GT3A Series — Analog Timers

Key features of the GT3A series include:

- 4 selectable operation modes on each model
- External start, reset, and pause inputs
- Panel mount or socket mount
- Large variety of timing functions
- Power and output status indicating LEDs

UL, c-UL Listed
File No. E55996

Specifications

	GT3A-1	GT3A-2	GT3A-3	GT3A-4,-5,-6
Operation	Multi-mode			Multi-mode with inputs (11 pins)
Time Range	0.1s to 180 hours			
Rated Voltage	100 to 240V AC, 50/60Hz 12V DC 24V AC, 50/60Hz / 24V DC			
Contact Ratings	125V AC/250V AC, 3A; 30V DC, 1A (resistive load)		125V AC/250V AC, 5A; 30V DC, 5A (resistive load)	
Minimum Applicable Load	5V, 10mA (reference value)			
Voltage Tolerance	AF20 (100V AC): 85 to 264V AC AD24: 20.4 to 26.4V AC/21.6 to 26.4V DC D12: 10.8 to 13.2V DC			
Error	±0.2%, ±10 msec (repeat, voltage, temperature)			
Setting Error	±10% maximum			
Reset Time	60msec maximum			
Insulation Resistance	100MW minimum			
Dielectric Strength	Between power and output terminals: 2,000V AC, 1 minute Between contacts of different poles: 2,000V AC, 1 minute Between contacts of the same pole: 750V AC, 1 minute			
Power Consumption (approximate)	Delayed SPDT	Delayed SPDT + instantaneous SPDT	Delayed DPDT	Delayed DPDT
	10.8VA (200V AC, 60Hz)	13.5VA (200V AC, 60Hz)	14.4VA (200V AC, 60Hz)	4.7VA (100V AC, 60Hz), 14.4VA (200V AC, 60Hz)
	—	12VDC/1W 24VDC/0.7W 24VAC/1.2VA	12VDC/1.1W 24VDC/0.6W 24VAC/1.3VA	12VDC/0.8W 24VDC/0.6W 24VAC/1.3VA
Mechanical Life	10,000,000 operations minimum		5,000,000 operations minimum	
Electrical LIfe	50,000 operations minimum (rated load)		100,000 operations minimum (rated load)	
Weight (approximate)	63g	73g	79g	80g
Vibration Resistance	100m/sec^2 (approximate 10G)			
Shock Resistance	Operating extremes: 100m/sec^2 (approximate 10G) Damage limits: 500m/sec^2 (approximate 50G)			
Operating Temperature	–10 to +50°C			
Operating Humidity	45 to 85% RH			
Storage Temperature	–30 to +80°C			
Housing Color	Gray			

Part Numbers

GT3A-1, -2, -3

Mode Of Operation	Rated Voltage Code	Time Range	Output	Contact	Complete Part No.	
					8-Pin	11-Pin
A: ON-delay 1 B: Interval 1 C: Cycle 1 D: Cycle 3	AF20: 100 to 240V AC (50/60Hz)	0.1 seconds to 180 hours	250V AC, 3A, 30V DC, 1A (resistive load)	Delayed SPDT	GT3A-1AF20	GT3A-1EAF20
	AF20: 100 to 240V AC (50/60Hz) D12: 12V DC AD24: 24V AC (50/60Hz)/24V DC			Delayed SPDT + Instantaneous SPDT	GT3A-2AF20	GT3A-2EAF20
					GT3A-2D12	GT3A-2ED12
					GT3A-2AD24	GT3A-2EAD24
			240V AC, 5A, 24V DC, 5A (resistive load)	Delayed DPDT	GT3A-3AF20	GT3A-3EAF20
					GT3A-3D12	GT3A-3ED12
					GT3A-3AD24	GT3A-3EAD24

1. For wiring schematics and timing diagrams for GT3A-1, -2, -3, see pages 807 and 808 respectively.
2. For more details about time ranges, see instructions on page 812.
3. For socket and accessory part numbers, see page 838.

GT3A-4, -5, -6

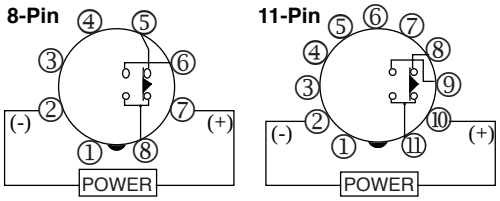
Mode of Operation	Rated Voltage Code	Time Range	Output	Contact	Input	Complete Part No.	
						A (11-pin)	B (11-pin)
A: ON-Delay 2 B: Cycle 2 C: Signal ON/OFF-Delay 1 D: Signal OFF-Delay 1	AF20: 100 to 240V AC (50/60Hz) D12: 12V DC AD24: 24V AC (50/60Hz)/24V DC	0.1 seconds to 180 hours	250V AC, 5A, 24V DC, 5A (resistive load)	Delayed DPDT	Start Reset Gate	GT3A-4AF20	GT3A-4EAF20
						GT3A-4D12	GT3A-4ED12
						GT3A-4AD24	GT3A-4EAD24
A: Interval 2 B: One-Shot Cycle C: Signal ON/OFF-Delay 2 D: Signal OFF-Delay 2	AF20: 100 to 240V AC (50/60Hz) AD24: 24V AC (50/60Hz)/24V DC					GT3A-5AF20	GT3A-5EAF20
						GT3A-5AD24	GT3A-5EAD24
A: One-Shot B: One-Shot ON-Delay C: One-Shot 2 D: Signal ON/OFF-Delay 3						GT3A-6AF20	GT3A-6EAF20
						GT3A-6AD24	GT3A-6EAD24

4. For wiring schematics and timing diagrams GT3A-4,-5,-6, see pages 809, 810, and 811 respectively.
5. For more details about time ranges, see instructions on page 812.
6. A (11-pin) and B (11-pin) differ in the way inputs are wired.
7. For socket and accessory part numbers, see page 838.
8. For the timing diagrams overview, see page 794.

Timing Diagrams/Schematics

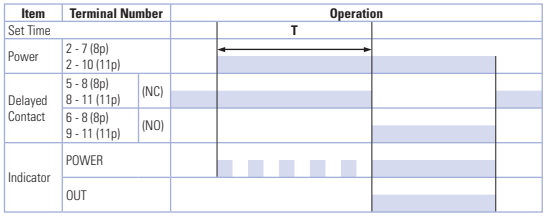
GT3A-1 Timing Diagrams
Delayed SPDT

Operation Mode Selection



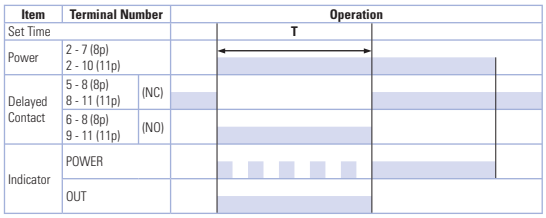
ON-Delay 1

MODE **A**



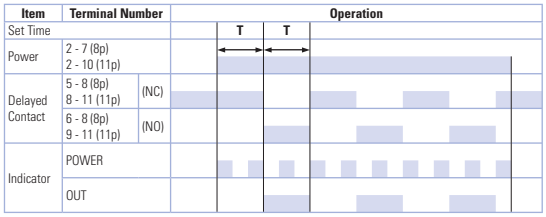
Interval 1

MODE **B**



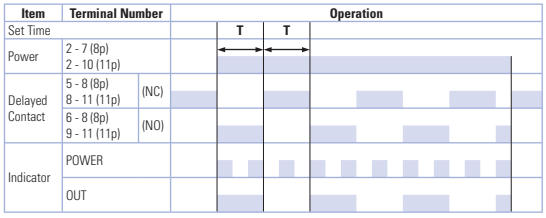
Cycle 1
(OFF first)

MODE **C**



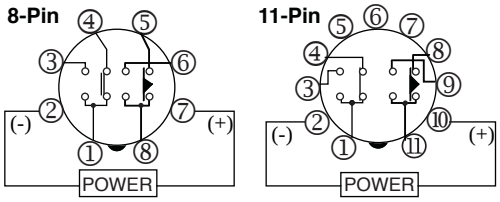
Cycle 3
(ON first)

MODE **D**



GT3A-2 Timing Diagrams
Delayed SPDT + Instantaneous SPDT

Operation Mode Selection



ON-Delay 1

MODE **A**

Item	Terminal Number		Operation
Set Time			T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	5 - 8 (8p) 8 - 11 (11p)	(NC)	
	6 - 8 (8p) 9 - 11 (11p)	(NO)	
Instantaneous Contact	1 - 4	(NC)	
	1 - 3	(NO)	
Indicator	POWER		
	OUT		

Interval 1

MODE **B**

Item	Terminal Number		Operation
Set Time			T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	5 - 8 (8p) 8 - 11 (11p)	(NC)	
	6 - 8 (8p) 9 - 11 (11p)	(NO)	
Instantaneous Contact	1 - 4	(NC)	
	1 - 3	(NO)	
Indicator	POWER		
	OUT		

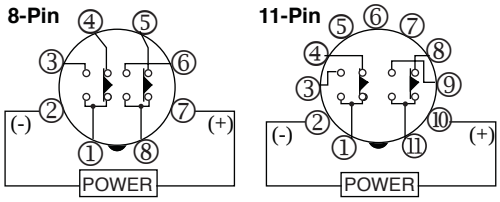
Cycle 1
(OFF first)

MODE **C**

Item	Terminal Number		Operation
Set Time			T T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	5 - 8 (8p) 8 - 11 (11p)	(NC)	
	6 - 8 (8p) 9 - 11 (11p)	(NO)	
Instantaneous Contact	1 - 4	(NC)	
	1 - 3	(NO)	
Indicator	POWER		
	OUT		

GT3A-3 Timing Diagrams
Delayed DPDT

Operation Mode Selection



ON-Delay 1

MODE **A**

Item	Terminal Number		Operation
Set Time			T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	1 -4, 5 - 8 (8p) 1 -4, 8 - 11 (11p)	(NC)	
	1 -3, 6 - 8 (8p) 1 -3, 9 - 11 (11p)	(NO)	
Indicator	POWER		
	OUT		

Interval 1

MODE **B**

Item	Terminal Number		Operation
Set Time			T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	1 -4, 5 - 8 (8p) 1 -4, 8 - 11 (11p)	(NC)	
	1 -3, 6 - 8 (8p) 1 -3, 9 - 11 (11p)	(NO)	
Indicator	POWER		
	OUT		

Cycle 1
(OFF first)

MODE **C**

Item	Terminal Number		Operation
Set Time			T T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	1 -4, 5 - 8 (8p) 1 -4, 8 - 11 (11p)	(NC)	
	1 -3, 6 - 8 (8p) 1 -3, 9 - 11 (11p)	(NO)	
Indicator	POWER		
	OUT		

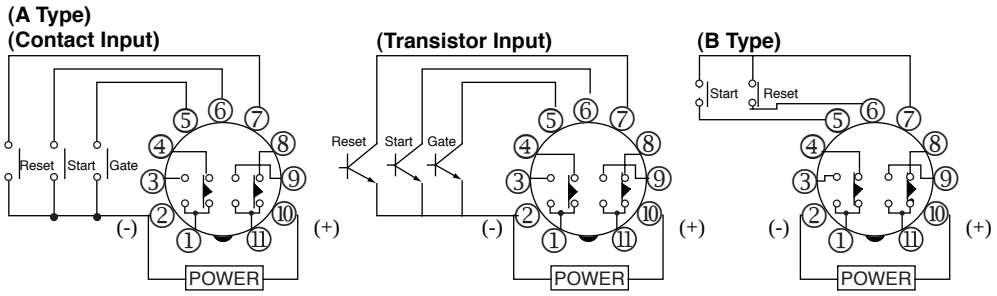
Cycle 3
(ON first)

MODE **D**

Item	Terminal Number		Operation
Set Time			T T
Power	2 - 7 (8p) 2 - 10 (11p)		
Delayed Contact	1 -4, 5 - 8 (8p) 1 -4, 8 - 11 (11p)	(NC)	
	1 -3, 6 - 8 (8p) 1 -3, 9 - 11 (11p)	(NO)	
Indicator	POWER		
	OUT		

GT3A-4 Timing Diagrams
Delayed DPDT

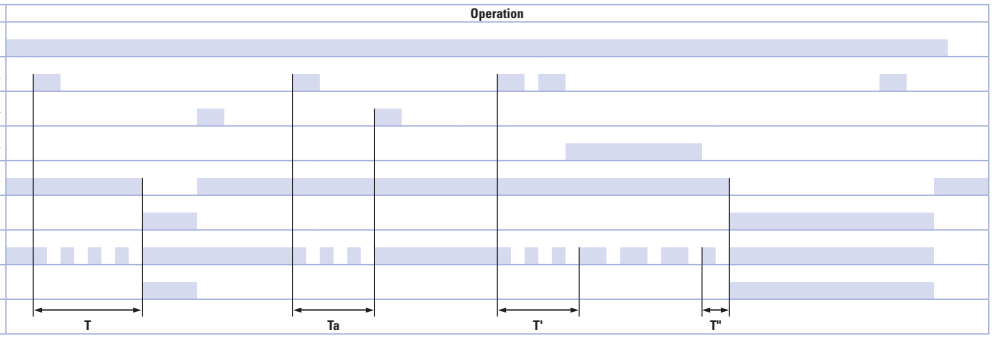
Operation
Mode Selection



ON-Delay 2

MODE **A**

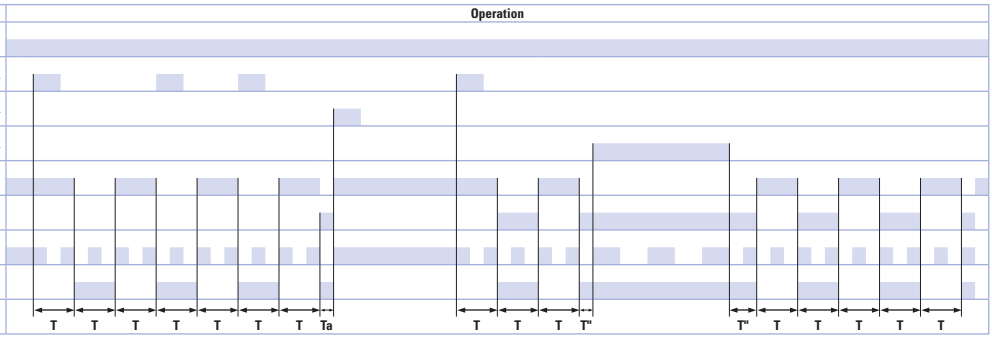
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



Cycle 2

MODE **B**

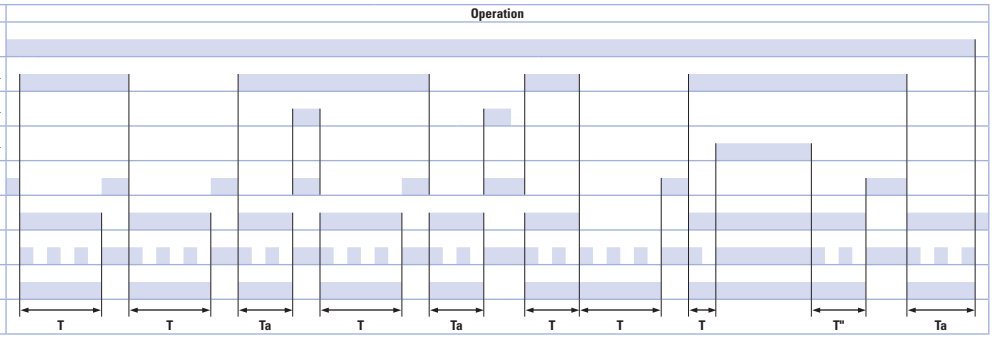
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



Signal ON/OFF-Delay 1

MODE **C**

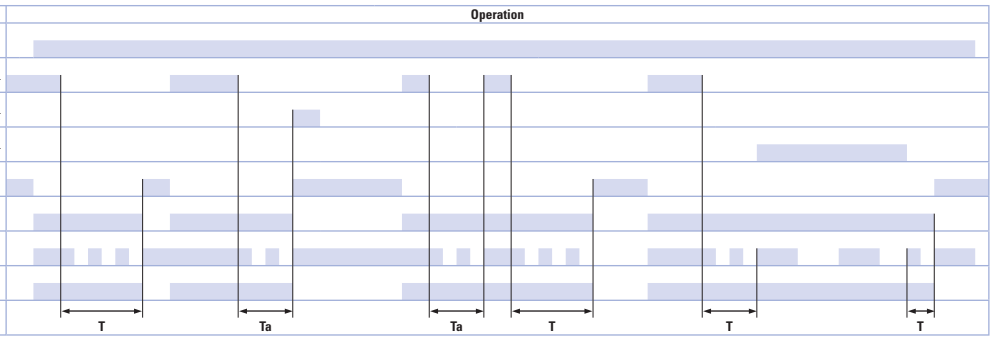
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



Signal OFF-Delay 1

MODE **D**

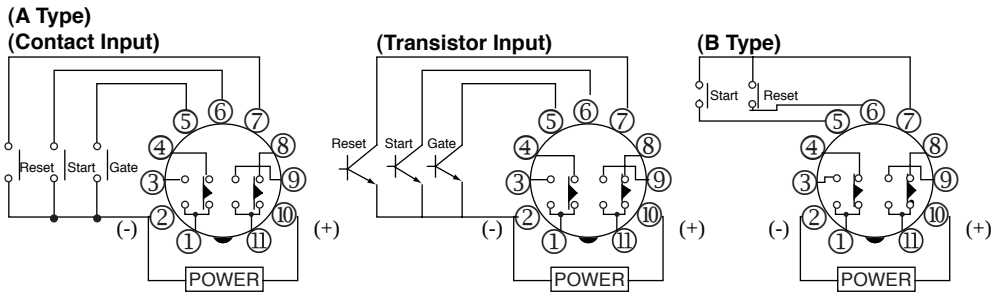
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



T = Set time Ta = Shorter than set time
T = T' + T"

GT3A-5 Timing Diagrams
Delayed DPDT

Operation Mode Selection

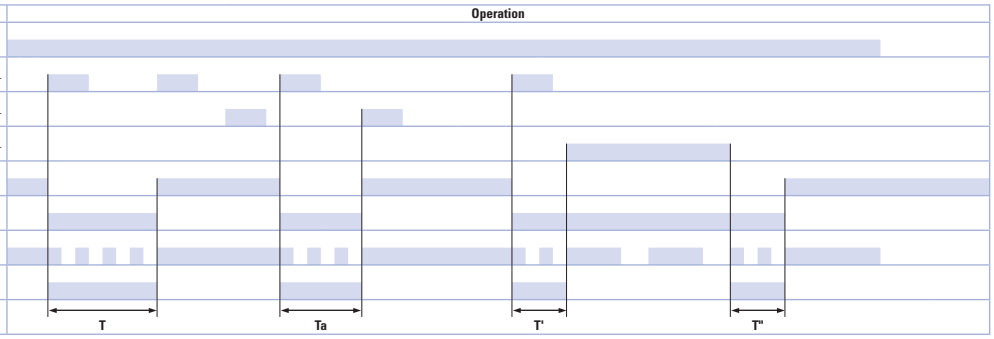


Interval 2

MODE **A**

Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			

Operation

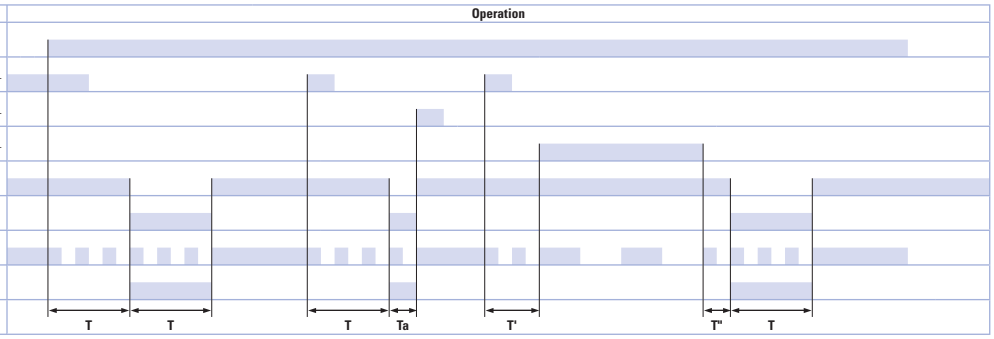


One-Shot Cycle

MODE **B**

Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			

Operation

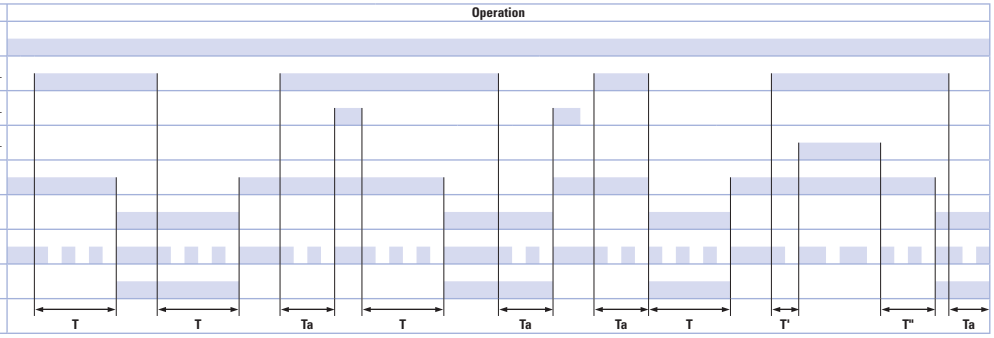


Signal ON/OFF-Delay 2

MODE **C**

Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			

Operation

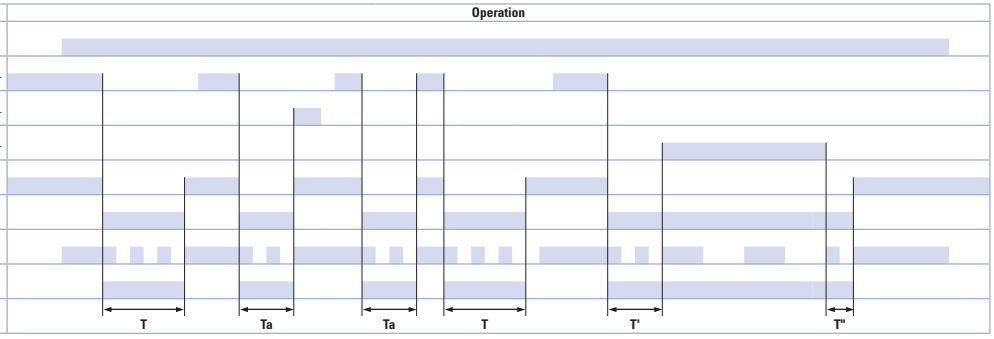


Signal OFF-Delay 2

MODE **D**

Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			

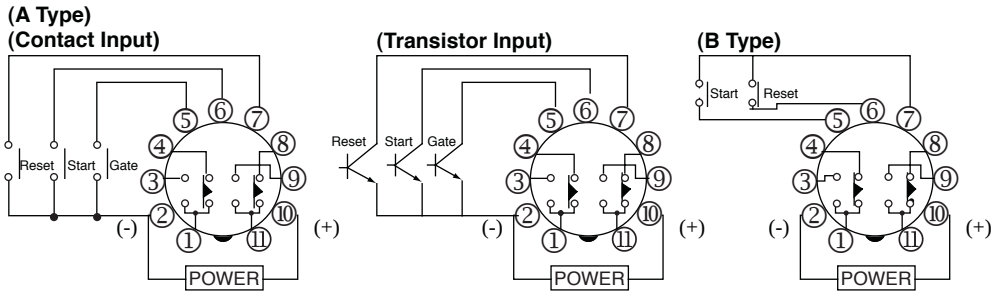
Operation



T = Set time Ta = Shorter than set time
T = T' + T"

GT3A-6 Timing Diagrams
Delayed DPDT

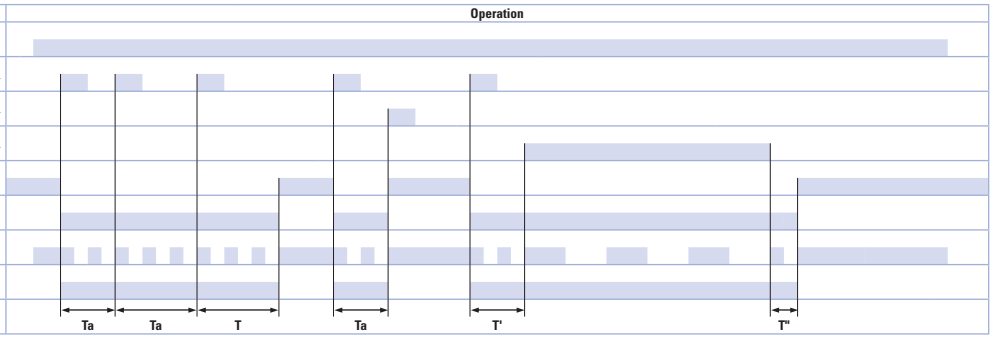
Operation Mode Selection



One-Shot 1

MODE **A**

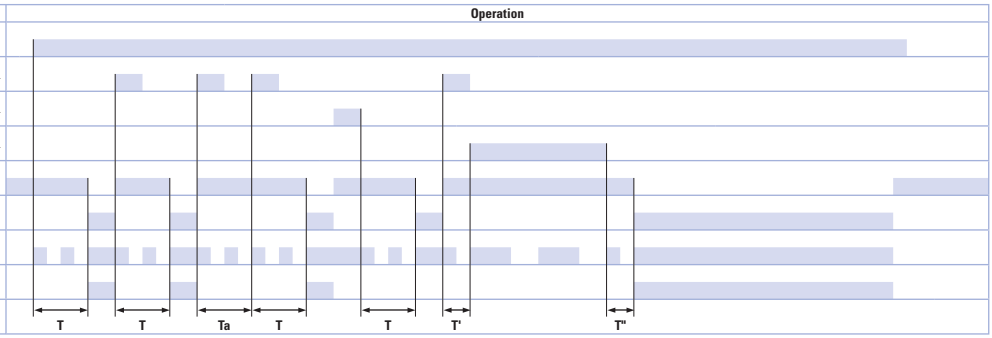
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



One-Shot ON-Delay

MODE **B**

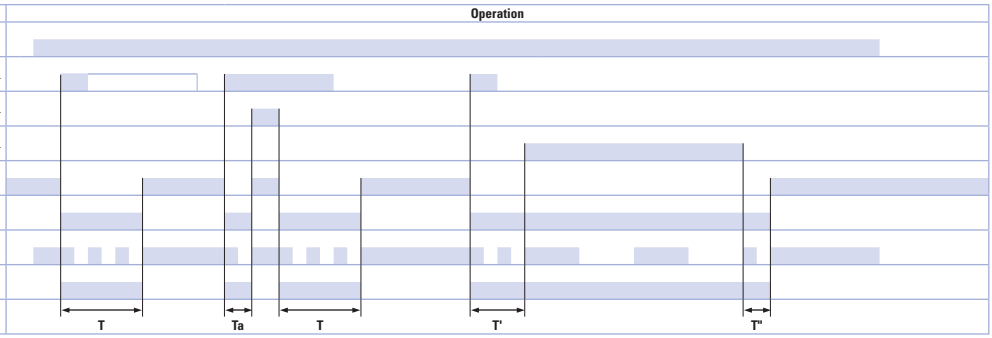
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



One-Shot 2

MODE **C**

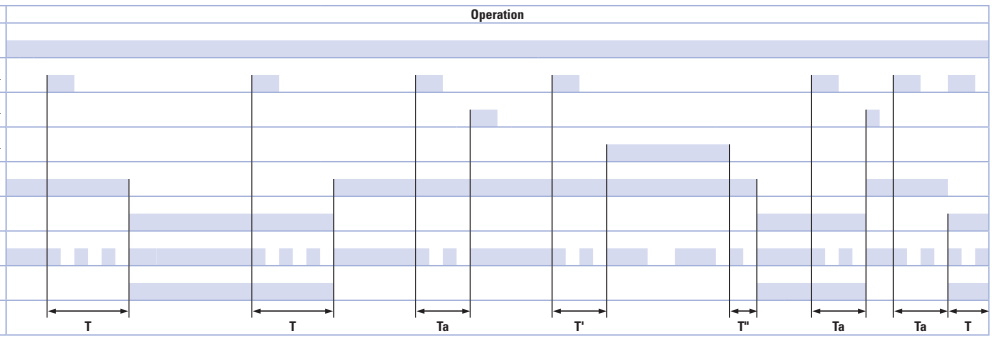
Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



Signal ON/OFF-Delay 3

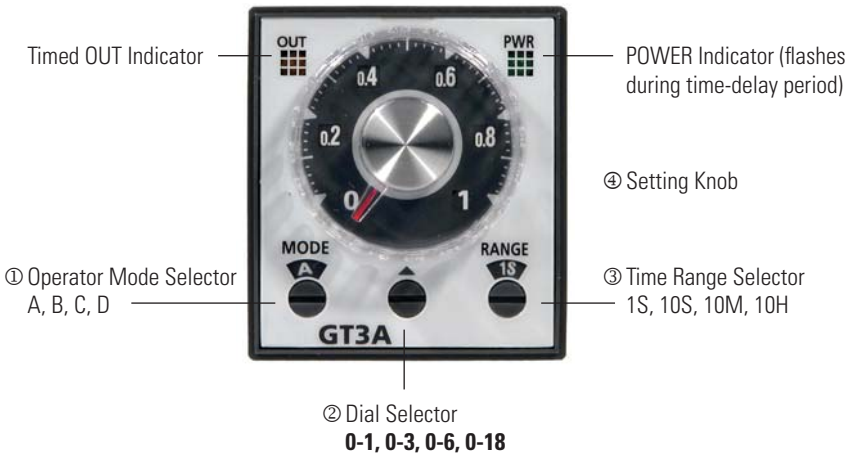
MODE **D**

Item	Terminal Number		
Power	2 - 10 POWER		
Input	Start	2 - 6 (A) 5 - 7 (B)	ON or L
	Reset	2 - 7 (A) 6 - 7 (B)	ON or L
	Gate	2 - 5 (A)	ON or L
Delayed Contact	1 - 4 8 - 11		(NC)
	1 - 3 9 - 11		(NO)
Indicator	POWER		
	OUT		
Set Time			



T = Set time Ta = Shorter than set time
T = T' + T"

Instructions: Setting GT3A Series Timers



Step 1.	Desired Mode of Operation		Selection	Remarks
	For Timers	Mode of Operation	① Operation Mode Selector	
Select the desired mode of operation.	GT3A-1 GT3A-2 GT3A-3	ON-delay 1	A	The desired operation mode can be selected from the A, B, C, and D modes using the Operation Mode Selector. Change the operation mode from A to B, C, and D in turn by turning the operation mode selector clockwise using a flat screwdriver which is a maximum of 0.156" (4mm) wide. The selected mode is displayed in the window.
		Interval 1	B	
		Cycle 1	C	
		Cycle 3	D	
	GT3A-4	ON-delay 2	A	
		Cycle 2	B	
		Signal ON/OFF-delay 1	C	
		Signal OFF-delay 1	D	
	GT3A-5	Interval 2	A	
		One-shot cycle	B	
		Signal ON/OFF-delay 2	C	
		Signal OFF-delay 2	D	
	GT3A-6	One-shot 1	A	
		One-shot ON-delay	B	
		One-shot 2	C	
		Signal ON/OFF-delay 3	D	

Step 2.	Desired Time Range	Selection		Remarks
	Time Ranges	② Dial Selector	③ Time Range Selector	
Select the time range that contains the desired time period.	0.05 seconds to 1 second	0-1	1S	The desired time range is selected by setting both ② Dial Selector and ③ Time Range Selector.
	0.1 seconds to 3 seconds	0-3		
	0.1 seconds to 6 seconds	0-6		
	0.15 seconds to 18 seconds	0-18		
	0.1 seconds to 10 seconds	0-1	10S	
	0.3 seconds to 30 seconds	0-3		
	0.6 seconds to 60 seconds	0-6		
	1.8 seconds to 180 seconds	0-18		
	6 seconds to 10 minutes	0-1	10M	
	18 seconds to 30 minutes	0-3		
	36 seconds to 60 minutes	0-6		
	108 seconds to 180 minutes	0-18		
	6 minutes to 10 hours	0-1	10H	
	18 minutes to 30 hours	0-3		
	36 minutes to 60 hours	0-6		
	108 minutes to 180 hours	0-18		

Step 3.	Selection
Set the precise period of time desired by using the ④ Setting Knob.	