

# Recycling Timer Switch (No Neutral Required)

**Model #:** BRT-405



#### **Features:**

BRT-405 is the most advanced recycling timer switch. It is controlled by a micro controller unit and has very accurate timing capability and duty cycle settings. It is designed for easy installation and retrofit, directly fit into standard wall box with no need for the neutral.

- Auto recycling for up to three recycling timing periods with multiple duty cycles;
- Manually triggered recycling with up to five duties cycles;
- LCD display showing current clock time, recycling timing period # and duty cycle periods;
- User friendly front panel key pads for easy manual operation or automatic timing settings;
- Load up to 2000W;
- ABS-V0 flame resistance material; and
- Classical 86 series design and high quality build.

## **LCD Display and Front Panel Buttons:**

Fig. 1 and Fig. 2 show the front view and the back view of BRT-405 recycling timer switch respectively.



Fig. 1 Front View



Fig. 2 Back View

As shown in Fig. 3, the BRT-405 recycling timer switch has an LCD display and 6 buttons in the front. The LCD display shows clock time, recycling timing period #, and duty cycle period # for the current timing period.



Fig. 3 Front Control Panel and LCD Display

The 6 buttons are used to turn on/off the load, and set clock time and timing settings.

**ON/OFF:** Power on or off the load, or run manual recycling mode. It can override the switch's automatic recycling.

**ALLOFF:** Switch displayed digits to be changes.

Clock: Press the button to enter clock setup mode. It is also used to enter the setup mode for manual recycling settings.

**Timer:** Press the button to enter duty cycle setup mode.

**◄:** Press the button to decrease the time when the digits are flashing; or

Press the button to increase the time when the digits are flashing; or

# Specification Parameters:

Input Voltage	220~240V(50Hz/60Hz)	Operation Environment	No-condensation 20-90% RH, -20°C∼55°C
Wattage	2000W	Load type	All Types*
Mounting Hole	60mm	Matching	75mm x 75mm x 50mm
Spacing		Box	
Dimension	86mm x 86mm x 43mm	Weight	116g

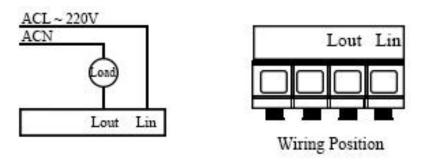
Product Description of BRT-405 Shenzhen Asia Bright Co., Ltd. \* For capacitive loads, an adaptor is needed. Please talk to our sales representatives.

# Wiring Diagram and Installation Guide:

BRT-405 recycling timer switch only requires hot wire for installation:

Hot wire (ACL): Coming from the power line with 220V; and

Load wire: Going to the load.



**Fig. 4** BRT-405 wiring diagram

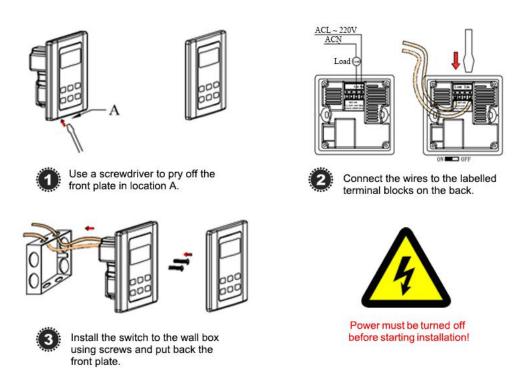
# Warning: Please make sure power is turned off before starting installation!

Fig. 4 shows the wiring diagram and Fig. 5 shows the step-by-step installation instructions. There are three easy steps:

Step one: Use a screwdriver to pry off the front plate in position A;

Step two: Wiring according to the diagram and the labelled ports of the switch; and

Step three: Install screws and front plate.



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#### Fig. 5 BRT-405 installation guide

### **▶** BRT-405 Recycling Timer Switch Setup:

#### 1. Set up the clock:

- 1.1 Press the "Clock" button and hold for 3 seconds to enter the clock setup mode, the hour display starts to flash; press " " or " " " to adjust the hours (holding down " " or " " " will adjust the hours quickly);
- 1.2 Press the "ALLOFF" button again, the minute display starts to flash; press " ◀ " or " ▶ " to adjust the minutes (holding down " ◀ " or " ▶ " will adjust the minutes quickly); and
- 1.3 Press and hold the "Clock" button until clock display stops flashing. The clock settings are saved.

(Note: If there is no button operation for 15 seconds, the clock settings will be automatically saved).

#### 2. Set up timing period and duty cycles for auto recycling:

BRT-405 can automatically start recycling at preset time. Up to three recycling timing periods can be set up. Within each timing period, up to five different duty cycle periods can be set.

#### Timing period:

- 2.1 Set up the On time for timing period: Press and hold the "Timer" button for 3 seconds until the hour display starts to flash to enter timing period setup mode. Press " " or " be " to adjust the hours (holding down " down " be " will adjust the hours quickly). Press the "ALLOFF" button, the minute display starts to flash; press " down " be " to adjust the minutes (holding down " down " be " will adjust the minutes quickly); and
- 2.2 Set up the Off time for timing period: Once the On time for a timing period is set up, press the "ALLOFF" button to set the Off time of the timing period. The hour display starts to flash and the right lower corner of the display shows "CL". Press " " or " " to adjust the hours (holding down " " or " " will adjust the hours quickly). Press the "ALLOFF" button, the minute display starts to flash; press " " or " " to adjust the minutes (holding down " " or " " will adjust the minutes quickly);

Once the timing period is set up, proceed to set up the duty cycles. The longest available cycle time is 90 minutes and the shortest available cycle time is 5 seconds.

#### **Duty cycles:**

- 2.3 Press the "Timer" button to set the first On cycle time of the timing period. The minute display starts to flash and the left upper corner of the display shows "on1". Press " ◀ " or " ▶ " to adjust the minutes (holding down " ◀ " or " ▶ " will adjust the minutes quickly). Press the "ALLOFF" button, the second display starts to flash; press " ◀ " or " ▶ " to adjust the seconds (holding down " ◀ " or " ▶ " will adjust the seconds quickly); and
- 2.4 Once the first On cycle time for a timing period is set up, press the "ALLOFF" button to set the first Off cycle time of the timing period. The minute display starts to flash and the left upper corner of the display shows "off1". Press " " or " " " to adjust the minutes (holding down " " or " " will adjust the minutes quickly). Press the "ALLOFF" button, the second display starts to flash; press " " or " " to adjust the seconds (holding down " " or " " will adjust the seconds quickly);

Up to five different On cycles and 5 different Off cycles can be set up for each timing period in sequence. Repeat 2.3 and 2.4 to set up more cycles as desired.

Once the first timing period and its duty cycles are set up, proceed to set up the On/Off time and On/Off cycles for the second timing period.

Once all the timing periods and their duty cycles are set up, press and hold the "Timer" button until clock display stops flashing. The settings are saved. If there is no button operation for 15 seconds, the settings will be automatically saved as well.

#### 3. Manually triggered recycling:

BRT-405 can also start recycling anytime by pressing the "On" button. The duty cycle periods need to be set first by the steps as follows:

- 3.1 Right after setting up the clock time in step 1.2, press "Clock" button to enter manual recycling setup mode;
- 3.2 Follow step 2.3 and step 2.4 to set duty cycle periods as desired. Up to five different On cycles and 5 different Off cycles can be set; and
- 3.3 Once the duty cycles are set up, press and hold the "Timer" button until clock display stops flashing. The settings are saved. If there is no button operation for 15 seconds, the settings will be automatically saved as well.

The recycling process can be stopped anytime by pressing the "Off" button.

#### 4. Delete settings

All the saved settings can be deleted by changing the settings to "--:--" by following the steps above.

## Applications:

BRT-405 recycling timer switch is used for automatically turning on and/or turning off various loads in preset duty cycles. These loads include fans, lights, appliances, or other kinds of electrical equipment. They are perfect for bringing convenience and safety to our daily life and work.

They have wide applications at various locations such as factories, laboratories, hospitals, farms, etc. The typical application scenes include:

Factories: Automatically run equipment for aging test;

**Hospitals or Laboratories:** Automatically turn on and turn off UV disinfection equipment to isolate operators from harmful UV exposure; and

**Farms:** Automatically turn on or turn off irrigation equipment.

## How to Order:

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