APT-8S / APT-9S

WEEKLY PROGRAMMABLE TIMER

User's Manual

RESTRICTIONS ON USE

When using this product in applications that require particular safety or when using this product in important facilities, please pay attention to the safety of the overall system and equipment. Install fail-safe mechanisms, perform redundancy checks and periodic inspections and adopt other appropriate safety measures when it is necessary.

SAFETY PRECAUTION This manual uses the following symbols to ensure safe operation of this timer.

⚠ **WARNING** Warnings are indicated when mishandling this controller might result in death or serious injury to user.

⚠ **CAUTION** Cautions are indicated when mishandling this controller might result in minor injury to the user, or only physical damage to the timer.

⚠ WARNING

- Note this incorrect wiring of this controller can damage it and lead to other hazards. Make sure the controller has been correctly wired before turning the power ON.
- Before wiring, or removing / mounting the controller, be sure to turn the power OFF. Failure to do so might cause electric shock.
- Do not touch electrically charged parts such as the power terminals. Doing so might cause electric shock.
- Do not disassemble the controller. Doing so might cause electric shock or faulty operation.

⚠ CAUTION

- Use the controller within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere and etc.). Failure to do so might cause fire or faulty operation.
- Firmly tighten the terminal screws. Insufficient tightening of terminal screws might cause electric shock or fire.

SPECIFICATIONS

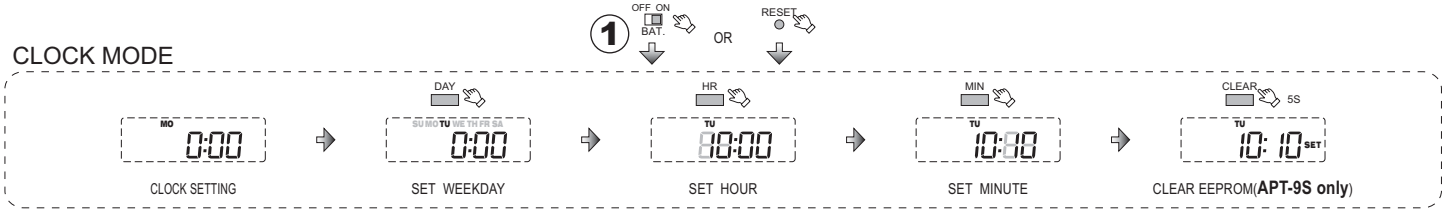
Operating voltage	AC/DC : 12 ~ 48V / AC/DC : 100 ~ 240V
Allowable operating voltage range	85 ~ 110% of rated operating voltage
Rated frequency	50 / 60 Hz
Contact rating	250VAC 10A (Resistive load)
Indicator operating	POWER - Red / RELAY ON - Green
Power consumption	Approx. 3.3VA
Life	Mechanical : 5,000,000 times / Electrical : 100,000 times
Ambient temperature	-10 ~ +50 °C
Ambient humidity	MAX 85% RH
Weight	Approx. 170g

BUTTON and SWITCH FUNCTIONS

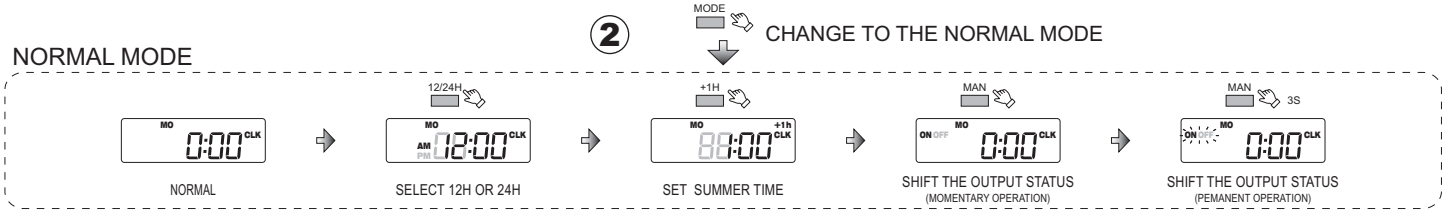
- DAY : Weekday setting
- HR : Hour setting
- MIN : Minute setting
- SEC : Second setting
- MODE : Mode status selecting
- PROG. : Program number setting
- START : Normal mode setting
- CLEAR : Clear setting
- 12/24H : 12H or 24H setting
- +1H : Daylight-saving-time setting
- MAN : Mandatory contact enable or disable
- RESET : Program reset
- TIMER : Timer mode
- PULSE : Pluse mode
- min : Unit of minute (in TWIN TIMER)
- sec : Unit of second (in TWIN TIMER)
- ON : Power on (Battery on)
- OFF : Power off (Battery off)

OPERATING FLOWCHART

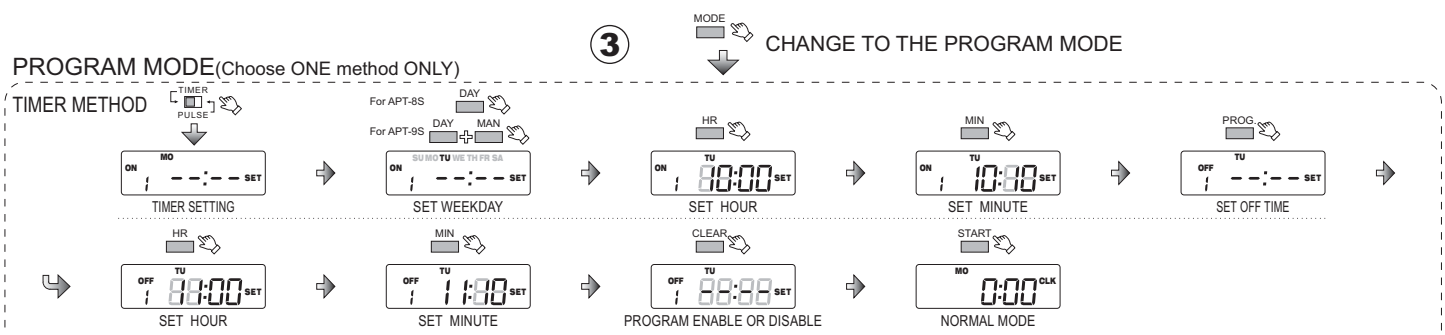
CLOCK MODE



NORMAL MODE

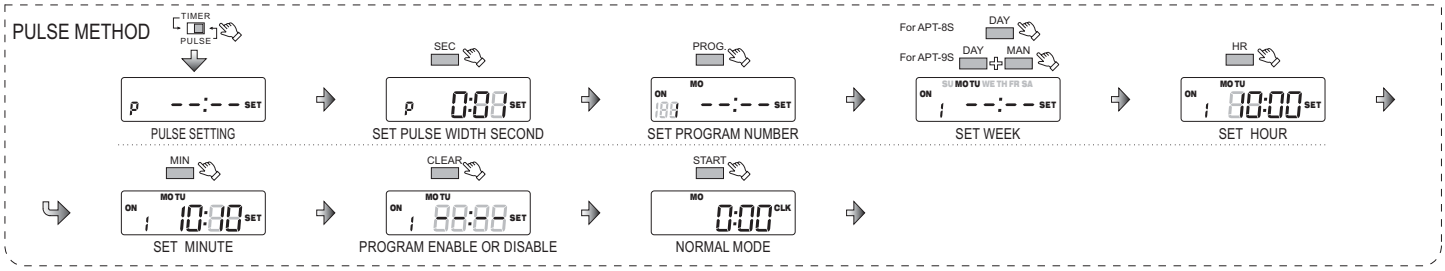


PROGRAM MODE(Choose ONE method ONLY)



Setting example :

There is a machine needed to be turned on at 8:00 AM and to be turned off at 5:00 PM, from Monday to Friday.
In addition, the machine needed to be turned on at 9:00 AM to 11:00 AM every Saturday for inspection.
The correct setting display should be as follows.



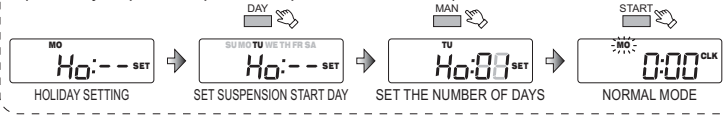
Setting example :

The factory has a buzz to remind workers their business hours, break time and etc. The buzz should be activated at 8:00, 12:00, 13:00, and 17:00 from Monday to Saturday. The buzz should be activated 10 seconds every time.
The correct setting display should be as follows.

HOLIDAY SUSPENSION MODE

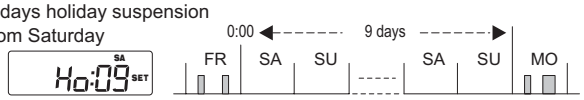
④ MODE CHANGE TO THE HOLIDAY SUSPENSION MODE

(You may skip this step and setup this function later.)



Setting example :

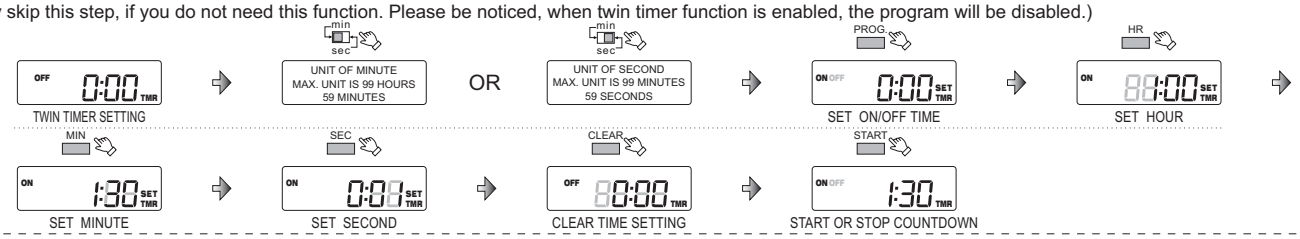
9 days holiday suspension from Saturday



TWIN TIMER MODE

⑤ MODE CHANGE TO THE TWIN TIMER MODE

(You may skip this step, if you do not need this function. Please be noticed, when twin timer function is enabled, the program will be disabled.)

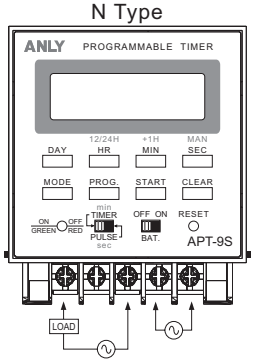


MODE BACK TO THE CLOCK MODE

CONNECTION

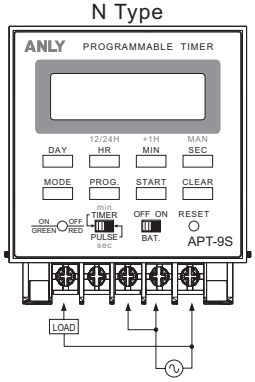
When a time switch and load power supply are separate.

N Type



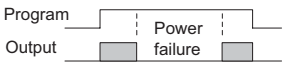
When a time switch and load power supply are the same.

N Type

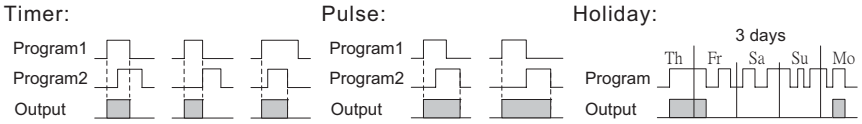


POWER BACKUP FEATURE

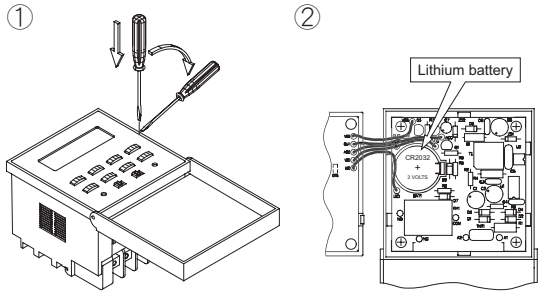
The timer retains clock operation and program memory when external power fail. With external power failure, the contact position will be held in OFF position until the power is restored. (See right chart) The program will stays ON regardless of the external power failure. (When program setting is ON) However, when external power is restored, it also restores contact status.



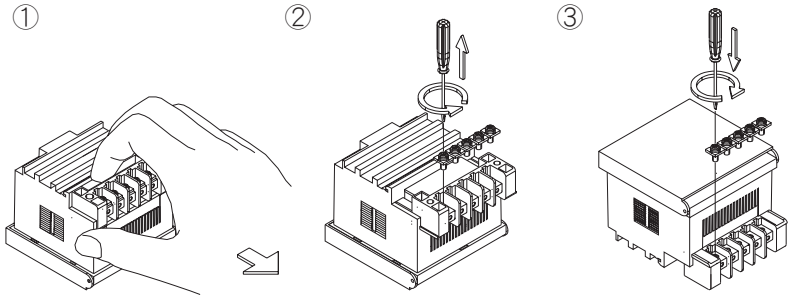
PROGRAM OVERLAPPING TIMEING CHART



BATTERY CHANGE



CONVERT Y TYPE (Flush Mounting) TO N TYPE (Surface Mounting)



CONVERT N TYPE (Surface Mounting) TO Y TYPE (Flush Mounting)