

KG316T

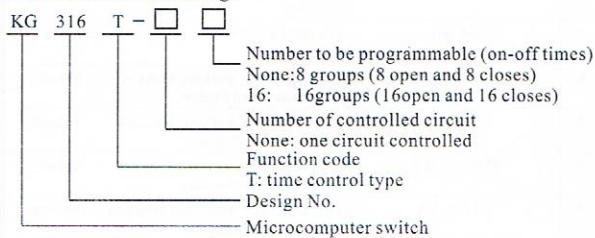
Microcomputer Time Control Switch Operation instructions

Please read the operation instructions before installing and using the product.

1 Application

The KG316T microcomputer time control switch (hereafter referred to as the switch) can be used for timing connection and break in AC 50HZ(or 60Hz) circuits with a rated voltage of 220V and rated current of 3A in such equipment as road and advertising lamp houses.

2 Model and its meanings



3 Normal working conditions and installation conditions

3.1 Ambient air temperature: $-25^{\circ}\text{C} \sim +60^{\circ}\text{C}$, and the average temperature within 24 hours shall not exceed $+40^{\circ}\text{C}$.

3.2 Altitude: no greater than 2000m;

3.3 Humidity: The relative humidity of the installation site shall be no greater than 50% at the highest temperature of $+40^{\circ}\text{C}$; at a relatively low temperature, higher relative humidity is allowable. Special measures shall be taken for the condensate on the product resulting from temperature variations.

3.4 Pollution Grade: 3

3.5 The product shall not be kept in the media of exploration danger or with gases that may erode metals or destroy insulation, or in the area where there are a lot of conducting dust.

3.6 The product shall be kept in the area where there are rain and kept snow prevention equipment and not be kept in the area where there are a lot of steam.

3.7 The product shall be kept in the area where there is no distinct swing, impact, or vibration.

3.8 Installation category: II

3.9 Transportation and storage conditions: $-25^{\circ}\text{C} \sim +65^{\circ}\text{C}$

3.10 Source voltage variation range : 85%~110% rated voltage.

3.11 Degree of protection : IP20

4 Technical parameters

4.1 Rated control source voltage: AC(50Hz); 220V

4.2 Conventional heat current : 10A

4.3 Auxiliary circuit commission category: AC-15

4.4 Rated working current(Ie): AC-15 220V 3A

4.5 Timing error: $\leq 2\text{s/day}$

4.6 Time control range : 1 minute~ 168 hours

4.7 Mechanical life : ≥ 30000 times

4.8 Electrical life: ≥ 10000 times

4.9 Installation mode : unit style

4.10 Anti-interference tolerance : see Table 1



display screen show symbol explanation

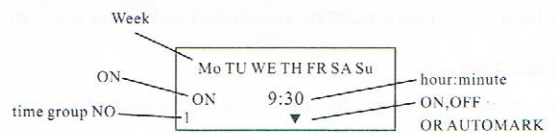


Table 1 Anti-interference tolerance

Item	Rigor grade
Static discharge tolerance	$\pm 8\text{kV}$ (air discharge) $\pm 10\%$
Radiating electromagnetic field tolerance	Pilot electric field intensity $10(\text{V/m}) \pm 10\%$
Rapid transient tolerance	2kv for power cord, 1kv for I/O signal and control lines. Duration 1 min.
Surge (impact) tolerance	Open -circuit test voltage($\pm 10\%$)2.0kv

5. Physical dimension, installation dimension, and mode of connection

5.1 Physical dimension and installation dimension see Figure 1

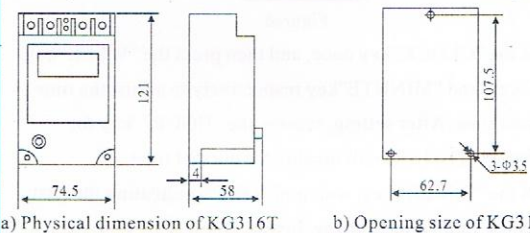


Figure 1 Physical dimension and installation dimension of KG316T

5.2 Mode of connection

5.2.1 Direct control mode If the power for the appliance under control is supplied by a single phase and the working current does not exceed the rating of the switch, then the direct control mode can be adopted, with the mode of connection as shown in Figure 2.

For the lamp loads with a large pickup impulse current, the control mode by AC contactor capacity expansion shall be used.

5.2.2 Single-phase capacity expansion mode If the power for the appliance under control is supplied by a single phase and the working current exceeds the rating of the switch, then the control mode by AC contactor capacity expansion shall be employed.

5.2.3 Three-phase working mode If power for the appliance under control is supplied by three phases, an external AC conductor is required.

a) If the control conductor's coil voltage is AC380V 50Hz, then the mode of connection is shown as in Figure 4.

b) If the control conductor's coil voltage is AC 380V 50Hz, then the mode of connection is shown as in Figure 5.

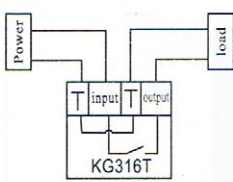


Figure 2 Direct control mode

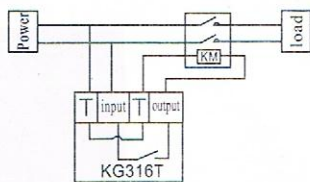


Figure 3 Single-phase capacity expansion mode (conductor's coil voltage is AC220V)

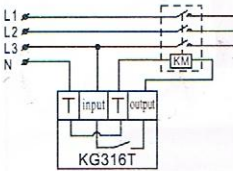


Figure 4 Three-phase working mode (conductor's coil voltage is AC220V)

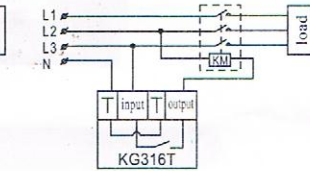


Figure 5 Three-phase working mode (conductor's coil voltage is AC380V)

6. Setting and use

Prior to putting the product into service, first load a battery.

The cover direction is the positive electrode of the battery.

When reading the manual, be sure to see clearly the keys on the panel. It is preferred to read the manual together with operation. All the setup functions of the production are available until the keyboard lock is unlocked. The manual take "8-open and 8-close" product as the example, and the product of 16 groups can follow suit.

6.1 Pressing the "RESET/RECALL" key four times can unlock the keyboard lock, and the " " disappear, it is shown as Figure 6.

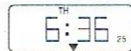


Figure 6

6.2 Press the "CLOCK" key once, and then press the "WEEK" key, "HOUR" key, and "MINUTE" key respectively to adjust the time to the current time. After setting, repress the "HOUR" key for conformation. The LCD will display the current time.

6.3 Press the "TIMER" key, wait until "1 ON" (indicating the first time opening time) appear in the lower left of LCD, and then press "WEEK" key, "HOUR" key, and "MINUTE" key and in put the required opening time, as shown in Figure 7.



Figure 7

6.4 Press the "TIMER" key once again; wait until "1 OFF" (indicating the first time closing time) appear in the lower left of LCD, and then press "WEEK" key, "HOUR" key, and "MINUTE" key and input the required closing time, as shown in Figure 8.

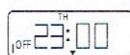


Figure 8

6.5 Continue to press the "TIMER" key. (2 ON, 2 OFF,.....8 ON, 8 OFF) will be displayed in the lower left of LCD in turn. Set up the time for these groups in accordance with the above procedures.

If both open and close operations are conducted only once within

a day, the "RESET/RECALL" key must be pressed to cancel the time of all other groups to make the LCD to be displayed as "--:--", as shown in Figure 9.

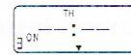


Figure 9

6.6 Press the "WEEK" key to set up working mode, as shown in Table 2.

Table 2 working mode

NO.	Working mode	Functions
1	MO TU WE TH FR SA SU	The same daily working hours in a week
2	MO/ TU/ WE/ TH/ FR/ SA/ SU	Different daily working hours in a week
3	MO TU WE TH FR	The same daily working hours from Monday to Friday
4	MO TU WE TH FR SA	The same daily working hours from Monday to Saturday
5	SA SU	The same daily working hours on Saturday to Sunday
6	MO WE FR	The same daily working hours on Monday, Wednesday, and Friday
7	TU TH SA	The same daily working hours on Tuesday, Thursday, and Saturday
8	MO TU WE	The same daily working hours on Monday, Tuesday, and Wednesday
9	TH FR SA	The same daily working hours on Thursday, Friday, and Saturday

Note: 1. As long as a working mode is set up once, the system can work in accordance with the presetting routine.

Note: 2. MO TU WE TH FR SA SU are the abbreviations of Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

6.7 After finishing the timing setup, press the "CLOCK" key to make the LCD to display the current time; otherwise, the automatic clock switch will switch itself into the clock mode automatically 30 seconds later.

6.8 Connect the wires according to the connection diagram and switch on, and the red light on the panel will be on; after switching on the switch, the green light will be on and there will be 220V current at the output terminal.

6.9 Pressing the "AUTO/MANUAL" key can help to switch on or off directly. The way to let the switch act automatically is that: first press the "AUTO/MANUAL" key to adjust the arrow in the lower part of the LCD to the "OFF" position. Only in this way can the automatic clock switch work according to the present and realize automatic control.

7 Precautions

- 7.1 The incoming feeder of the switch can only be connected with AC 220V power supply; never use any other power source.
- 7.2 If it is confirmed that the input terminal is alive but the red indicator light is off, then check whether the fuse on the panel fails. If the fuse fails, please replace it with a new fuse of 0.25A.
- 7.3 The product employs 1.5V high performance batteries with can be used for one year from the date of manufactory. If the display is not clear after a period of service, please replace the batteries in time. The battery cover direction on the right of the product indicates the positive electrode.
- 7.4 Based on the vertical installation position, screw the battery cover to the "⊖" position to uncover the battery box and replace the batteries; after replacement, cover the box and screw the cover to the "⊕" position.