# **AHD16T Astronomical Time Switch**

# Manual

# Description:

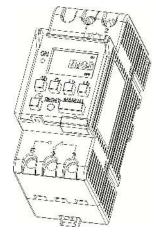
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- Built-in calendar: 2016 ~ 2066 years.
- The ON/OFF time of the program can be switched ON or OFF according to the sunrise and sunset time.
  - 1. Longitude range: east longitude / west longitude 0 ~ 180  $\,^\circ\,$  , 1 degree increase.
  - 2. Latitude range: latitude / latitude 0 ~ 68, 1 degree increase.
  - 3. Time zone range: 12 ~ -12,1H increment.
- Manual Daylight Saving Time start and end for EU, USA.
- 8 sets of program settings, can be change or not change according to astronomical time.
- Users can check the day of sunrise and sunset time according to the setting longitude, latitude, date and time zone.
- Suitable for DIN35mm standard rail and South Africa rail installation.
- Built-in lithium battery, as usual after power outage.
- With data card port, date can be copied include instant time, latitude and longitude, summer time and program switching time, pulse time.
- Automatic key lock function, effectively prevent misuse.
- This product is particularly suitable for advertising light boxes, street lamps, home appliances, construction and industrial timing control.

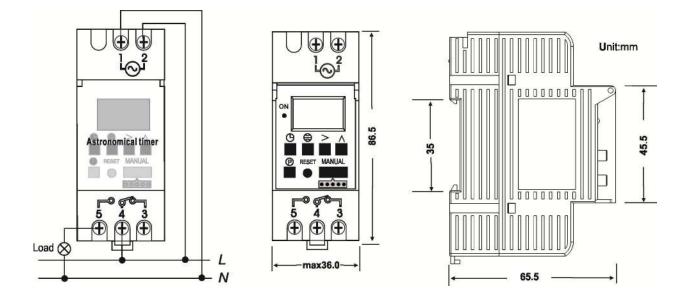


## Technical parameters and electrical characteristics:

Rated voltage	220VAC(85~110%) 50Hz	Power outage memory	3 years
Number of ON/OFF setting	8groups of ON/OFF program	Power consumption	≪5VA
The minimum setting	1 minute	Contact electrical life	10⁵ times
Contact load capacity	Resistive load: 16A/ 250V AC COS $\phi$ =1	Contact mechanical life	10 <sup>7</sup> times
	reactive load: 10A/ 250V AC $\cos \phi = 0.6$	Operating temperature	-10 ~ +50 <sup>o</sup> C(Not frozen)
Contact number	1changeover	environment humidity	35~85 % RH
Contact resistance between contacts	≤100m Ω	Storage temperature	-10 ~ +60 °C
Insulation resistance	≥100M Ω /500V	Wight	130g



## Wiring diagram and dimensions:



## **Product setting:**

- 1. The product is set at off state before delivery, press the "RESET" button on the interface to open the product display at the first time.
- 2. Press both  $\bigcirc$  and  $\ominus$  to shut down,all programs and settings will be cleared, the accumulated working hours and the number of actions will not be cleared.
- If there is no operation within 30 seconds during the setting process, the button will self-locking. The current setting parameters will be retained, and any setting needs to be unlocked before operation.



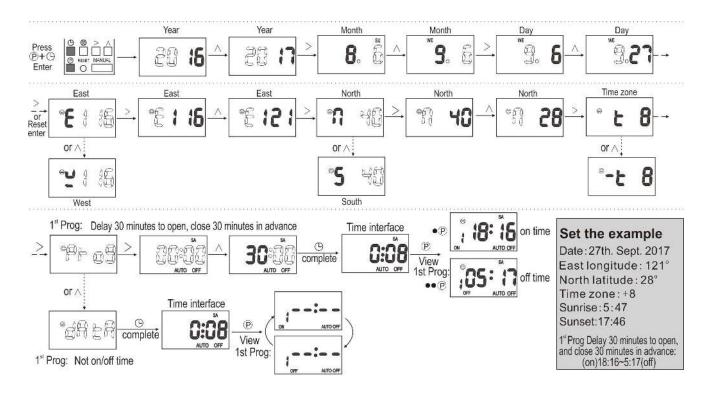
### • Latitude and longitude and date settings

There is several steps should be set before using the product.

1. Set the date, latitude and longitude, time zone.

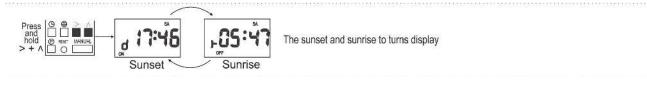
2. hether the ON/OFF program of group 1 is turned ON and OFF according to the sunset and sunrise.

3. Whether the delay-on or early-off should be set ( $0 \sim 99$  minutes adjustable range).

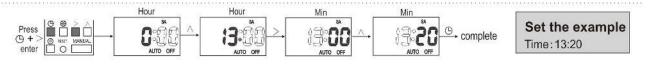


### Sunrise and sunset time checking

The day's sunset and sunrise time is displayed corresponding to the setting longitude, latitude and longitude and time zone.



#### • Current time setting

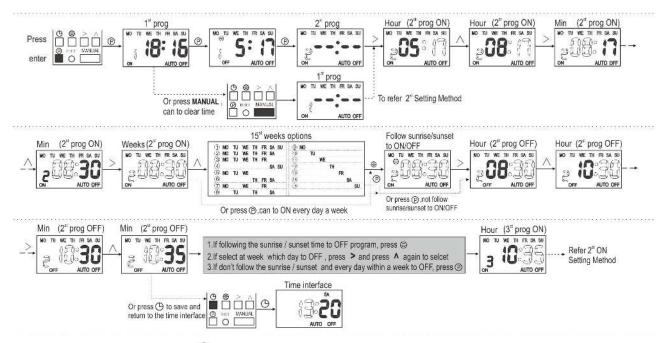


#### program settings

Setting example:

Group 1: ON time 18:16, OFF time 05:17, according to the sunrise and sunset time, the daily 30 minutes delay ON, 30 minutes advance OFF.

Group 2: ON time 8:30, OFF time 10:35, running every day of the week.



- 2. The time display interface will display the ⊖ logo if there is one group or one setting select ⊖ in the program.
- 3. Press the key (P) to view the setting time after the program is set, modify according to the setting steps.

### Daylight Saving Time

1. The ON/OFF of Daylight Saving Time (EU, US)

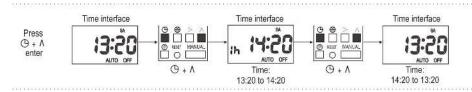


"1h" mark will be displayed in the lower left corner of the display when turned on.

When the Daylight Saving Time date start or end, the following time will automatically increase or decrease 1 hour:

- A. current time.
- B. sunrise and sunset time.
- C. the ON/OFF time of the first program set according to latitude and longitude.
- D. all of ON/OFF time setting with  $\Theta$  mark.

## 2. The ON/OFF of manual Daylight Savings Time operation



The Daylight Savings Time can not be set if it is turned on.

"1h" mark will be displayed in the lower left corner of the display when turned on.

When the Daylight Saving Time date start or end, the following time will automatically increase or decrease 1 hour:

- E. current time.
- F. sunrise and sunset time.
- G. the ON/OFF time of the first program set according to latitude and longitude.
- H. all of ON/OFF time setting with  $\Theta$  mark.

### • Total cumulative working hours and action times



The display circulates the working hours (h) and the times (p). The actual working hours and the number of actions: multiplying the displayed values by 10.

For example: "h00 13" and "p00 21" are displayed, which mean the device has accumulated 130 hours of work and 210 times action. (Max: 99990 hours and 99990 times)

Press key to return to the clock interface after viewing, or no operation for 30 seconds to automatically return to the clock interface and lock.

### • The ON/OFF by manual control

Press the 'MANUAL' button, you can freely set ON/OFF of the time switch output, the four modes are as follows:

- 1. ON AUTO: Now it is ON state to automatic ON/OFF according to the programs.
- 2. AUTO OFF: Now it is OFF state to automatic ON/OFF according to the programs.
- 3. ON: Long-term ON state that not according to the programs.
- 4. OFF: Long-term ON state that not according to the programs.

Attention

Please don't use in the place with dust, corrosive gas, direct sunlight or rain.

• Please store and use in the conditions of rated voltage with the specified temperature and humidity.

Product design and specifications maybe be changed without notice.

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