

Bypass Timer

TAC4 Series (Interval)

HVAC/R Timer

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

Approvals:

Accessories



External adjust potentiometer
P/Ns:
P1004-12 (fig A)
P1004-12-X (fig B)



Female quick connect
P/N:
P1015-64 (AWG 14/16)



Quick connect to screw adaptor
P/N: **P1015-18**

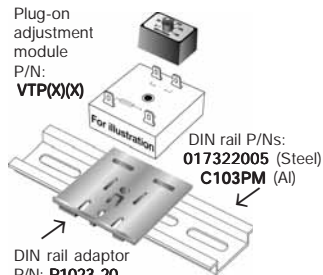


Versa-knob
P/N: **P0700-7**



Mounting bracket
P/N: **P1023-6**

Plug-on adjustment module
P/N:
VTP(X)(X)



DIN rail P/Ns:
017322005 (Steel)
C103PM (Al)

DIN rail adaptor
P/N: **P1023-20**

See accessory pages for specifications.

Description

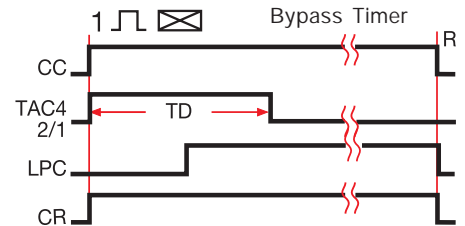
The TAC4 is a bypass timer that provides a closure across the low pressure switch during compressor startup. Its time delay circuit is totally solid state including the normally closed output. The molded housing with encapsulation, the single hole mounting, and 0.25 in. (6.35 mm) termination makes the TAC4 easy to use, rugged, and reliable.

Operation

(As shown in the connection & function 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.

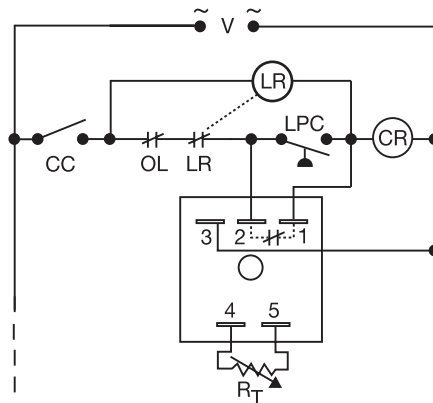
Reset: Removing input voltage or opening CC resets the output and time delay.

Function



CC = Controller Contact CR = Compressor Relay
LPC = Low Pressure Cutout
— = Undefined time

Connection



R_T is used when external adjustment is ordered.

V = Voltage LR = Lockout Relay
OL = Overload or High Pressure Switch
LPC = Low Pressure Cutout
CR = Compressor Control Relay
CC = Controller Contact

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.

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Technical Data

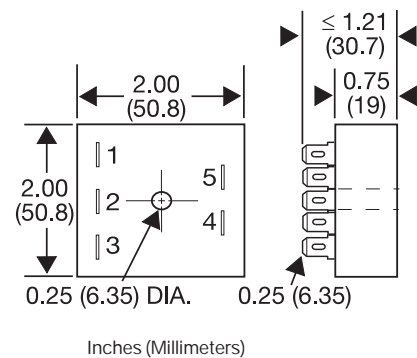
Time Delay Type Range Repeat Accuracy Tolerance (Factory Calibration) Time Delay vs. Temperature & Voltage Reset Time	Analog circuitry 0.05 ... 300 s in 4 adjustable ranges or fixed +/-2% +/-20% ≤ +/-10% ≤ 150 ms
Input Voltage Tolerance Line Frequency	24, 120, or 230 V AC +/-20% 50 ... 60 Hz
Output Type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

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Desired Time Delay*					R _T Megohm
Seconds					
1	2	3	4		
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.

Mechanical View



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

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