

Time Range



Functions Diagram

A:On Delay (Power On)

When the input voltage U is applied, time delay t begins. Relay contacts R change state after time delay is complete. Contacts R return to their initial state when input voltage U is removed. Trigger switch is not used in this function.



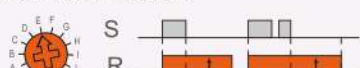
C: Repeat Cycle (Starting Off)

When input voltage U is applied, time delay t begins. When time delay t is complete, relay contacts R change state for time delay t . This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.



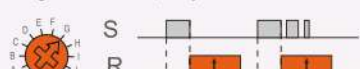
E:Off Delay (S Break)

Input voltage U must be applied continuously. When trigger switch S is closed, relay contacts R change state. When trigger switch S is opened, delay t begins. When delay t is complete, contacts R return to their initial state. If trigger switch S is closed before time delay t is complete, then time is reset. When trigger switch S is opened, the delay begins again, and relay contacts R remain in their energized state. If input voltage U is removed, relay contacts R return to their initial state.



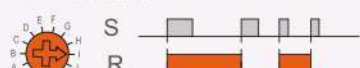
G:Single Shot Trailing Edge (Non-Retriggerable)

Upon application of input voltage U , the relay is ready to accept trigger signal S . Upon application of the trigger signal S , the relay contacts R transfer and the preset time t begins. At the end of the preset time t , the relay contacts R return to their normal condition unless the trigger switch S is opened and closed prior to time out t (before preset time elapses). Continuous cycling of the trigger switch S at a rate faster than the preset time will cause the relay contacts R to remain closed. If input voltage U is removed, relay contacts R return to their initial state.



I:Latching relay

Input voltage U must be applied continuously. Output changes state with every trigger switch S closure. If input voltage U is removed, relay contacts R return to their initial state.



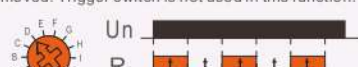
B:Interval (Power On)

When input voltage U is applied, relay contacts R change state immediately and timing cycle begins. When time delay is complete, contacts return to initial state. When input voltage U is removed, contacts will also return to their initial state. Trigger switch is not used in this function.



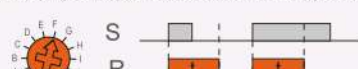
D: Repeat Cycle (Starting On)

When input voltage U is applied, relay contacts R change state immediately and time delay t begins. When time delay t is complete, contacts return to their initial state for time delay t . This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.



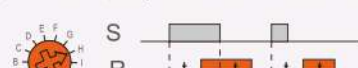
F:Single Shot

Upon application of input voltage U , the relay is ready to accept trigger signal S . Upon application of the trigger signal S , the relay contacts R transfer and the preset time t begins. During time-out, the trigger signal S is ignored. The relay resets by applying the trigger switch S when the relay is not energized.



H:On/Off Delay

Input voltage U must be applied continuously. When trigger switch S is closed, time delay t begins. When time delay t is complete, relay contacts R change state and remain transferred until trigger switch S is opened. If input voltage U is removed, relay contacts R return to their initial state.

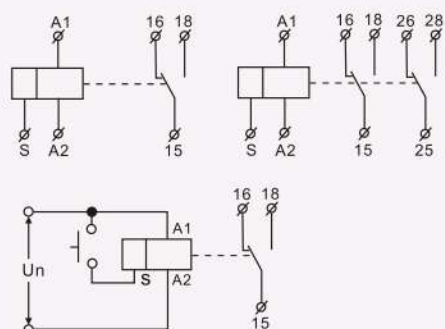


J:Pulse generator

Upon application of input voltage U, a single output pulse of 0.5 seconds is delivered to relay after time delay t. Power must be removed and re-applied to repeat pulse. Trigger switch is not used in this function.

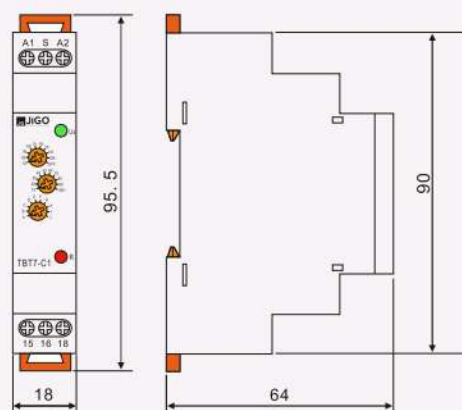


Wiring Diagram



PS.As shown, S-A2 can load (relay, lamp,contactor...) .the load still power on when S closed

Dimensions(mm)



MULTI-FUNCTION TIME RELAY

General

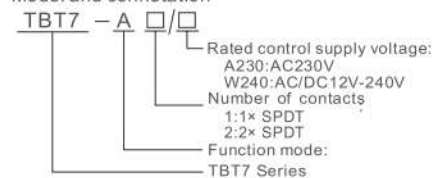
Applications

-Multifunction time relay can be used for electrical appliances, control of lights, heating, motors, pumps and fans (10 functions, 10 time ranges, multi-voltage).

Function Features

- 10 functions:
 - 5 time functions controlled by supply voltage
 - 4 time functions controlled by control input
 - 1 function of latching relay
- Comfortable and well-arranged function and time-range setting by rotary switches.
- Time scale 0.1 s - 10 days divided into 10 ranges.
- Relay status is indicated by LED.
- 1-MODULE, DIN rail mounting.

Model and connotation



TBT7-A1

Technical parameters	TBT7-A1
Function	A,B,C,D,E,F,G,H,I,J
Supply terminals	A1-A2
Voltage range	AC/DC12-240V(50-60Hz)
Burden	AC0.09-3VA/DC0.05-1.7W
Voltage range	AC230V(50-60Hz)
Power input	ACmax.6VA/1.3W
Supply voltage tolerance	-15%;+10%
Supply indication	green LED
Time ranges	0.1s-10days,ON,OFF
Time setting	potentionmeter
Time deviation	10%-mechanical setting
Repeat accuracy	0.2%-set value stability
Temperature coefficient	0.05%/°C, at=20°C(0.05°F = at 68°F)
Output	1× SPDT
Current rating	1×16A(AC1)
Switching voltage	250VAC/24VDC
Min. breaking capacity DC	500mW
Output indication	red LED
Mechanical life	1×10 ⁷
Electrical life(AC1)	1×10 ⁵
Reset time	max.200ms
Operating temperature	-20°C to +55°C (-4°F to 131°F)
Storage temperature	-35°C to +75°C (-22°F to 158°F)
Mounting/DIN rail	Din rail EN/IEC 60715
Protection degree	IP40 for front panel/IP20 terminals
Operating position	any
Overvoltage cathegory	III.
Pollution degree	2
Max. cable (size) mm ²	solid wire max. 1×2.5 or 2×1.5 with sleeve max. 1×2.5(AWG 12)
Dimensions	95.5×18×64mm
Weight	1×SPDT:W240 62g
Standards	EN 61812-1, IEC6947-5-1