>External adjust potentiometer P/Ns: P1004 12 (fig A) P1004 12 X (fig B)</p>
<p>Female quick connect P/N: P1015 64 (AWG 14/16)</p>	<p>Plug-on adjustment module P/N: VTP(X)(X)</p>
<p>Quick connect to screw adaptor P/N: P1015 18</p>	<p>DIN rail adaptor P/N: P1023 20</p>
<p>Versa-knob P/N: P0700 7</p>	<p>DIN rail P/Ns: C103PM (Al) 17322005 (Steel)</p>

See accessory pages at the end of this section.