

XY-L30A battery charging control module digital full power off overcharge protection switch 6-60V

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Module highlights:

1. 6-60V any battery, lithium battery can be used;
2. LCD display, battery voltage, charging percentage and charging time at a glance;
3. The function is very powerful, can automatically charge control, can control the charging time, can set and upload the corresponding parameters through the serial port;

1. Function description

1. Automatic charging control function:

By setting the upper limit voltage UP and the lower limit voltage dn; When the battery voltage is less than the lower limit voltage dn, the relay is switched on and the charger starts to charge the battery. When the battery voltage is greater than or equal to the upper limit voltage UP, the relay is disconnected and an automatic charge is completed.

2. Charging time control function:

How do I enable the time control function?

After entering the parameter setting, if the parameter OP is not set to 0, the time control function is enabled. The default parameter of OP is: -- : --h, and the time control function is not enabled by default.

After the time control function is enabled (OP is not 0), when the battery voltage is < the lower limit voltage dn, the charger starts to charge the battery, and the system starts to time; During the timing period, the battery voltage \geq the upper limit voltage UP, the relay is disconnected; If the battery voltage is < the upper limit voltage, but the charging time OP time is up, the relay is disconnected; If the OP time is up and the battery voltage is still < the lower limit voltage dn, the relay will keep on, automatically turn off the charging time control function, and flash H:ER to remind the user that the time parameter setting is unreasonable; Press any key to stop flashing;

Note: Time format: 00:59 (00 represents hours, 59 represents minutes) The maximum time is 99:59, which is 100 hours.

3. Serial port data upload and parameter setting functions:

The system supports UART data upload and parameter setting (TTL level).

UART: 115200,8,1

Command function

Enable on the relay

off Indicates that the relay is disabled

start Enables the data reporting function

stop Stops the data reporting function

read Gets the parameters of the system

dw10.0 Sets the lower limit voltage

up20.0 Set the online voltage

xx: xx sets the charging time. Turn off the charging time control function at 00:00

Format of data upload message:

Battery voltage + battery percentage + charging time + charging status

12.0 V, 020%, 00:10, OP

2. Parameter setting

- a) Long press the SET key to enter the parameter setting interface, and the LCD will display SET;
- b) After entering the parameter setting interface, press the SET key to switch the set parameters;
- c) After selecting parameters, you can set them by the UP/DOWN key, supporting short press and long press (fast increase or decrease);
- d) To set other parameters, repeat steps b), c);
- e) After all parameters are SET, long press the Set key to exit and save;

Three, key function description

In the running interface (main interface),

Press the SET button to display the current parameters.

Press the UP button to switch the display of charging percentage and charging time;

Press the DOWN button and select Enable/Disable relay. If the relay is disabled, "OFF" will be displayed to remind you that the relay is disconnected.

Long press the UP button to set the status of the LCD backlight (L-P). OFF: the backlight is always on. on: the backlight will be automatically extinguished after 5-10 minutes.

Press and hold the SET button to enter the parameter setting.

4. Calculation of voltage percentage: $\text{battery voltage}/(\text{upper voltage} - \text{lower voltage})$.

5. Additional functions

- a) Charging time recording function: When the charging time control is not turned on, the product will record a complete time. When entering the time display interface, the charging time will blink to display; Then exit the time display interface or empty when the next charge is turned on (relay conduction);
- b) Parameter automatic detection: When the parameters are set and exit, if the lower voltage dn is greater than the upper voltage up, the system blinks "ERR" to remind you.
- c) Battery access detection: This product is attached to the battery, if the battery is not connected, the system will display "nbE" in the downlink to remind;

