



KG10D/KG10M
Time Switch

User Instruction

Safety Warning

- ① Only professional technicians are allowed for installation and maintenance.
- ② Installation in any damp, condensed-phase environment with inflammable and explosive gas is forbidden.
- ③ When the product is being installed or maintained, the power must be switched off.
- ④ You are prohibited from touching the conductive part when the product is operating.
- ⑤ The product shall be stored, installed and used in accordance with the rated control power supply voltage and specified conditions indicated in the user instructions.
- ⑥ The products shall be properly wired in strict accordance with the wiring diagram.

1 Use Purpose

KG10D/KG10M time switch is mainly used in automatic control circuits with AC 50Hz/60Hz, rated control supply voltage up to 220V and rated operating current up to 3A, for the purpose of timed connect and disconnect control for lamppost, advertising light boxes, etc.

2 Key Technical Parameters

Table 1 Ambient Conditions

Normal use conditions	Ambient temp.: -5°C~+40°C; average value within 24h not exceeding +35°C; altitude not exceeding 2,000m.
Atmospheric conditions	RH shall not exceed 50% when maximum temperature is +40°C; in case of lower temperature, higher RH is allowed. Measures should be taken against occasional condensation due to temperature change.
Installation category	II
Transport and storage conditions	-25°C~+55°C

Table 2 Product Specifications and Main Technical Parameters

Model	KG10D-1H	KG10D-1Z	KG10M
Installation method	Rail mounting		Panel type
Operating method	Manual on, manual off, automatic on/off		
Number of programmable groups	16 groups		
Time control range	1min~168h		
Timing error	±2s/d		
Output method	1 normally-open contact	1 group of change-over contact	1 normally-open contact
Other function	Clock auto calibration function		

Table 3 Main Circuit and Auxiliary Circuit Technical Parameters

No.	Product specifications	KG10D	KG10M
1	Rated control supply voltage U_s (V), frequency (Hz)	AC220V, 50Hz/60Hz	
2	Allowable fluctuation range of rated control power supply voltage	85% U_s ~110% U_s	
3	Agreed free air heating current I_{th} (A)	10	
4	Rated duty	Uninterrupted duty or 8h duty	
5	Rated operating voltage U_e (V)	AC240V	AC220V
6	Utilization category and rated operating current I_e (A)	AC-15	AC-15
		3A	3A
7	Rated insulation voltage U_i (V)	240	220
8	Rated impulse withstand voltage U_{imp} (kV)	4	4
9	Enclosure protection class (if applicable)	IP20	
10	Pollution class	Class 3	
11	Type and maximum value of short circuit protection	RT36-00/16A	
12	Terminal tightening screw (or nut) size	M4	/
13	Torque of terminal tightening screw (N·m)	1.2	/
14	Electrical life / mechanical life (10,000 times)	10/100	

Table 4 Immunity to Interference

No.	Test type	Test level
1	Electrostatic discharge immunity test	8kV (air discharge)
2	RF electromagnetic field immunity test	10V/m
3	Electrical fast transient/burst immunity test	2kV/5kHz on the power supply side
4	Surge immunity test	1kV (wire to wire)

3 Installation

3.1 Outline and installation size: see Figure 1~ Figure 2, unit: mm.

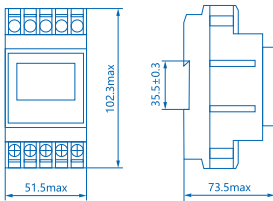


Figure 1 Outline and Installation Size of KG10D

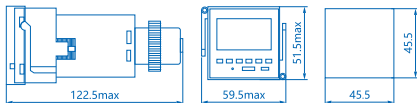


Figure 2 Outline and Installation Size of KG10M

3.2 Installation, commissioning and operation

3.2.1 Wiring method

3.2.1.1 For the wiring method of KG10D, please refer to Figure 3~ Figure 4.

3.2.1.1.1 Single-phase direct control method

The controlled load is supplied by single phase, and the power consumption does not exceed the rated capacity of the switch. The direct control mode can be adopted, and the wiring method is shown in Figure 5.

3.2.1.1.2 Three-phase control method

If the controlled load uses 3-phase power supply, an external AC contactor is required. Control contactor coil voltage: AC220V 50Hz/60Hz, see Figure 6 for wiring method.

3.2.1.2 The wiring method of KG10M is shown in Figure 7, and the base CZS08C can be used for the guide rail type installation.

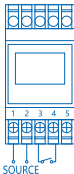


Figure 3 KG10D-1H

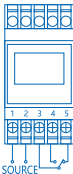


Figure 4 KG10D-1Z

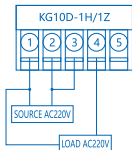


Figure 5 Single-Phase Control Wiring Diagram

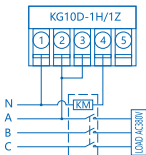


Figure 6 Three-phase Control Wiring Diagram

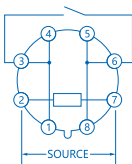


Figure 7 Wiring Diagram of KG10M

3.2.2 Settings and usage

The product panel has the "HOUR", "MINUTE" and "WEEK" buttons, which can be used to adjust hour, minute and week accordingly.

3.2.2.1 Unlock setting

All settings of this product can only be performed after unlocking. Press the "RECALL" key four times to cancel the keyboard lock function and then " " hides, as shown in Figure 8.

3.2.2.2 Clock setting

Press the "HOUR", "MINUTE" and "WEEK" key to operate and set the clock to the current time.

3.2.2.3 Timing settings

3.2.2.3.1 Press the "SETTING" key once, and "01 ON" is displayed at the bottom right of the LCD (indicating the first turn-on time). In the initial state, the turn-on time is displayed as "=: ==", press the "RECALL" key, and the turn-on time is displayed as "0:00"

pattern. Then press the "WEEK" key to select the working mode (see Table 5), press the "HOUR" key and "MINUTE" key to enter the first group of turn-on time required, as shown in Figure 9.

3.2.2.3.2 Press the "SETTING" key again, and "01 OFF" is displayed at the bottom left of the LCD (indicating the first turn-off time). In the initial state, the turn-off time is displayed as "=: ==", press the "RECALL" key, and the turn-off time is displayed as "0:00" pattern. Then press the "WEEK" key to select the working mode, press the "HOUR" key and "MINUTE" key to enter the first group of turn-off time required, as shown in Figure 10.

3.2.2.3.3 Continue to press the "SETTING" key, (02 ON, 02 OFF...16 ON, 16 OFF) will be successively displayed at the bottom left of the LCD, please refer to the above steps to set the turn-on and turn-off time of other groups. If the circuit is turned on and off once a day, you must press the "RECALL" key to eliminate the time of other groups and make the LCD display the "=: ==" pattern, as shown in Figure 11.

3.2.2.3.4 After the timing setting, press the "TIMER" key to make the LCD display the current time. If you don't press the "TIMER" key, the time switch will automatically switch to the clock mode after 30s.

3.2.2.4 Automatic/manual mode setting

Press the "ON/AUTO/OFF" button to adjust the time switch to the current on-off state of the control equipment, and then adjust it to the "AUTO" position. At this time, the time switch can automatically turn on and off the circuit according to the set time. If you need to temporarily turn on and off the circuit during use, just press "ON/AUTO/OFF" to turn the switch to the "ON" and "OFF" positions.

3.2.2.5 Clock auto calibration function

After unlocking, first press and hold the "RECALL" key, and press the "SETTING" key together to enter the automatic clock calibration function. As shown in Figure 12, the screen display shows the time to be adjusted in 1 week, unit: s. "- 30" means automatic slowdown for 30s, "30" means automatic speedup for 30s, press the "WEEK" key to adjust the required calibration time of each week, and press the "TIMER" key to return. After setting, the time switch will automatically calibrate time at 0:01am every Saturday.



**Figure 8 LCD Display
(after unlocking)**



**Figure 9 LCD Display
(Timing setting 01 ON)**



**Figure 10 LCD Display
(Timing setting 01 OFF)**



**Figure 11 LCD Display (Timing
setting time elimination)**



**Figure 12 LCD Display
(calibration function setting)**

Table 5 Operating Mode

No.	Operating Mode	Function Enabled
1	Mo TU WE TH FR SA SU	The same operating time for each day
2	Mo TU WE TH FR SA	The same operating time from Monday to Saturday
3	Mo TU WE TH FR	The same operating time from Monday to Friday
4	SA SU	The same operating time on Saturday and Sunday
5	Mo TU WE	The same operating time on Monday, Tuesday and Wednesday
6	TH FR SA	The same operating time on Thursday, Friday and Saturday
7	Mo WE FR	The same operating time on Monday, Wednesday and Friday
8	TU TH SA	The same operating time on Tuesday, Thursday and Saturday
9	Mo/TU/WE/TH/FR/SA/SU	Different operating time for each day
Note 1: All operating modes only need to be set once to ensure operation according to the set procedure.		
Note 2: Mo TU WE TH FR SA SU are the abbreviations of Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.		

Notes: The KG10D product has a built-in lithium battery, which is only used to store program after the product is powered off. The KG10M product has a built-in rechargeable battery, which should be charged in time. KG10M products are panel mounted, if you want to realize the rail type installation, choose CZS08C base. When the base is installed and used, it must be aligned with the foot position, and the plug boss on the time switch should be aligned with the groove of the base.

4 Maintenance

- 4.1** The terminal of the time switch should be tightened on a regular basis.
- 4.2** Avoid squeezing the product; the product should be stored in a well-ventilated place.
- 4.3** For equipment that may cause material economic losses or personal safety, safety measures such as secondary circuit protection should be taken.

Table 6 Fault Analysis and Troubleshooting

Symptoms	Cause analysis	Troubleshooting method
Abnormal display and large clock error.	Setting error, clock calibration function enabled.	Touch the "reset" button to restore the factory default settings.
The product runs outside the set time range.	Timing setup error.	Check if the timing setup is removed according to Figure 11.

5 Environmental Protection

In order to protect the environment, the product or product parts should be disposed of according to the industrial waste treatment process, or be sent to the recycling station for assortment, dismantling and recycling according to local regulations.

CHINT

QC PASS

KG10D/KG10M
Time Switch
IEC/EN 60947-5-1

JDQ Check 10

Test date: Please see the packing

ZHEJIANG CHINT ELECTRICS CO., LTD.

CHINT

CHINT ELECTRICS

KG10D/KG10M Time Switch User Instruction

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