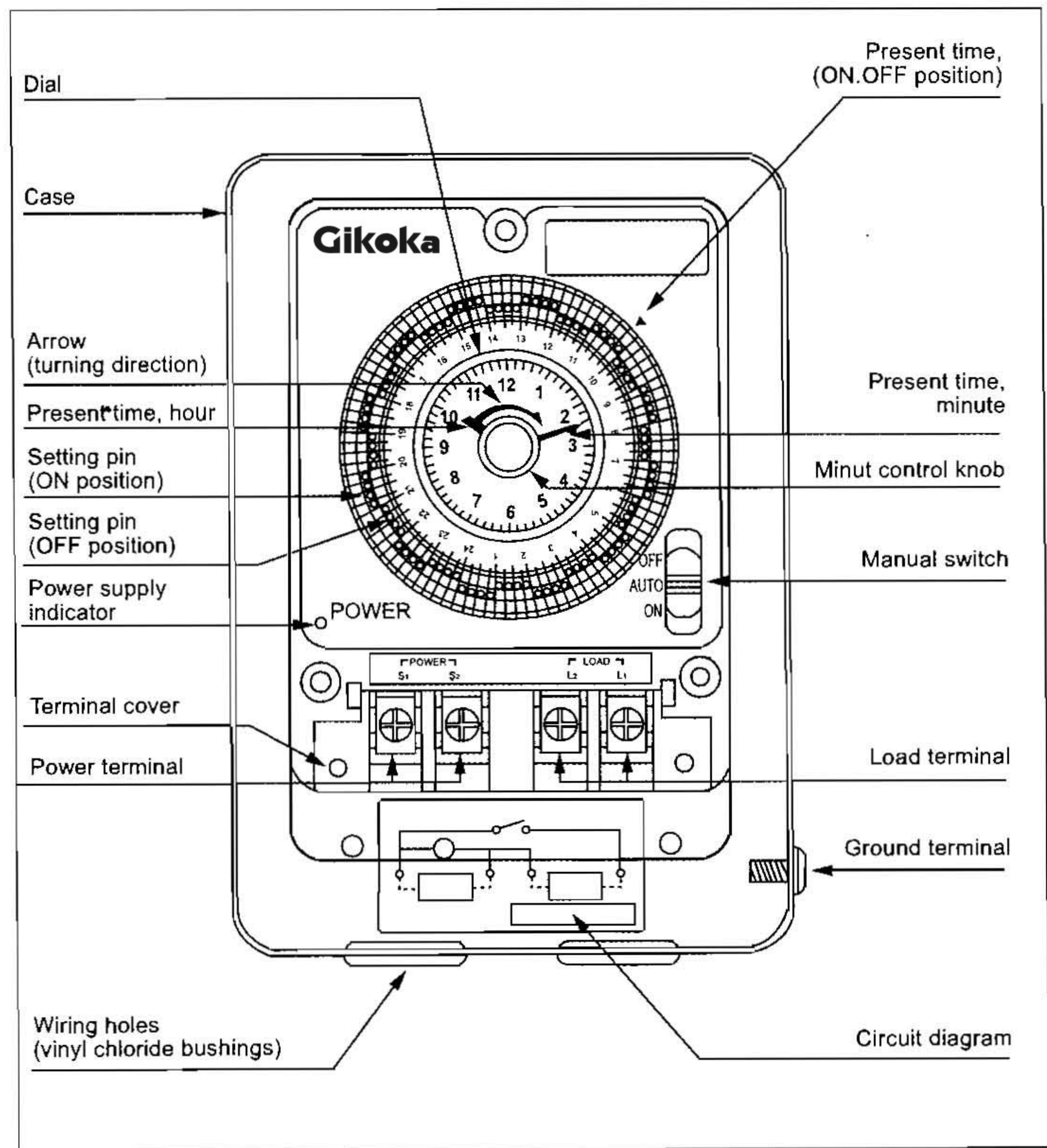


TBH35 Time Switch

Operating Instructions

Thank you very much for your purchase. Before operating this unit, please read these instructions completely.

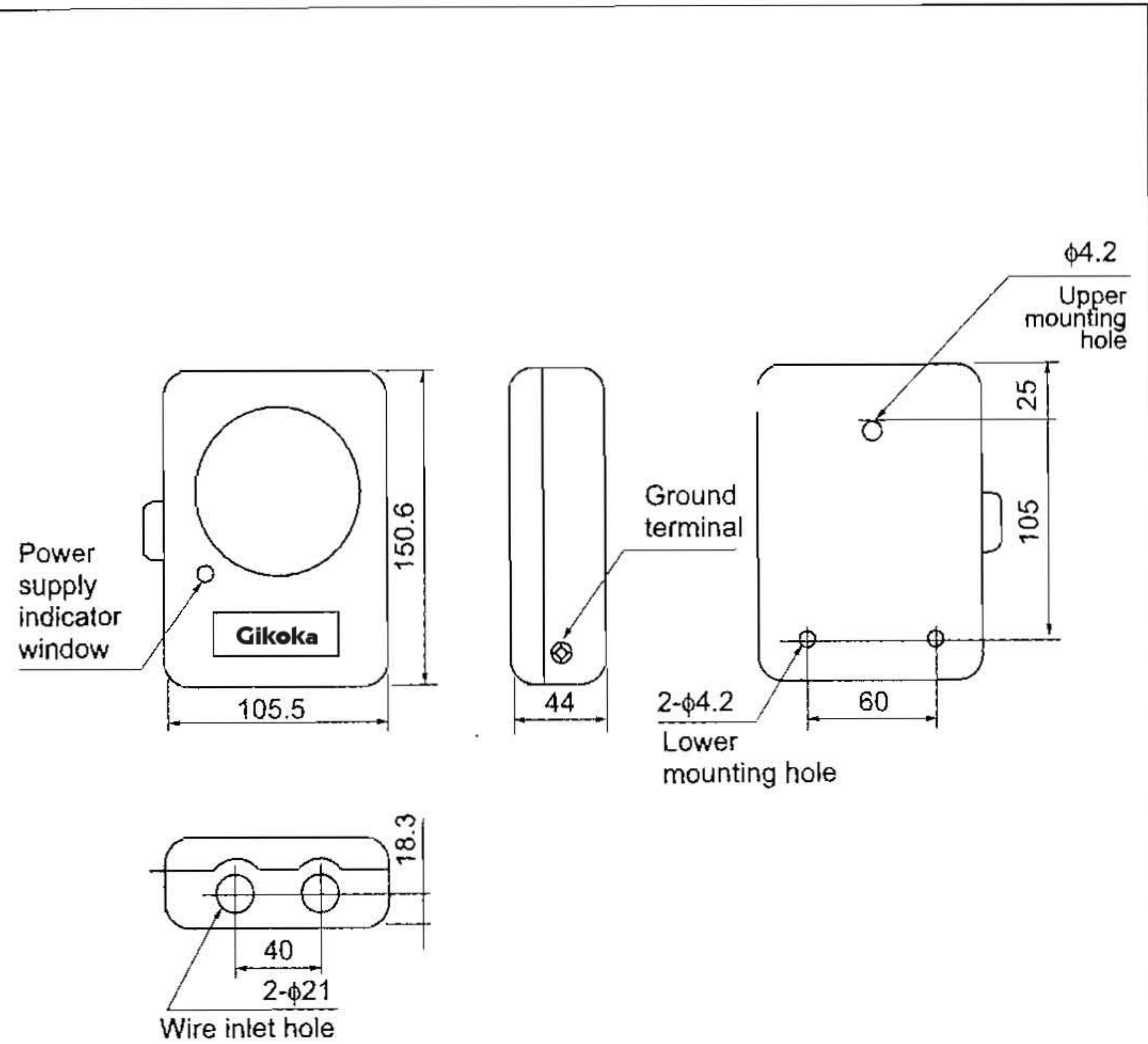
PARTS IDENTIFICATION



SPECIFICATIONS

Rated voltage			100-240/AC
Voltage tolerance			85-264/AC
Frequency			50/60Hz(common use)
Power consumption			110VAC 1W, 220VAC 2W
Drive method			Quartz controlled stepping motor
Cycle			24 hours
Time precision			Same as AC current frequency
Load	Circuit		Separate circuit(voltage is not applied to the load circuit)
	Switch construction		SPST(—○—)
	Manual ON/OFF		ON/AUTO/OFF switch
	Capacity	Resistive load	20A
		Incandescent lamp	10A
		Inductive(cosφ=0.7)	12A
		Motor(cosφ=0.7)	110V AC 750W, 220V AC 1500W
Setting	Present time setting		Turn the Minute control knob in the center clock
	ON/OFF program setting		15 Minutes
	Minimum unit		15 Minutes
	Minimum interval		15 Minutes
	No.of ON/OFF operations		96 operations
Working reserve time			150 hours
Ambient temperature			-10℃ ~ +50℃
Ambient humidity			Max.85%
Weight			480g

DIMENSIONS(Unit:mm)



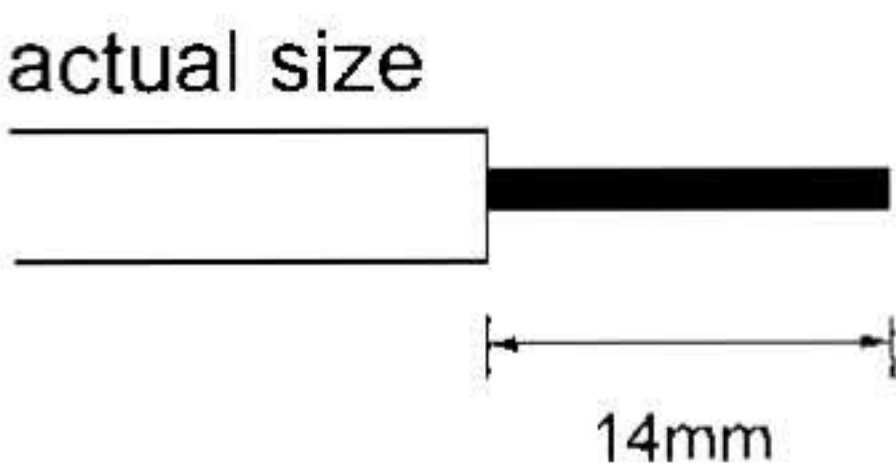
INSTALLATION

- Before installing, check that this unit conforms to the operating voltage.
- Do not install this unit in a place as described in the "cautions 3 paragraph".

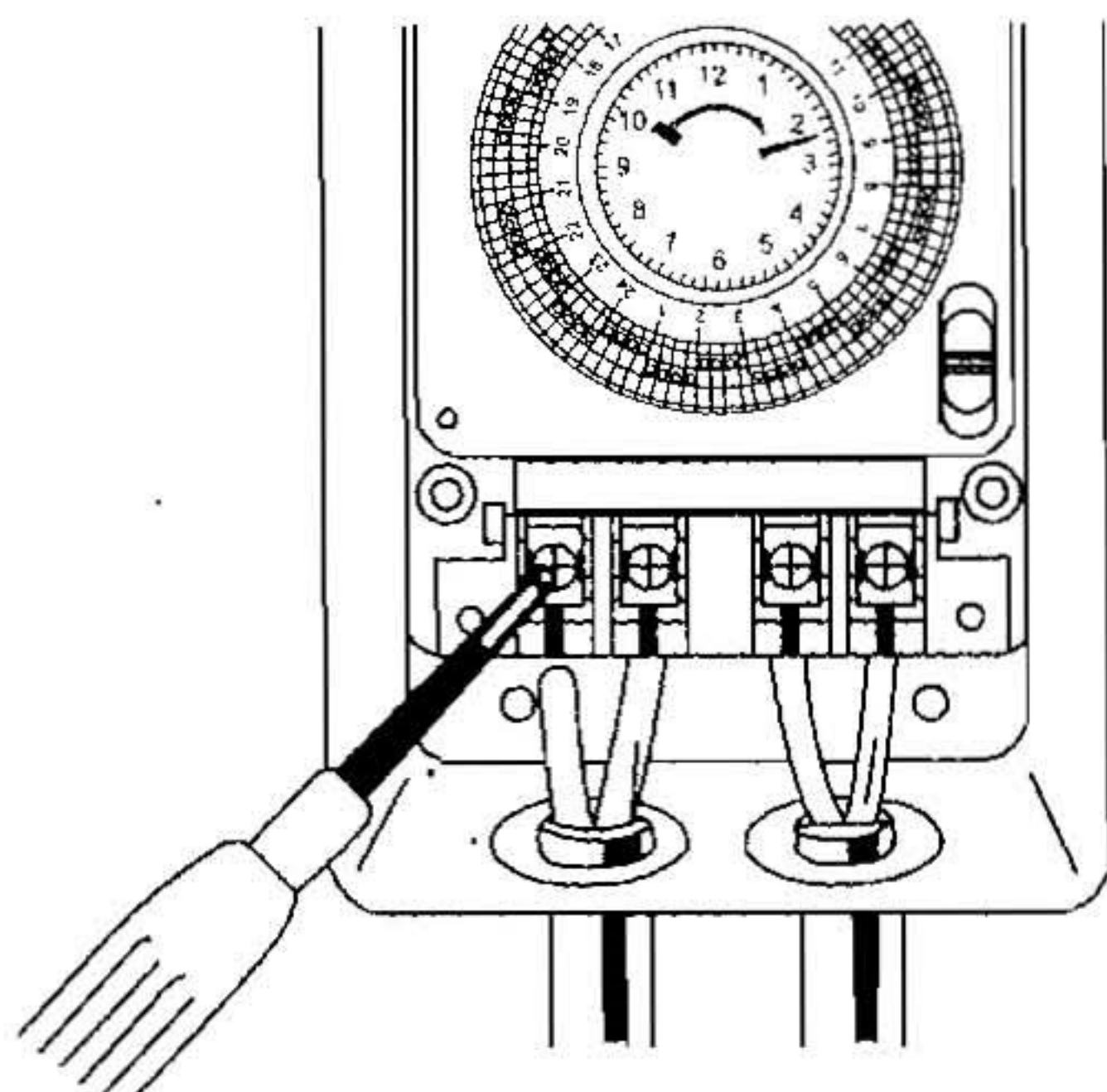
- Hook the mounting hole(rounding-bellied hole) at the rear case on a wooden screw, and secure the two lower mounting holes(round), using wooden screws.
- To connect an electric wire, break a vinyl chloride bushing and open the terminal cover. For the connection method, refer to the circuit diagram inside the case and the connecting method in the manual.
- When making piping connections, using a conduit, remove a vinyl chloride bushing for use.
- This unit is not of waterproof structure; therefore, protect the unit, using it in outdoors.

Wiring Precautions

- Applicable cable:
Single cable(φ 1.6, φ 2.0)
IV stranded cable(2.0mm²)
- The wire peeled length should be 14 mm



- Close the terminal cover securely after wiring.

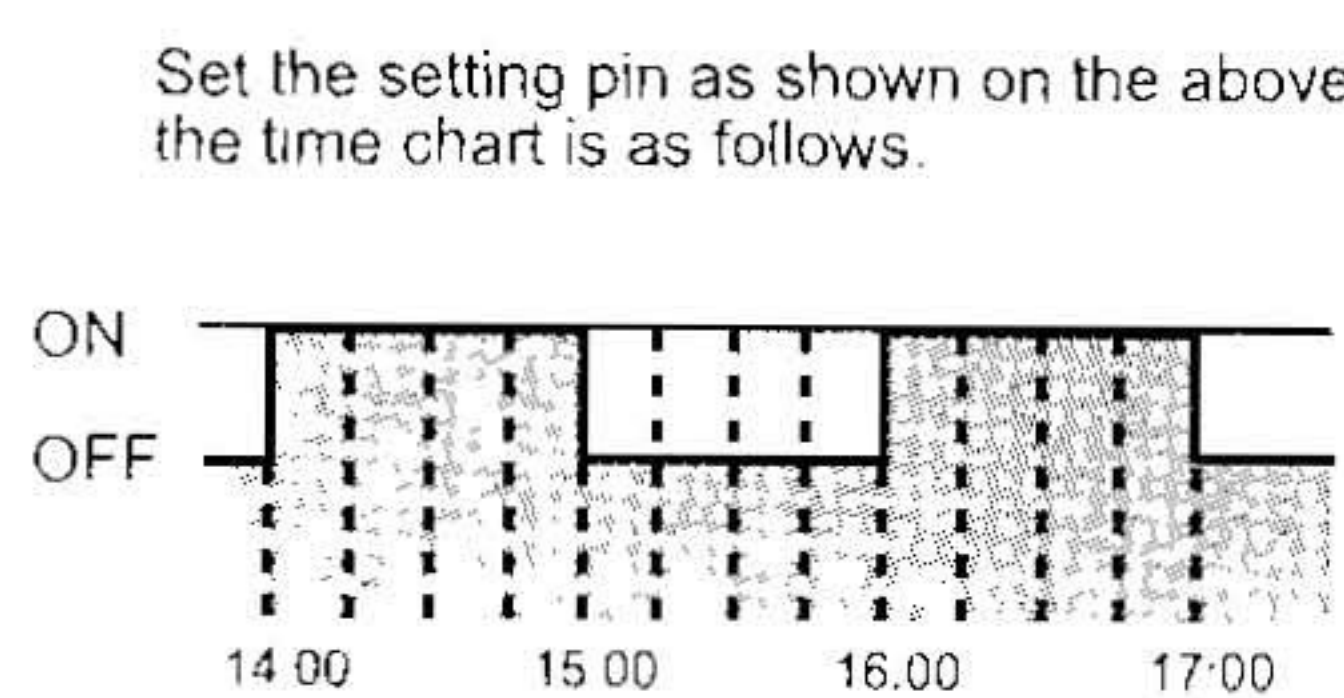
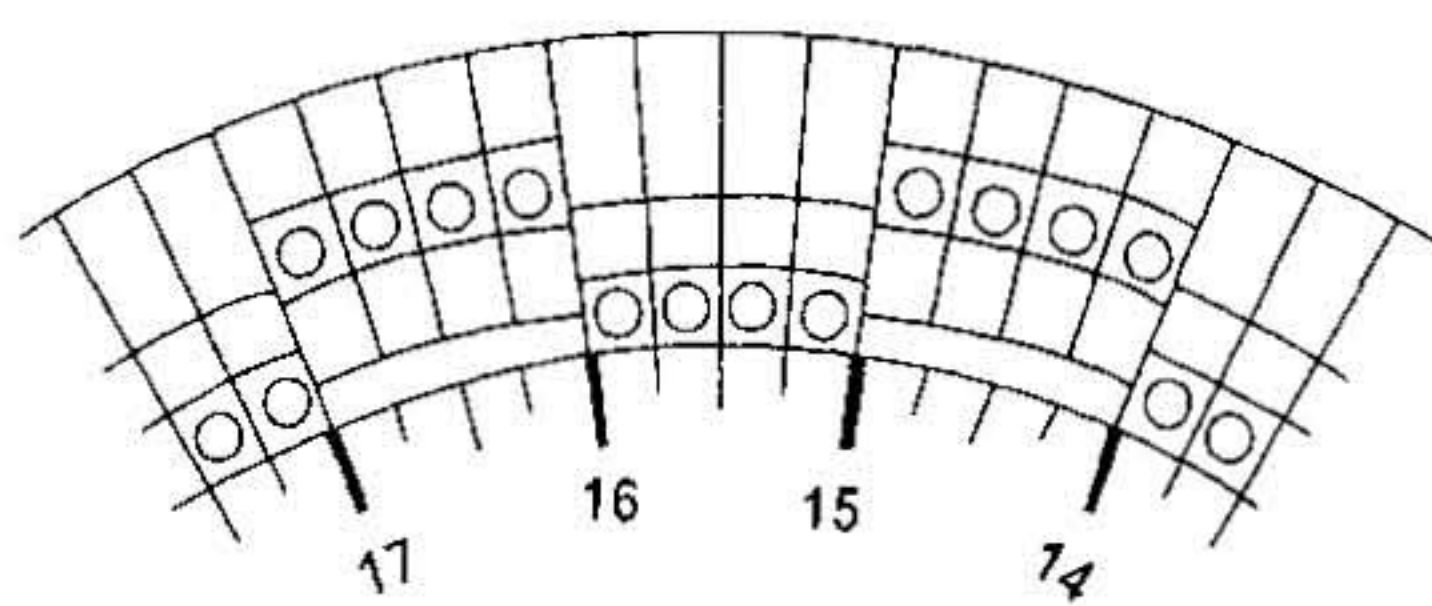


OPERATING INSTRUCTIONS

- Before turning power ON, check that your unit conforms to the operating voltage.
- When you buy this product, the inside battery for a long discharge itself, the power reserve will lower. When the inside battery completely discharge, even if connect and switch on the power source, the product still not working immediately. Then, please connect and switch on the power source, and wait about 10 minutes before set the product present time. The full power reserve is built up after about 3 days.

1. Set the operating time:

- Set the setting pin between the desired times to the inside or outside of dial.
- Set the setting pin to the outside of dial: ON-state is reached at that time. If the setting pin is set to the outside continuously, ON-state continues only for No. of setting pins X 15 minutes.
- Set the setting pin to the outside fully until a click is heard.
- If the setting pin is set to the inside, at that time, the output is placed in OFF-state.
- When your desired time is close to the present time position, turn the minute control knob and set it apart from the position before setting.



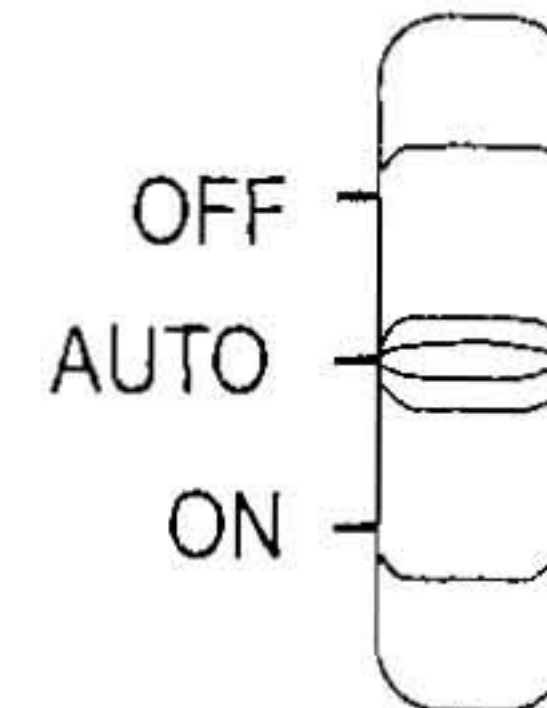
2. Adjust the present time:

- Turn the minute control knob in the center clock unit in the direction of the arrow and adjust the time.

3. Set the manual switch:

Use this switch to select either turning ON or OFF in manual or ON/OFF in the operation program.

- "AUTO": Output is turned ON and OFF according to the set program.



- Manual "ON": Output is turned ON irrespective of the program. (Permanent ON)
Use this mode for test operation.

- Manual "OFF": Output is turned OFF irrespective of the program. (Permanent OFF)

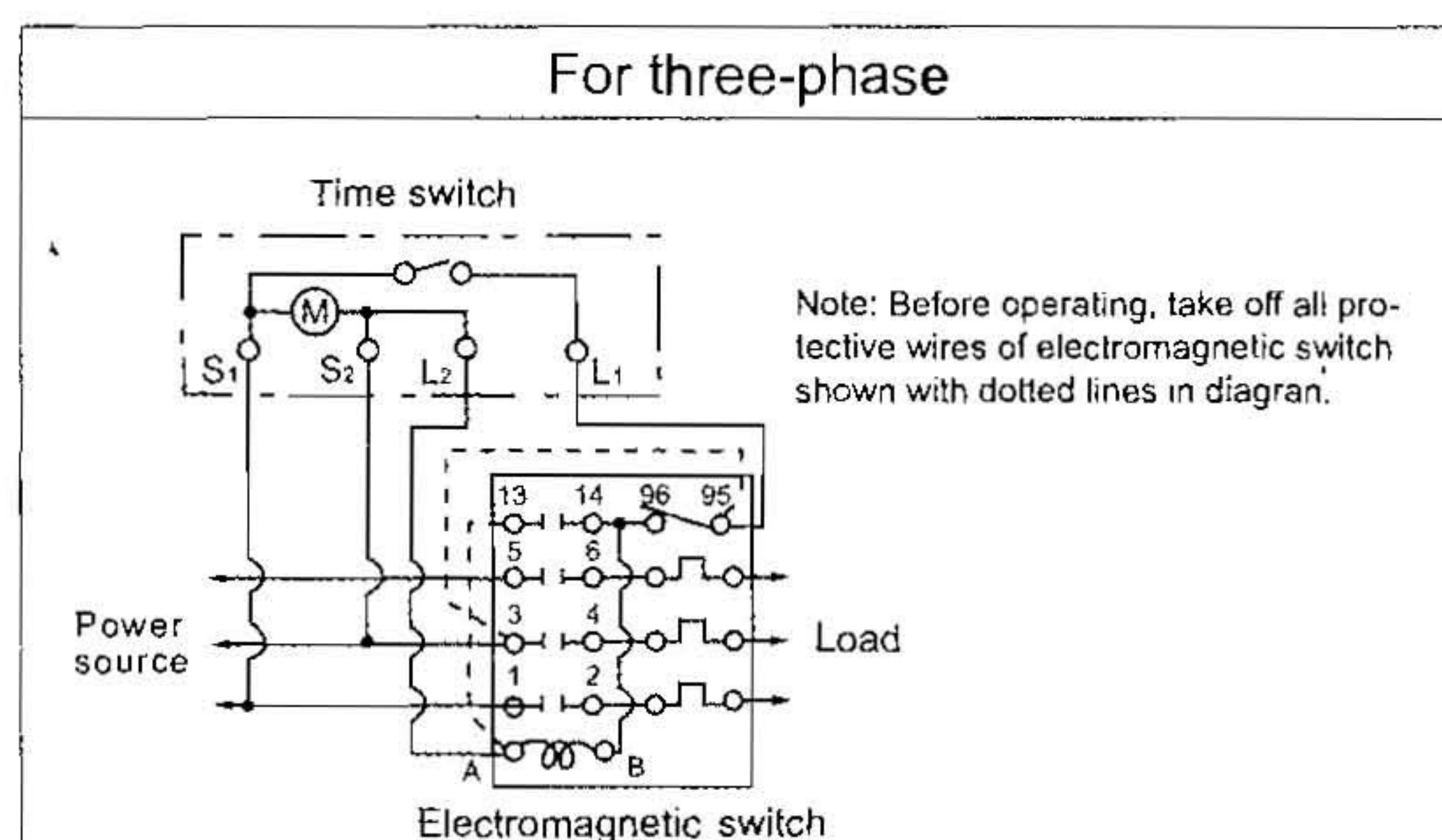
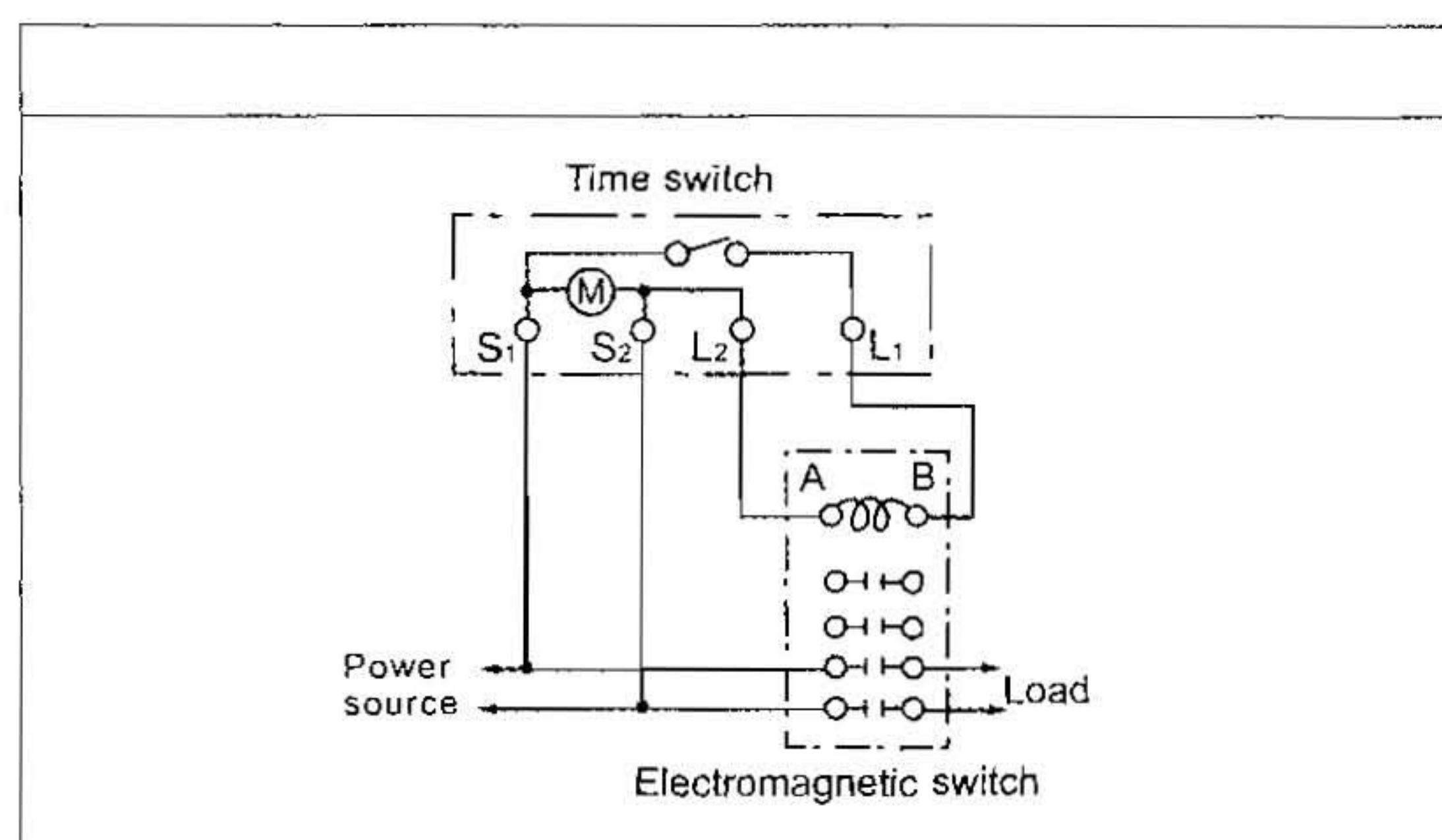
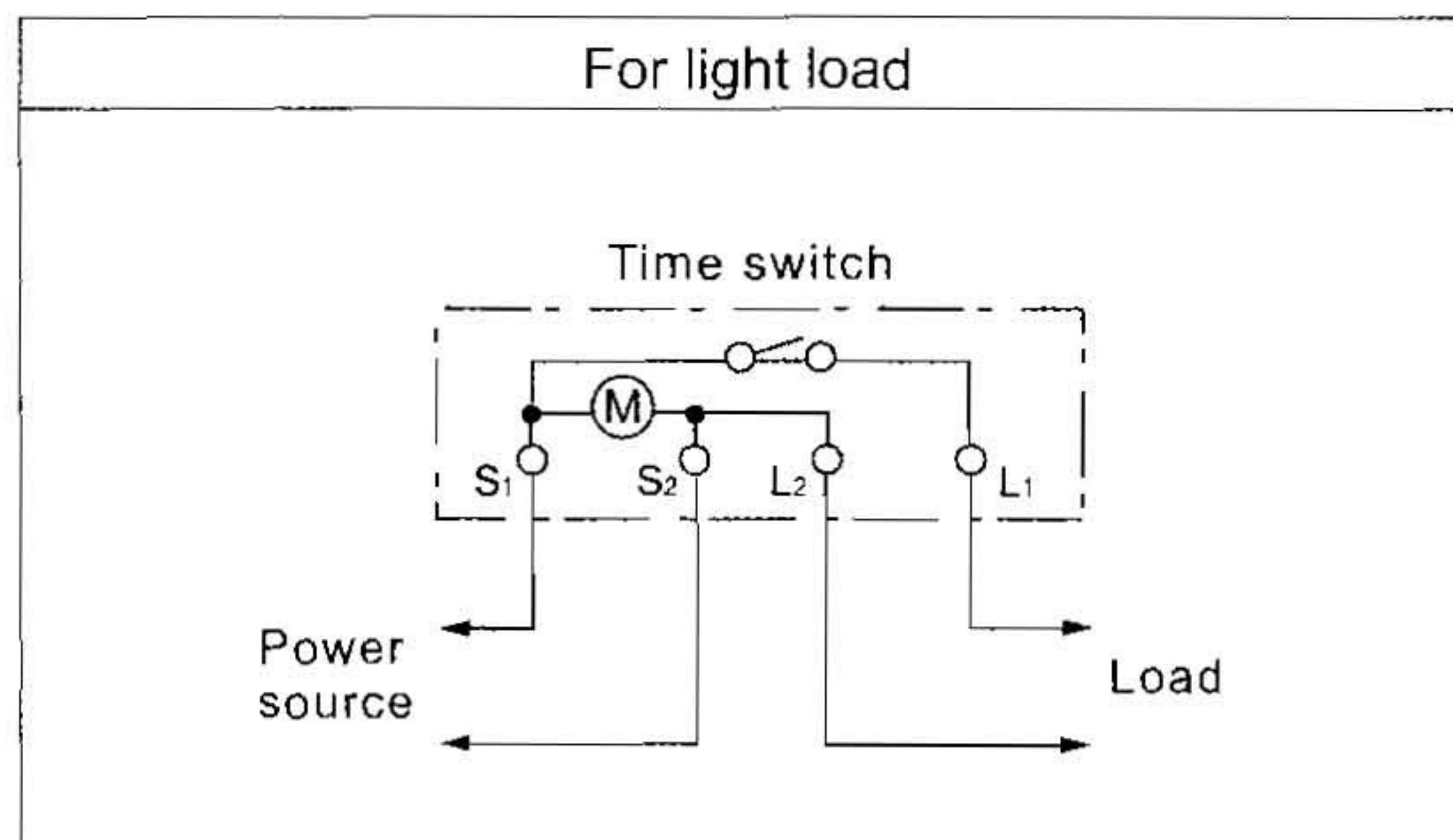
※ After completion of test operation, set the manual switch to "AUTO".

CAUTIONS

1. Turn the minute control knob in the direction(clockwise) indicated by the arrows. It cannot be turned in the opposite direction.
2. When the time switch is used for loads exceeding its rated capacity, it is imperative that the time switch should be used in combination with one or more magnetic contactors according to each load
3. The precision and life of the Time Switch are affected by the environmental conditions. Please do not use it in the following areas:
 - The ambient temperature is below -10°C or over +50°C.
 - A place where dew condensates.
 - The humidity is high.
 - There is dust or gas
 - There is vibration or shock.
 - There is exposure to direct sunlight
 - A place where the unit is exposed to direct rainfall and water drops outdoors

In unavoidable cases, use a protective cover to cover the unit, and take care so that the unit is not exposed to direct dust or dirt and waterdrops.
4. When the time error occurs due to power failure, turn the minute control knob in the direction of the arrow, and adjust to the present time.
5. Do not push in the setting pin forcibly

CIRCUIT DIAGRAMS



1. When a heater is used as a load, be sure to insert a thermoswitch into the load circuit.
2. Use a timer suitable for the specified voltage of operation circuit of electromagnetic switch.
3. After completion of wiring connections, turn the manual switch ON once and check the wiring connections.