

GT3F Series – True OFF Delay Timers


Key features of the GT3F series include:

- “True” power OFF-delay up to 10 minutes
- No external control switch necessary
- Available with reset inputs
- Mountable in sockets or flush panel


Specifications

	GT3F-1	GT3F-2
Operation	True power OFF-delay	
Time Range	0.1 seconds to 600 seconds	
Rated Voltage	100 to 240V AC, 50/60Hz 24V AC/DC	
Contact Rating	250V AC/30V DC, 5A (resistive load)	250V AC/30V DC, 3A (resistive load)
Contact Form	SPDT	DPDT
Minimum Power Application Time	1 second	
Voltage Tolerance	AF20: 100 to 240V AC AD24: 21.6 to 26.4VDC, 20.4 to 26.4VAC	
Repeat Error	±0.2%, ±10 msec	
Voltage Error	±0.2%, ±10 msec	
Temperature Error	±0.2%, ±10 msec	
Setting Error	±10% maximum	
Insulation Resistance	100MW minimum	
Dielectric Strength	Between power and output terminals: 2,000V AC, 1 minute (SPDT) 1,500V AC, 1 minute (DPDT) Between contacts on different poles: 1,000V AC, 1 minute (DPDT) Between contacts of the same pole: 750V AC, 1 minute	
Power Consumption	AF20: 3.7VA (200V AC, 60Hz) AD24: 0.8W (DC), 1.2VA (AC)	
Mechanical Life	20,000,000 operations minimum	
Electrical Life	100,000 operations minimum	
Vibration Resistance	100m/sec ² (approximate 10G)	
Shock Resistance	Operating extremes: 100 m/sec ² (approximate 10G) Damage limits: 500 m/sec ² (approximate 50G)	
Operating Temperature	–10 to +50°C	
Storage Temperature	–30 to +80°C	
Operating Humidity	45 to 85% RH	
Weight (approximate)	77g	79g



1. An inrush current flows during the minimum power application time. AF20: approximate 0.4A, AD24: approximate 1.2A
2. GT3F does not read the preset time range shown on the knob after power is turned off. Note that minimizing the preset time, by turning the knob to zero, does not shorten the delay time after power is removed.

Part Numbering List

GT3F

Mode of Operation	Rated Voltage Code	Time Range	Output	Contact	Optional Input	Complete Part Number	
						8-Pin	11-Pin
Power OFF-delay	AF20: 100 to 240VAC (50/60Hz)	0.1 seconds to 600 seconds	250V AC, 5A,	Delayed SPDT	Reset	GT3F-1AF20	GT3F-1EAF20
			30V DC, 5A (resistive load)			GT3F-1AD24	GT3F-1EAD24
	AD24: 24V AC/DC		250V AC, 3A,	Delayed DPDT	None (8p) Reset (11p)	GT3F-2AF20	GT3F-2EAF20
			30V DC, 3A (resistive load)			GT3F-2AD24	GT3F-2EAD24

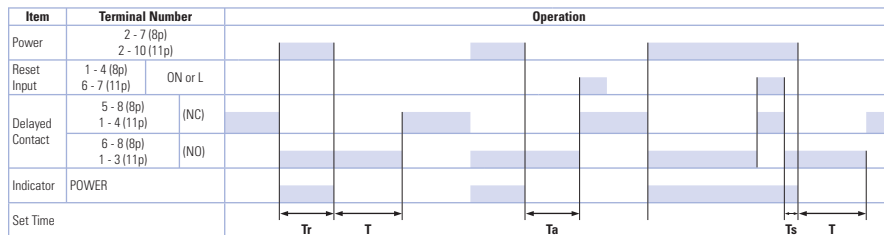
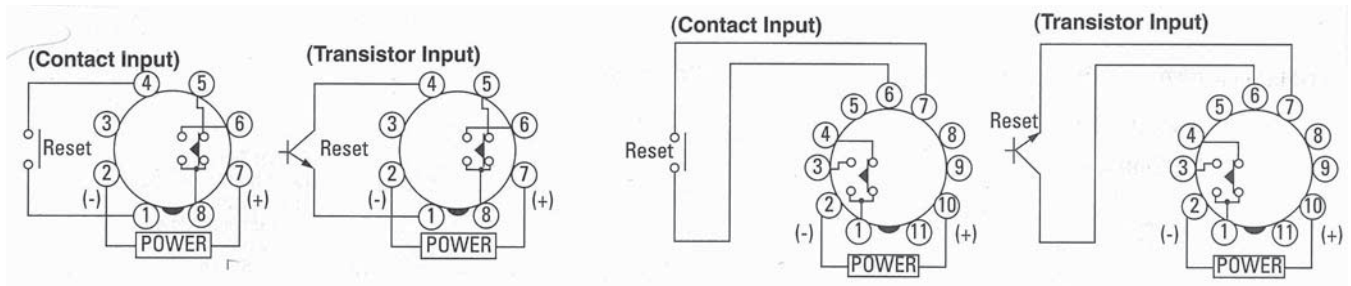


Optional reset input resets the contact to the OFF state before time out.

Timing Diagrams/Schematics

GT3F-1 Timing Diagrams

GT3F-1 (8-pin)	GT3F-1E (11-pin)
Delayed SPDT Output, with Reset Input	



T = Set time
 Ta = Shorter than set time
 Ts = 1 Second
 Tr = Minimum Power Application Time
 GT3F-1: 1 Second

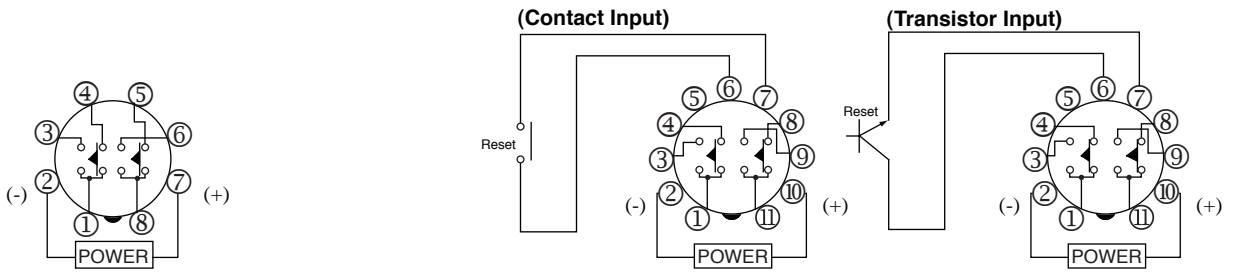
1. For time ranges, see page 829.
2. For sockets and accessory part numbers, see page 838.
3. When power is applied, the NO output contact closes. When power is removed, the timing period begins. When time has elapsed, the NO contact opens.
4. For the timing diagram overview, see page 794.

GT3F-2 Timing Diagrams

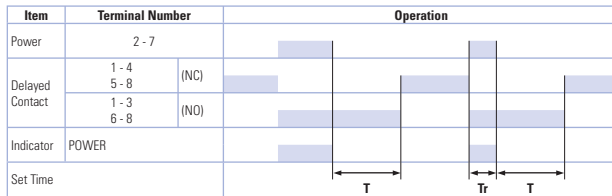
GT3F-2 (8-pin)

GT3F-2E (11-pin)

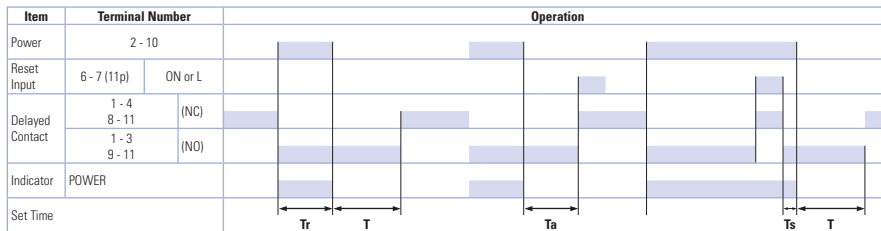
Delayed DPDT Output



8-Pin Type

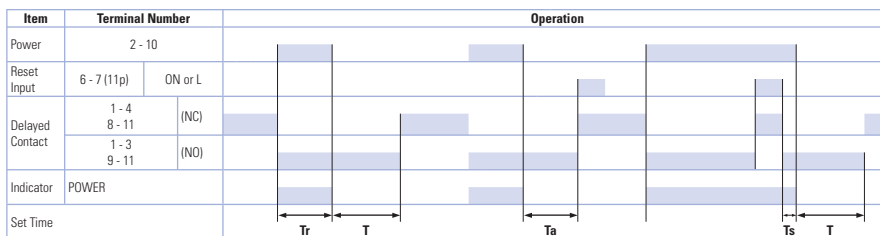


11-Pin Type



When power is applied, the NO contact closes. When power is removed, the timing period begins. When time has elapsed, the NO contact opens. Optional reset input will return contacts to original state before time elapses.

- T = Set time
- Ta = Shorter than set time
- Ts = 1 Second
- Tr = Minimum Power Application Time
- GT3F-1: 1 Second



Instructions: Setting GT3F Series Timers



Step 1	Desired Operation	Selection		Remarks
Select a time range that contains the desired period of time.	Base Time Ranges	① Dial Selector	② Time Range Selector	Time range can be selected from 1S and 10S using a flat screwdriver and five different dials of 0 to 1, 0 to 3, 0 to 6, 0 to 18, and 0 to 60 are displayed in the six windows by turning the Dial Selector, allowing for selecting the best suited scale. Note that the switch does not turn infinitely.
	0.1s to 1s	0 to 1	1s	
	0.1s to 3s	0 to 3		
	0.1s to 6s	0 to 6		
	0.1s to 10s	0 to 1	10s	
	0.3s to 30	0 to 3		
	0.6s to 60	0 to 6		
	1.8s to 180s	0 to 18		
6s to 600s	0 to 60			
Step 2				Remarks
The set time is selected by turning the ③ Setting Knob.				Setting Examples: 1. When the Setting Knob ③ is set at 2.5, with Dial Selector ① 0 to 3 and Time Range Selector ② 1S selected, then the set time is 2.5 seconds. 2. When the Setting Knob ③ is set at 5.0, with Dial Selector ① 0 to 60 and Time Range Selector ② 10S selected, then the set time is 500 seconds.

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

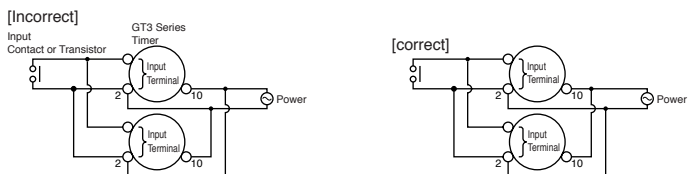
Terminal Blocks

Circuit Breakers

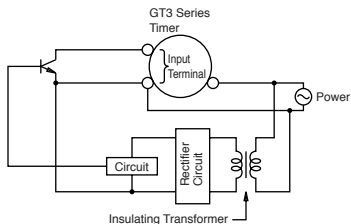
Instructions: Wiring Inputs

Inputs of GT3F

To avoid electric shock, do not touch the input signal terminal during power voltage application. Never apply the input signals to two or more GT3F timers using the same contact or transistor.



In a transistor circuit for controlling input signals, with its primary and secondary power circuits isolated, do not ground the secondary circuit.



On the GT3F timers, connect the input signals to terminal No.1 and 4 only on the 8-pin type; connect the input signals to terminal No. 6 and 7 only on the 11-pin type. Never apply voltage to other terminals; otherwise, the internal circuit may be damaged.

Input signal lines must be made as short as possible and installed away from power cables and power lines. Use shielded wires or a separate conduit for input wiring.

The GT3F, consisting of a high-impedance circuit, may not be reset due to the influence of an inductive voltage or residual voltage caused by a leakage current. If not reset, connect an RC filter or bleeder resistor between power terminals so that the voltage between power terminals can be reduced to less than 15% of the rated voltage.

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers