

# 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

### WARNING

- Do not use this product in applications that may adversely affect people's lives or society in case it malfunctions, e.g. medical equipment or a large-scale facility.
- Do not disassemble or modify this time switch. An electric shock, fire or other failure may result.
- Do not touch the terminal while supplying power. You may receive an electrical shock.
- Be sure to allow for an adequate safety margin for rating and performance. Integrate appropriate safety measures, e.g. a redundant circuit, when used for devices such as heaters, refrigerators, etc. in which damage may result if the switch goes out of order.
- Do not pour water or oil on the time switch. An electric shock, fire or other failure may result.

### CAUTION

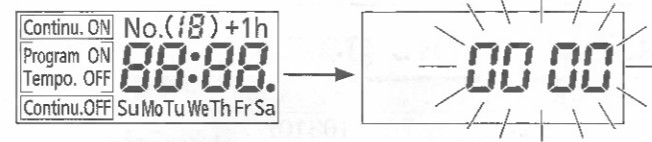
- If you see rust or other contamination on the terminal, replace the terminal as soon as possible. Improper contact may lead to overheating or a fire.

## ① Description of Mode switch

Mode	Switch position	LCD	Content
Run	Run Program Clock	Program OFF 8:15	Current time display
Program	Run Program Clock	No. (1) 7:30 Su Mo Tu We Th	Setting timer on-off time
Clock	Run Program Clock	8:15 Su	Current time adjustment

### Reset

When pressed Reset button, all the contents to be set are cancelled.  
After indicated all the displays lighted for 4 seconds, "00 00" will flash.  
If pressed other button than Reset, clock starts from "0:00".



## ② Clock setting

If the timer displays 23:30 Thursday, it must be changed to 8:15 Sunday. Detailed operation is as follows:

- (1) Set the Mode switch to "Clock."
- (2) Press Hour, Min and Day button to set the time and the day of the week.
- (3) Press Enter button to set 0 sec.
- (4) Set the operating mode switch to "Run" position to complete the clock adjustment.

**NOTE**  
• 24-hour type has no Day button.

## ③ Program setting

To set the program of "7:30 ON, ~16:30 OFF", "Operation of Monday to Friday".

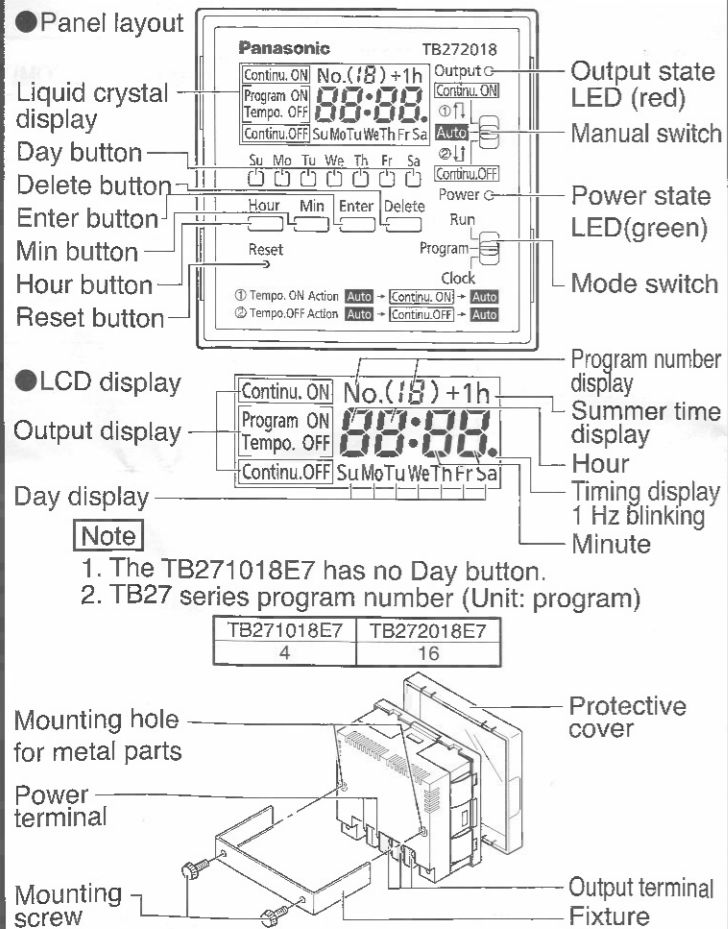
- (1) Set the Mode switch to Program. Setting screen for "TURN-ON TIME" will appear.
  - (2) Select "TURN-ON TIME" with Hour, Min and Day and set with Enter button. The setting screen changes into "TURN-OFF TIME".
  - (3) Select "TURN-OFF TIME" with Hour, Min and Day and set with Enter button. The setting screen changes into "TURN-ON TIME".
  - (4) Repeat (2) and (3) when setting continuously.
  - (5) Set the program continuously based on (2) to (4).
- NOTE**  
• 24-hour type has no Day button.

## ④ Checking, changing, and canceling setting

**Checking:** Set the operating mode switch to "Program." The screen displays the No. 1 program setting. The screen display is as indicated in the diagram at right. If the current program setting is not to be changed, press the Enter button to display the next program setting. Every time the Enter button is pressed, the serial number changes in order of 1 on-2 off-3 on-4 off.....15 on-16 off.

**Changing:** Change the current program setting based on the timing setting.  
**Canceling:** press the Delete button. The screen display is as indicated in the diagram at right. Press Enter. The current program setting is cancelled. At the same time, the screen display displays the next program setting.

## Explanation of parts



## Manual switch operation

	Position, operation	LCD display	Output function description
Continuous action	Continuous ON Switch: Contin. ON (up), Auto (middle), Contin. OFF (down)	Continu. ON 23:30	Continuous ON regardless of the program. Output: Continuous ON
	Automatic Switch: Contin. ON (up), Auto (middle), Contin. OFF (down)	Program OFF 8:15	Output as assigned by the program. Output: Pulsed ON
	Continuous OFF Switch: Contin. ON (up), Auto (middle), Contin. OFF (down)	Continu. OFF 23:30	Continuous OFF regardless of the program. Output: Continuous OFF
Temporary activation	Temporary ON Switch: Contin. ON (up), Auto (middle), Contin. OFF (down)	Tempo. ON 23:30	Temporary ON is held until the next TURN-ON TIME. Output: Pulsed ON
	Temporary OFF Switch: Contin. ON (up), Auto (middle), Contin. OFF (down)	Tempo. OFF 23:30	Temporary OFF is held until the next TURN-OFF TIME. Output: Pulsed OFF

## Specifications

Type	TB271018E7	TB272018E7
Driving method	Electronic	
Voltage/frequency of operational power supply	220 V AC / 50-60 Hz	
Permissible operating voltage	190 V to 240 V AC	
Power failure backup time	5-year built-in lithium battery	
Time precision	±15 s/month at 25 °C	
Cycle	24 hours	1 week
Power consumption	1 W	
Output	Number of Circuit / circuit composition	1 circuit, Separate circuit (no voltage contact output)
	Contact composition	Single pole double through ( )
	Automatic switch on/off	Additional turn on/automatic/off switch
	Resistance	16 A (240 V AC)
	Reactance (cosφ=0.6)	9 A (240 V AC)
Contact switch durability	20,000 times	
Time activation setting	Minimum unit	1 min
	Minimum interval	1 min
	Number of times for off	4
Suitable electric wire	Fixed wiring conductors: 1.2 to 1.6 mm Flexible cord conductors: 1.25 to 2 mm <sup>2</sup>	
Operating environment temperature/humidity	-10 °C to +50 °C, 85 % or less	
Weight	176 g	178 g

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