

# Autonics Weekly/Yearly Timer LE365S-41

## M A N U A L



Thank you very much for selecting Autonics products.  
For your safety, please read the following before using.

### Caution for your safety

- Please keep these instructions and review them before using this unit.
- Please observe the cautions that follow:
  - Warning** Serious injury may result if instructions are not followed. Product may be damaged, or injury may result if instructions are not followed.
  - Caution** The following is an explanation of the symbols used in the operation manual.
    - Injury or danger may occur under special conditions.

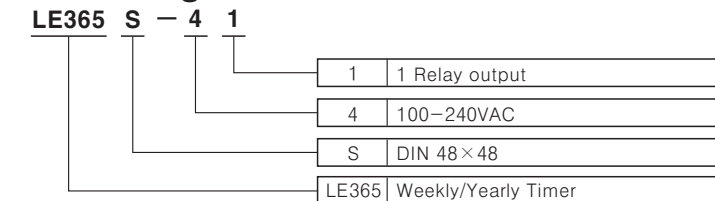
### Warning

- In case of using this unit with machinery(Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it is required to install fail-safe device.** It may cause a fire, human injury or damage to property.
- It should be mounted on Panel to use.** It may give an electric shock.
- Do not connect, inspect and repair when power is ON.** It may give an electric shock.
- Do not disassemble or modify this unit. Please contact us if it is required.** It may give an electric shock and cause a fire.
- Lithium battery is used for memory protection in this product, therefore do not disassemble or burn up. Please contact Autonics to replace battery.** It may cause an explosion.
- Safe using for battery** This battery has combustibles including lithium organic solvent, it may cause a fire, exothermicity, leakage and explosion, please keep the following.
  - Do not charge, short, disassemble, transform, heating and throw in a fire.
  - Do not solder on a battery directly.

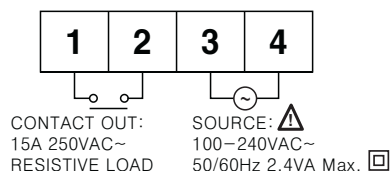
### Caution

- This unit shall not be used outdoors.** It might shorten the life cycle of the product or give an electric shock.
- Please use power input terminal wire over AWG NO. 20(0.50mm<sup>2</sup>), relay output terminal wire over AWG NO. 14(2.50mm<sup>2</sup>) and tighten terminal screw with 0.74-0.90N·m strength.** It may cause a malfunction or fire due to contact failure.
- Please observe the rated specifications.** It might shorten the life cycle of the product and cause a fire.
- In cleaning the unit, do not use water or an organic solvents.** It may give an electric shock and fire.
- Do not use this unit at place where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration and impact etc.** It may cause a fire or explosion.
- Do not inflow dust or wire dregs into the unit.** It may cause a fire or malfunction.

### Ordering information

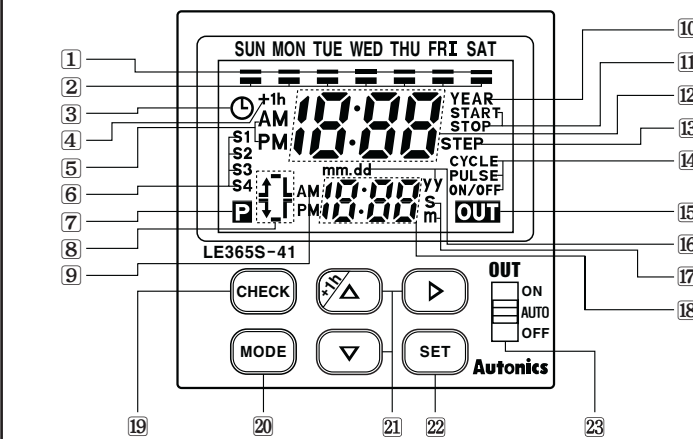


### Connections



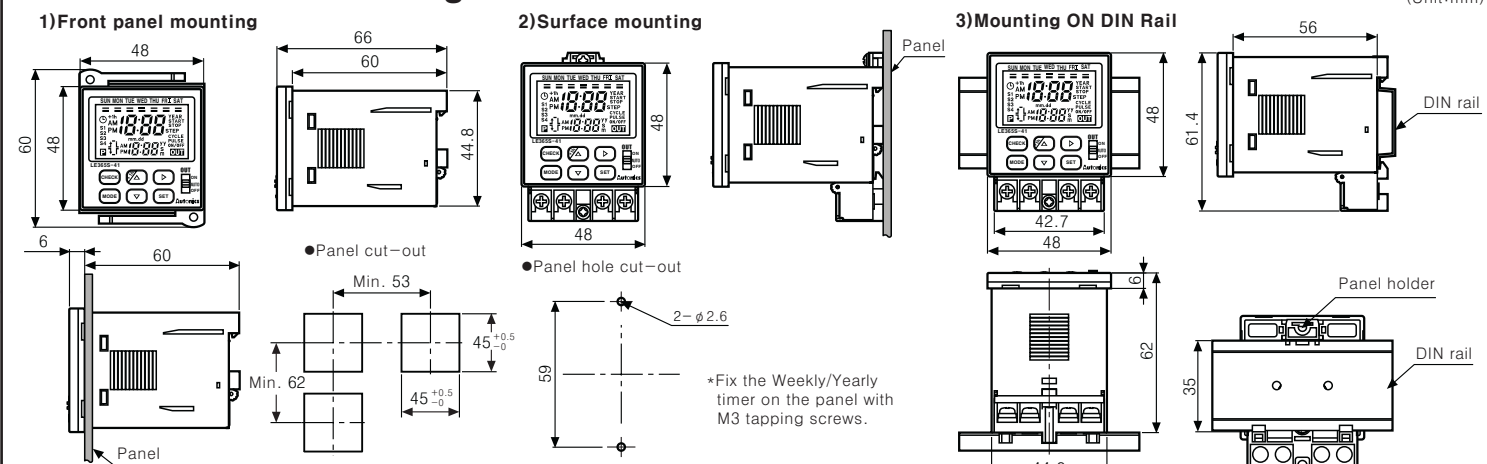
\*The above specifications are subject to change without notice.

### Front panel identification

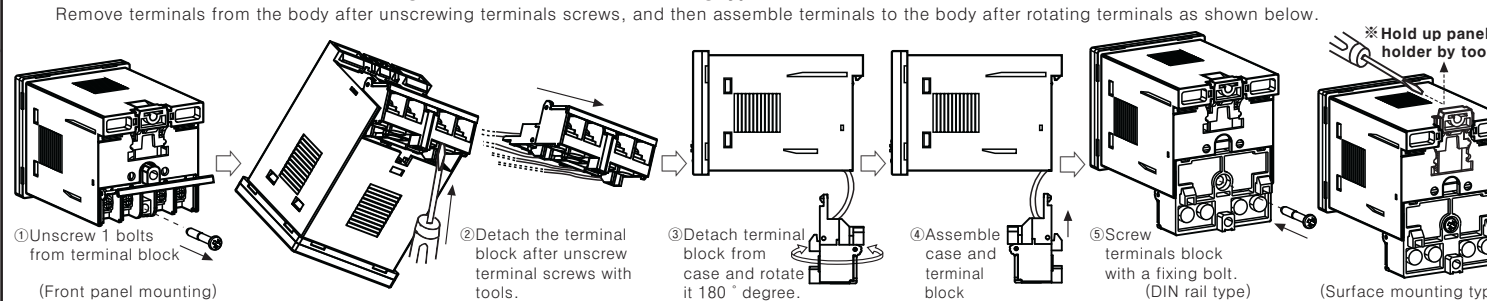


- Day indicator**
- Day display**
  - Light : Day is selected.
  - Light-out : Day is not selected.
- Current time setting mode indicator**
- DST display(Daylight Saving Time)**
- AM/PM display(Main display)**
- Season display**
- Program display**
- Display ON time/day, OFF time/day, ON time width, OFF time width**
- AM/PM display(Sub-display)**
- YEAR display** : It is lighted when set, check, modify, delete yearly program, set yearly holidays and operate yearly program.
- Yearly START/STOP day display**
- Main display**
- Remaining step display**
- Operation mode display**
- Output mode display**
- Year, month, date display**
- Unit of pulse duration display**
- Sub-display**
- CHECK Key**
- MODE Key**
- Operation key** : Press [+1h] key over 3sec in RUN mode, DST mode is set and released.
- SET Key**
- Output selection switch**
  - AUTO : Control output according to the set program.
  - ON : Output is ON.(Operation)
  - OFF : Output is OFF.

### Dimensions & Mounting



#### 4)How to switch from the flush mounting to surface or DIN rail mounting type

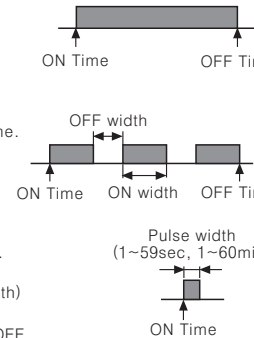


### Specifications

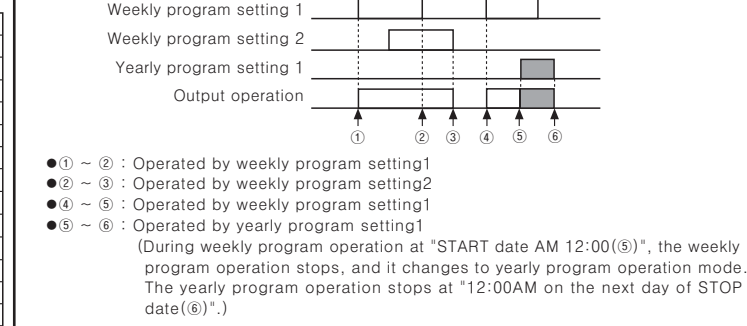
Model	LE365S-41
Power supply	100-240VAC 50/60Hz
Allowable voltage range	90 to 110% of rated voltage
Power consumption	Max. 2.4V
Control	Contact type SPST(Single Pole Single Contact)
Output	Contact capacity 250VAC 15A resistive load
	Number of circuits Independent 1 circuits(1a)
Number of steps	48 steps for weekly, 24 steps for yearly
Operation mode	ON/OFF mode, Cycle mode, Pulse mode
Mounting	Front panel mounting, Surface mounting, DIN rail mounting
Time deviation	±15sec/month(Ta:25°C)
Temperature error	0.01% ±0.05sec
Memory protection	Over 5 years(25°C)
Insulation resistance	Min. 100MΩ(at 500VDC)
Dielectric strength	2000VAC 50/60Hz for 1 minute
Noise strength	±2kV the square wave noise(pulse width:1μs) by the noise simulator
Relay life cycle	Mechanical Min. 5,000,000 operations(Switching capacity 30 times/1 minute)
	Electrical 50,000 operations(Switching capacity 20 times/1 minute, at 250VAC 15A(resistive load))
Ambient temperature	-10 ~ +55°C(at non-freezing status)
Ambient humidity	35 ~ 85%RH
Storage temperature	-25 ~ +65°C(at non-freezing status)
Approval	CE, VDE
Unit weight	Approx. 110g

### Functions

- Definitions**
  - Record : A part of program that controls output operation.
  - Step : Basic component of Record.
- Operation mode**
  - If the operation mode of Program1 (Program2) is set on Pulse mode initially, the Pulse mode is fixed for additional programs.
- Weekly ON/OFF mode**
  - Output operation by ON/OFF set time.
  - Min. time setting unit : 1 min.
  - Able to set ON/OFF day separately.
  - One Record in two Steps (ON day/ON time, OFF day/OFF time)
- Weekly Cycle mode**
  - Output turns ON for ON time and turns OFF for OFF time. And the ON/OFF cycle is repeated.
  - Range of ON/OFF time : 1 min.~12:59
  - One Record in three Steps(ON day/ON time, OFF day/OFF time, ON width/OFF width)
- Weekly Pulse mode**
  - Output turns ON at ON time for a specified pulse width. (Pulse width : 1~59sec, 1~60min)
  - One Record in two Steps(ON day/ON time, Pulse width)
- Yearly ON/OFF mode**
  - Output turns ON at ON time on START date and turns OFF at OFF time on STOP date.
  - One Record in three Steps(START/STOP date, ON/OFF time)
- Yearly Pulse mode**
  - Output turns ON at ON time on START date and turns OFF at OFF time on STOP time for a specified pulse width repeatedly.
  - One Record in three Steps(START/STOP date, ON time, Pulse width)



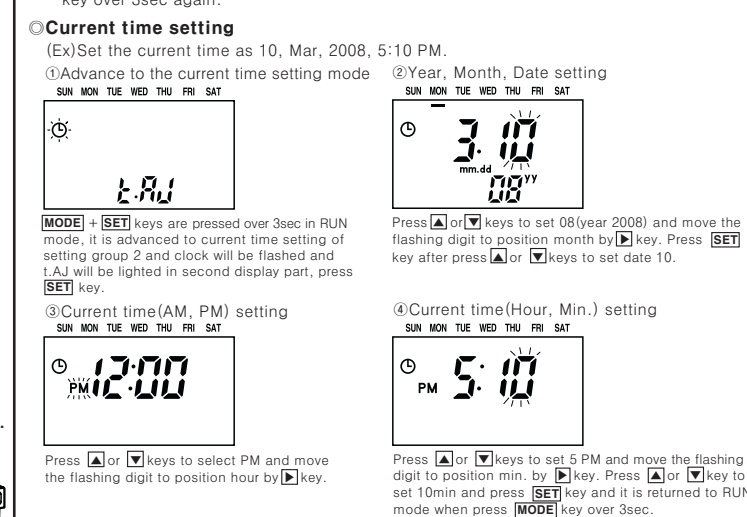
### Program operation



- ① ~ ② : Operated by weekly program setting1
  - ② ~ ③ : Operated by weekly program setting2
  - ④ ~ ⑤ : Operated by weekly program setting1
  - ⑤ ~ ⑥ : Operated by yearly program setting1
- (During weekly program operation at "START date AM 12:00(⑤)", the weekly program operation stops, and it changes to yearly program operation mode. The yearly program operation stops at "12:00AM on the next day of STOP date(⑥)".)

- Display and change of next mode**
  - The day of next mode in program is displayed on the day indicator, and the time of next mode is displayed on the lower row of screen.
  - In ON/OFF or Cycle mode, set ON time and OFF time to next mode. In Pulse operation mode, set Pulse ON time to next mode.
- Power restore mode**
  - In setting group 2—"LEVEL 2("rEL" is lighted, "RL" or "nor" are flashed), select Auto("RL" or Normal("nor") by [▲] or [▼] keys and press [SET] key to set.
  - Auto("RL") power restore mode
    - Output(OUT1, OUT2) operates according to program when power turns on again after power failure.
  - Normal("nor") power restore mode
    - When power turns on again after power failure, output is kept OFF and "r:n" is flashed on the lower row of screen and power restore input(press [SET] key over 3 sec., in RUN mode) is applied, "r:n" is light out and output operates according to program.
- Season switching mode**
  - In setting group 2—"LEVEL 2("SEn" is lighted, "oFF" is flashed.), select ON("on") by [▲] or [▼] keys and press [SET] key to set.
  - (Note) : When the season switching mode changed from "oFF" to "on" or vice versa, previous set programs are deleted.
  - ON("on") mode
    - Weekly program is switched automatically by season switching.
    - Period setting per season
      - Press [SET] key in period setting per season mode of setting group 2. ("SEn" is flashed, season with preset period is lighted and "START" and "STOP" are lighted.)
      - Advance to the flashing position of season selection among S1, S2, S3, S4 by [▲] or [▼] keys and press [SET] key.
      - After set START month, date per season and press [SET] key.
      - [SET] key is pressed after set STOP month, date per season, it is advanced to LEVEL1 of period setting per season. Add or adjust the period setting by [SET] key.
    - It is disable to use when it is OFF("oFF").

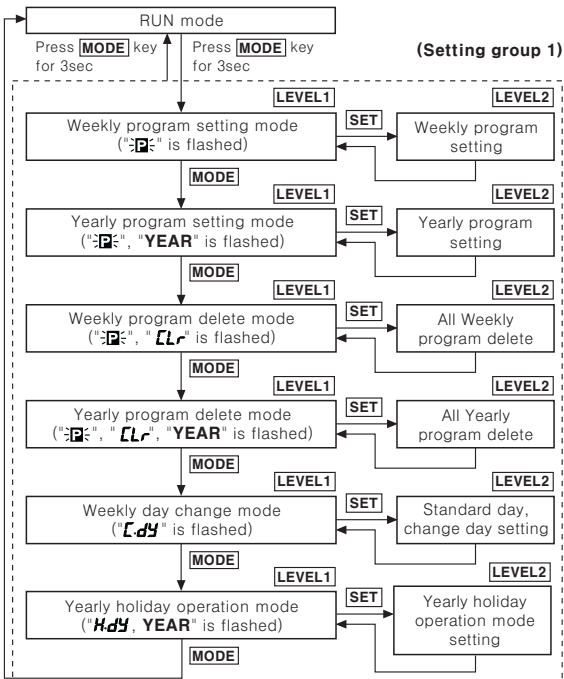
- Daylight Saving Time**
  - In setting group 2—"LEVEL 2("dSL" is lighted, "RL" or "nor" is flashed.), select Auto("RL" or Normal("nor") by [▲] or [▼] keys and press [SET] key to set.
  - Auto("RL") Daylight Saving Time mode
    - Current time will be faster as an hour when it is started and will be slower as an hour when Auto mode is finished.
    - Automatic Daylight Saving Time period setting
      - Automatic Daylight Saving Time period setting LEVEL 1 of setting group 2. ("dSL" is flashed and "START" and "STOP" are lighted.)
      - Set START date(Month, date) of automatic Daylight Saving Time mode and press [SET] key. But, the minute will be fixed as 00.
      - Set STOP date(Month, date) of automatic Daylight Saving Time mode and press [SET] key.
      - Set STOP time(AM/PM, Hour) of automatic Daylight Saving Time mode and press [SET] key. But, the minute will be fixed as 00.
    - Normal("nor") Daylight Saving Time mode
      - Press [+1h] key over 3sec in RUN mode, "+1h" is lighted and current time is faster as an hour and "+1h" is lighted out, current time will be slower as an hour when press [+1h] key over 3sec again.



- It advances to "③Current time setting mode" in ON status and set current time as shown above ②~④ by [SET] key.
- Current time is set up to 31, Dec, 2099.
- Check current year/month/date in RUN mode
  - When [▶] key is pressed over 3sec in RUN mode, it advances to current year/month/date display. After display current year/month/date for 3sec, it returns to RUN mode displaying current display.

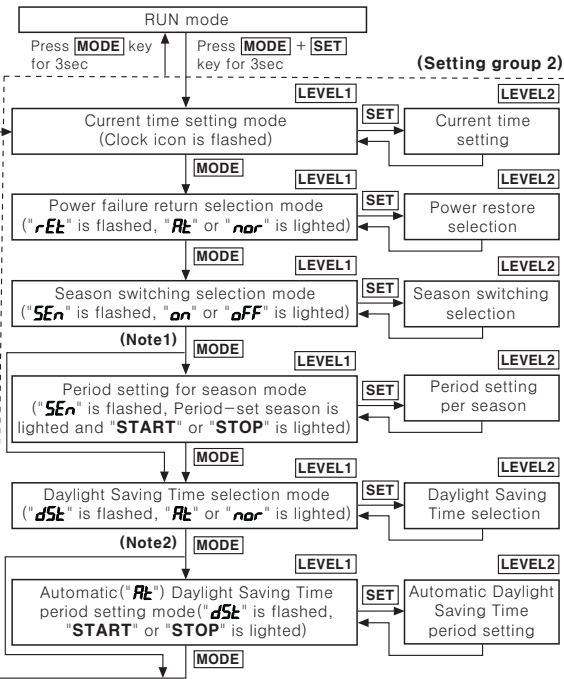
## Program setting

### Setting group 1



- When it is advanced to setting group 1 in RUN mode, output (OUT1, OUT2) will be OFF.
- It is returned to previous setting group 1 when power of time switch is ON again in setting group 1.
- When [MODE] key is pressed in LEVEL2 of setting group 1, current setting will be canceled and it is returned to previous LEVEL1.
- When press [SET] key to program over max. number of steps for weekly program in Weekly program setting mode of setting group 1-LEVEL 1, number of remaining steps and "STEP" are flashed and it returns to LEVEL 1 status.
- When press [SET] key to program over max. number of steps for yearly program in Yearly program setting mode of setting group 1-LEVEL 1, number of remaining steps and "STEP" are flashed it returns to LEVEL 1 status.

### Setting group 2

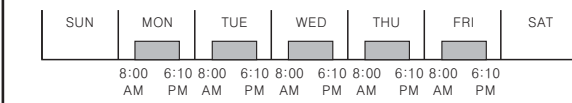


- (Note1) Season switching selection is "off".
- (Note2) Automatic switching selection of Daylight Saving Time is Normal ("nor").
- When it advances to setting group 2 in RUN mode, output(OUT1, OUT2) will be OFF.
- When power of time switch is ON again in setting group 2, it is returned to previous setting group 1.
- Front [MODE] key is pressed in LEVEL2 of setting group 2, it is returned to previous LEVEL1.
- When season switching selection is changed from "off" to "on" or "on" to "off", previous set weekly program will be deleted.

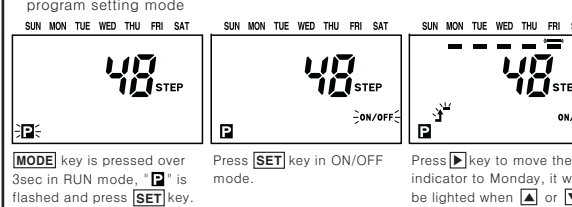
## Weekly program setting

### Weekly ON/OFF mode

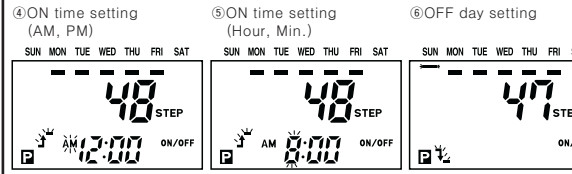
(Ex)Output1(OUT1) is ON from Monday to Friday at 8:00 AM and OFF at 6:10 PM.



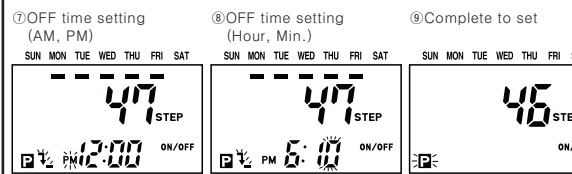
- Advance to weekly program setting mode
- Mode type setting
- ON day setting



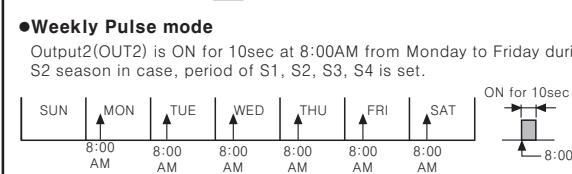
- ON time setting (AM, PM)
- ON time setting (Hour, Min.)
- OFF day setting



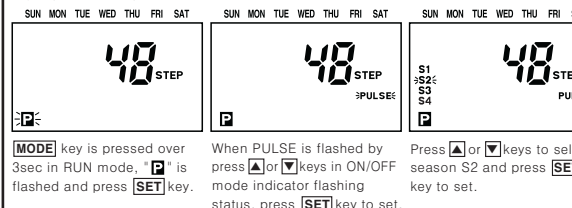
- OFF time setting (AM, PM)
- OFF time setting (Hour, Min.)
- Complete to set



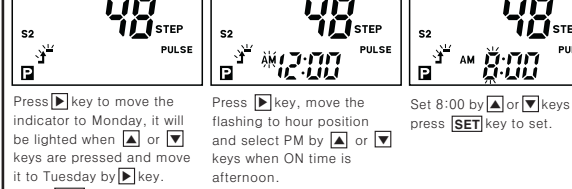
- Advance to weekly day change mode
- Standard day selection
- Change day selection



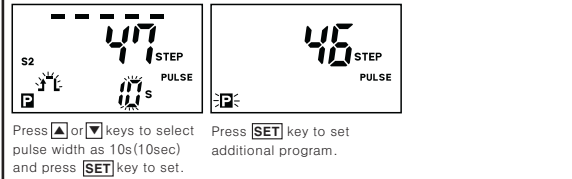
- Advance to weekly program setting mode
- Mode type setting
- Season selection



- ON day setting
- ON time setting (AM, PM)
- ON time setting (Hour, Min.)



- Pulse width setting
- Complete to set

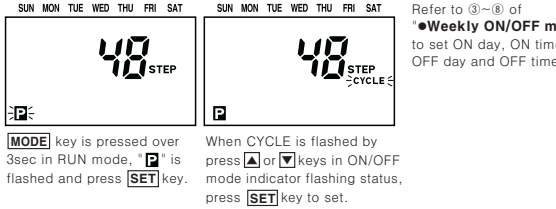


## Weekly Cycle mode

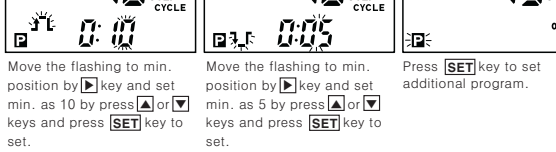
(Ex)Output1(OUT1) is ON for 10min and OFF for 5min from Monday 6:00AM to Saturday 5:30PM.



- Advance to weekly program setting mode
- Mode type setting
- ~ ⑧



- ON time width setting
- OFF time width setting
- Complete to set

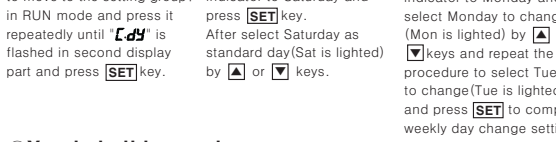


- Change current year, month, date in current time setting mode
- Change standard day
- Delete all program in program
- Season switching

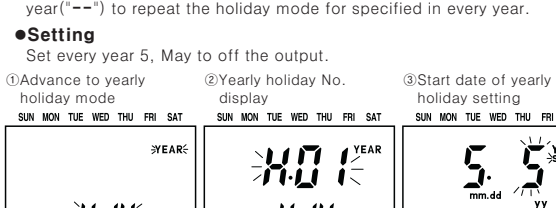
- Advance to weekly day change mode
- Standard day selection
- Change day selection



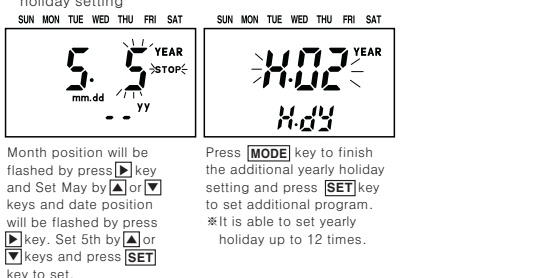
- Advance to weekly holiday mode
- Yearly holiday No. display
- Start date of yearly holiday setting



- End date of yearly holiday setting
- Complete to set



- Advance to yearly program setting mode
- Mode type setting
- Start date setting

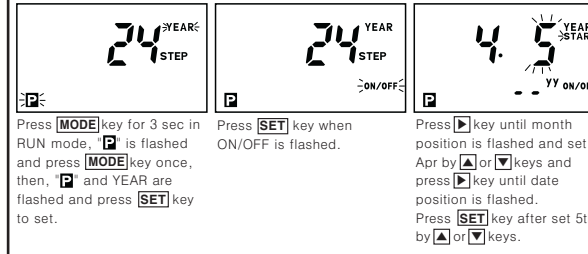


## Yearly program setting

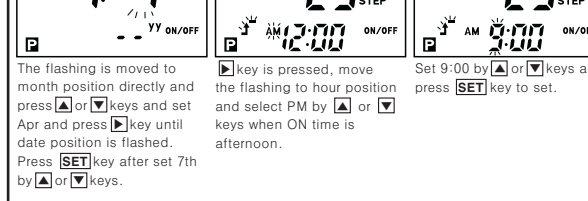
### Yearly ON/OFF mode

(Ex)Output(OUT) is ON from every 5, Apr to 7, Apr at 9:00AM and OFF 5:10PM.

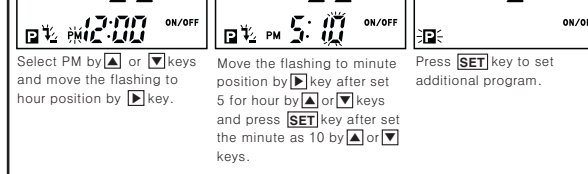
- Advance to yearly program setting mode
- Mode type setting
- Start date setting



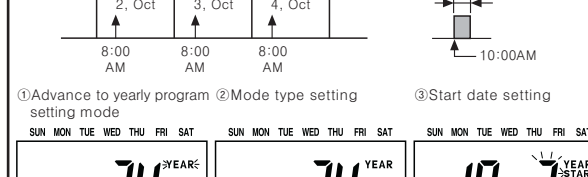
- End date setting
- ON time setting (AM, PM)
- ON time setting (Hour, Min.)



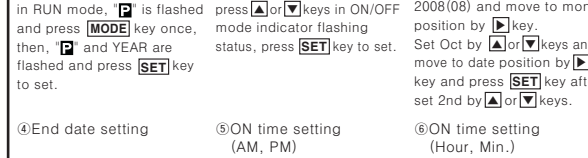
- OFF time setting (AM, PM)
- OFF time setting (Hour, Min.)
- Complete to set



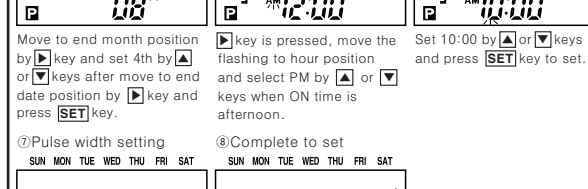
- Advance to yearly pulse mode
- Standard day selection
- Change day selection



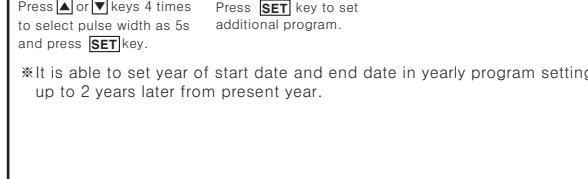
- Advance to yearly program setting mode
- Mode type setting
- Start date setting



- End date setting
- ON time setting (AM, PM)
- ON time setting (Hour, Min.)

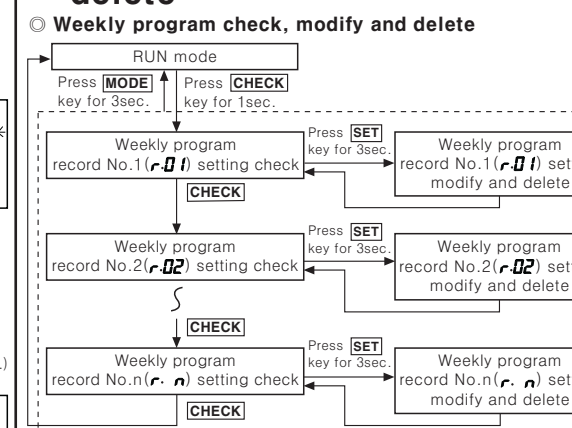


- Pulse width setting
- Complete to set

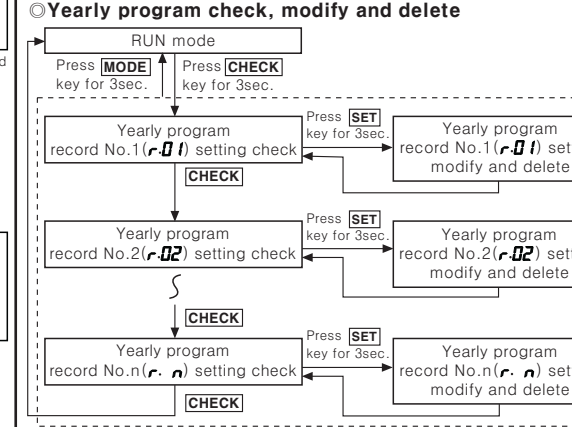


## Program check, modify and delete

### Weekly program check, modify and delete



### Yearly program check, modify and delete



\* "YEAR" is lighted when check, modify or delete yearly program.

- If any key is untouched for 60sec, it is returned to RUN mode in weekly or yearly program check.
- In weekly or yearly program check, it controls output depending on program setting and output is OFF in modify or delete mode.
- When [MODE] key is pressed in weekly or yearly program record modify, delete stand by or delete mode, current work is cancelled and it is returned to check mode.
- Weekly or yearly program record modify and delete
  - Program record modify
    - When press [SET] key over 3sec in program check, "Edt" is flashed in second display part, press [SET] key.
    - It is returned to check mode when finish the modify same as the above procedure.
  - Program record delete
    - When press [SET] key over 3sec in program check, "Edt" is flashed in second display part, press [SET] key.
    - Press [SET] key over 3sec when "CLR" is lighted in second display part, it is returned to program check.

- Please use within the rated power and apply or cut the power at once to prevent from chattering.
- When test dielectric voltage and insulation resistance of the control panel with this unit installed.
  - Please insulate this unit from the circuit of control panel.
  - Please make all terminals of this unit short-circuited.
- When control a heater, please install the thermostatic switch at load circuit.
- Installation environment
  - It shall be used indoor
  - Altitude Max. 2000m
  - Pollution Degree 2
  - Installation Category II.

\* It may cause malfunction if above instructions are not followed.

## Caution for using

- Please use within the rated power and apply or cut the power at once to prevent from chattering.
- When test dielectric voltage and insulation resistance of the control panel with this unit installed.
  - Please insulate this unit from the circuit of control panel.
  - Please make all terminals of this unit short-circuited.
- When control a heater, please install the thermostatic switch at load circuit.
- Installation environment
  - It shall be used indoor
  - Altitude Max. 2000m
  - Pollution Degree 2
  - Installation Category II.

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## Major products

- Proximity sensors
- Photoelectric sensors
- Area sensors
- Fiber optic sensors
- Door/Door side sensors
- Pressure sensors
- Counters
- Timers
- Rotary encoders
- Display units
- Power controllers
- Sensor controllers
- Panel meters
- Graphic/Logic panels
- Temperature controllers
- Tachometer/Pulse(Freq) meters
- Temperature/Humidity transducers
- Switching power supplies
- Stepping motors/drivers/motion controllers
- Field network devices
- Laser marking system (CO<sub>2</sub>, Nd:YAG)
- Laser welding/soldering system

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