

TIMER SWITCH W/POWER RESERVE

INSTRUCTION MANUAL

- Please read through this instruction manual before starting to use this time switch to be familiar with the proper operation.
- After you read this, please keep it so as to refer it at any time.

PRECAUTIONS FOR SAFETY

⚠ WARNINGS

- Do not use this time switch for the machinery which will affect People's life or the society seriously if it gets out of order (medical equipment or large-scale facility, for instance).
- Never fail to reserve safety margin in performance and characteristic values, and to build in safety devices such as redundant circuit when this time switch is used for the machine (heater, refrigerator etc.) which may affect the property if the switch gets out of order.

⚠ CAUTIONS

- **Do not disassemble nor revamp this time switch.**
Might cause electric shock, a fire or other failures.
Never fail to ask selling or working store for repair or checkout.
- **Do not touch the terminal while supplying power.**
You may be struck by electricity.
- **If found rust at the terminal or the like, replace it as soon as possible.**
The rust will cause improper contact and then heat and a fire.
- **Do not pour water nor oil.**
Might cause electric shock, a fire or some other failures.

① OPERATION TIME SETTING

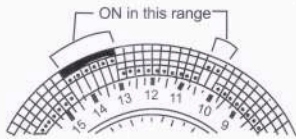
Set the Setting Tip at the required time slanting toward inside the dial (OFF) or outside (ON).

NOTE

- 1 Do not move the four setting tips before/after the present time indication (▼). You can not set the time in the said range, if set, there might be any failure.
- 2 In case the required time falls in the said range, turn the minute dial in arrow direction before setting.

[Ex] In case shown in the figure

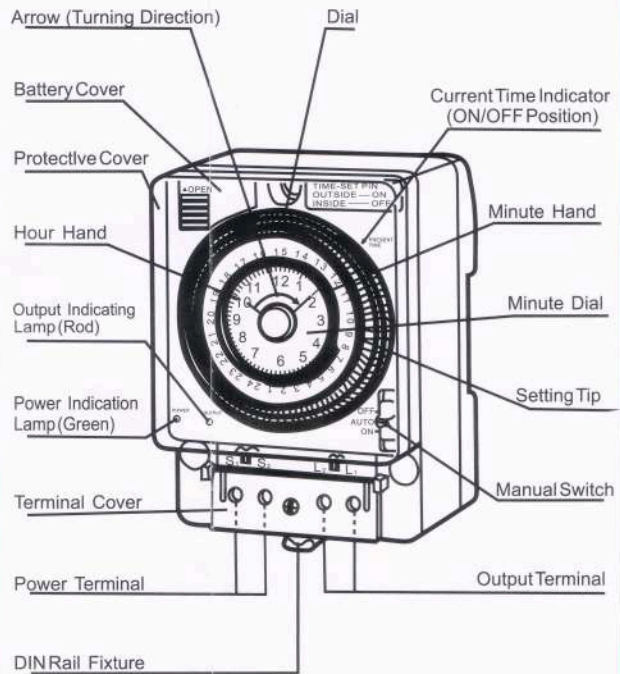
- At 10:00 "ON"
- At 10:30 "OFF"
- At 13:00 "ON"
- At 14:30 "OFF"



NOTE

To set some interval continuously, sequentially fold down neighboring tips. Fold down them until "click" sound can be heard

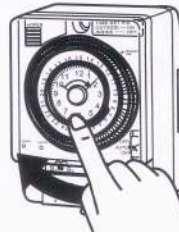
PARTS NAME



② PRESENT TIME SETTING

- Turn the minute dial in arrow direction (clockwise) to set the present time indication.

NOTE



Never fail to turn the minute dial in arrow direction. If turned by force in the opposite direction, it be damaged.

Do not turn directly the dial. If turned, it might cause some trouble.

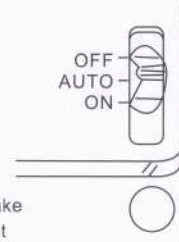
The dial is divided into 24 hours.

Set the time not to confuse the morning and the afternoon.

③ MANUAL SWITCH SETTING

- Set the Manual Switch at [AUTO] position.
[AUTO]: The output turns ON and OFF according to the setting times.
- [ON]: The output turns ON regardless of the setting.
(Continuous ON)
- [OFF]: The output turns OFF regardless of the setting.
(continuous OFF)

- By using this manual switch, you can make a test for load operation. Set the switch at [ON] or [OFF] position in such a case.



NOTE

After the test, never fail to set back to [AUTO] position.

CAUTION FOR USE

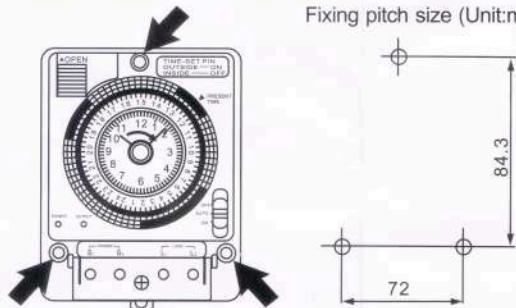
- Never fail to turn the Minute Dial in arrow direction when setting the time. If turned by force in the opposite direction, or turned directly the dial, it might be damaged.
- The built-in battery cell sometimes may be reduced in capacity due to the self-discharge when you purchase the present switch. If discharged completely, the clock will not work even when turned on the power supply. In such a case, take two to three minutes for charging and then set the current time.

INSTALLATION

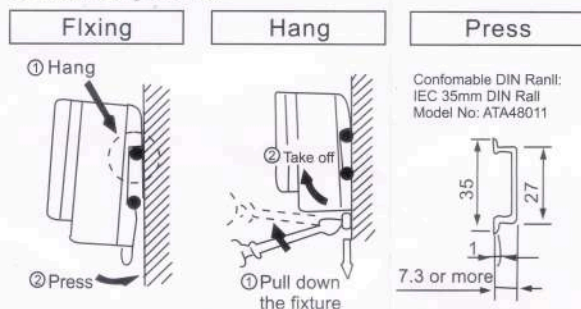
- ① When mounted (exposed) on a surface

Fix the switch at the three holes with screws or the like.

Fixing pitch size (Unit:mm)



- ② When using DIN Rail



TROUBLE SHOOTING

Symptom	Cause and Remedies
The load will not start at the preset time:	This time switch is divided into 24 hours. Don't you mis-set the time in the afternoon? Make sure the present time of the time switch. This is a mechanical time switch and there might be an error in the range of ± 3 minutes.
The clock gets out of order:	If the power failure lasts more than the compensating time (100 hours), the clock stops to cause deviation in the present time. Set again the present time in such a case.
Clock stops/Power indication lamp flashes:	battery is at the end of its life span. The battery need to be replaced with a new one. Please ask the working store.

SPECIFICATION

Operation Power Voltage		100-240V AC	
Allowable Operating Voltage		85~264V AC	
Power Source Frequency		50Hz/60Hz common use	
Driving Method		Quarts Motor	
Power Failre Compensation		300 hours	
Time Precision		Within ± 15 seconds per month (at temperature 25℃)	
Program Cycle		24hours	
Consumption Power		110V AC 1W • 220V AC 2W	
OUTPUT	Circuit Quantity	1circuit	
	Circuit Contiguration	Same Ctrcuit (voltage-applied contact ouptut)	
	Contact Configuration	Single Pole,Single-through (—○—)	
	Manual ON/OFF	With ON/AUTO/OFF Switch	
	Contact Capacity	Resistance	15A
		Incandescent Lamp	10A
		Induction(cos ϕ =0.7)	12A
Motor (cos ϕ =0.7)		110V AC 750W • 220V AC 1500W	
Operation time setting	Method	Setting Tip all built-in	
	Minimum Unit	15minutes	
	Minimum Interval	15minutes	
	Number of operations	96as standard	
Working Ambient Temperatute		-10℃ ~+50℃	
Working Ambient Humidity		85% or less	
Mass		250g	

BATTERY FOR POWER FAILURE COMPENSATION

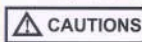
- ① Power Failure Compensating Time

This timeswitch is equipped with a built-in battery to work in service interruption.

- When turned on the time switch, the battery is to be charged automatically.
 - The battery is charged fully to be able to compensate power failure for 100 hours when supplied power 3 days in succession.
 - Frequent power failure and service interruption for a long time will shorten the life span of the storage battery.
- So please take care.

- ② Replacement

The life span of the battery is about 3 years. However, the hotter the service temperature, the shorter the life. Please replace with a new one either.



CAUTIONS Never fail to turn off the Power when replacing the cell, You might be struck by electricity.

1. Take off the battery cover.
2. Take out the battery of the case to disconnect the connector.
3. Connect the connector of the renewed battery and put it in the case properly.
4. Never fail to place the cover for the battery when used.



CONNECTING EXAMPLES

- Before wiring, draw the connecting diagram of the whole system including the devices to be controlled by the time switch.

in case of the same power supply for both time switch and load		
In case time sensor location off body load	Time Switch	
	Power supply	
	Load	
In case of load over the rated capacity or three-phase load control	Single phase	Time Switch Power supply Load Electromagnetic Contactor
	three phase	Time Switch Power supply Load Electromagnetic Switch (NOTE) Take off the jumper the shown with the dotted line. Connected to the electromagnetic switch. If connected so such, the switching apparatus unit not function properly.