Overview:

XY-L30A is perfect for keeping battery packs ranging from 6v to 60v fully charged. Ideal for use in electronic projects that are battery powered. The module comes fitted with an automatic battery protection and a range of features for charging

Features:

• Application Fields: 6-60V battery including lithium and Lead-acid battery
• Liquid crystal display highlighting battery voltage, charging percentage and charging time
• Automatic charging control
• Charging time control
• Setting and uploading corresponding parameters through serial port (UART TTL)

Specification:

• Model Number: XY-L30A
• Charging Voltage Range: 6V to 60V DC
• Max Charging Current: ≤30A
• Charging Accuracy: 0.1V
• Battery Compatibility: Lithium / Multi-Cell Packs (2S to 14S) / Lead Acid
• Onboard Buttons: SET | UP | DOWN
• Onboard Indicators: Charging | Running
• Integrated Relay: Single 30A Relay: SLA-05VDC-SL-A
• Integrated Display: White on Blue LCD Display
• Weight: 58g
• Dimensions: 92 x 45mm

Functional description:

1. Automatic charging control function:

By setting the upper limit voltage UP and lower limit voltage DN; When the battery voltage ≤ the lower limit voltage DN, the relay conducts, and the charger starts to charge the battery; When the battery voltage ≥ upper limit voltage UP, the relay is disconnected to complete an automatic charging.

2. Charging time control function:

How do I turn on time control?
After entering parameter setting, if the parameter OP is not set to 0, the time control function will be turned on. The default parameter of OP is: -- : --h, and the time control function will be turned on by default.

After the time control function is turned on (OP is not 0), when the battery voltage is less than the lower limit voltage DN, the charger starts to charge the battery and the system starts timing. During the timing period, the battery voltage ≥ upper limit voltage UP, the relay is disconnected; If the battery voltage < the upper limit voltage, but the charging time OP time is up, the relay is disconnected; If OP time is up, the battery voltage is still less than the lower limit voltage DN, the relay keeps the conduction, and the charging time control function is automatically turned off, and the flashing display H:ER reminds the user that the time parameter setting is unreasonable; Press any key to stop flashing;
Note: Time format: 00:59 (00 for hours, 59 for 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 uploading and parameter setting (TTL level). UART: 115200,8,1

Command function:

• On relay enables to open
• Off relay enables shutdown
• Start starts the data escalation function
• Stop data escalation function
• Read gets the parameters of the system
• The lower limit voltage is set on DW10.0
• Up20.0 sets the on-line 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 percent + charging time + charging state12.0 V, 020%, 00:10, OP

Parameter setting:

A) Enter the parameter setting interface by long pressing SET key, and the LCD will display SET;
B) After entering the parameter setting interface, short press SET key to switch the parameters SET;
C) After the parameter is selected, it can be set by UP/DOWN key, supporting short press and long press (fast increase or decrease);
D) If you want to set other parameters, repeat steps B) and c);
E) After all parameters are SET, long press SET key to exit and save;

Key function description:

• In the operation interface (main interface),
• Press SET button to display the current SET parameters;
• Press UP button to switch to display charging percentage and charging time;
• Short press DOWN button and select "on/OFF relay enable". If the relay enable is

OFF, "OFF" will be displayed to remind the relay to disconnect.
• Long press UP button to set the state of LCD backlight (L-P), OFF: backlight is always on, on: backlight will be OFF automatically after 5-10 minutes;
• Long press the SET button to enter the parameter setting.
• Calculation of voltage percentage: battery voltage/(upper limit voltage - lower limit voltage).

4. Additional functions

A) Charging time recording function: If the charging time control is not enabled, the product will record a complete time. When entering the time display interface, the charging time will be displayed in flicker; Clear the display interface after exit time or when the next charging is on (relay conduction);
B) Automatic parameter detection: when the parameters are set and quit, if the lower voltage DN ≥ the upper voltage up, the system will flash "ERR" to remind;
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;

5. Common fault analysis

Q: How much V level is suitable for use? How much V voltage does this module fit?
A: This model is suitable for use in the range of minimum 6V, maximum 60V voltage, maximum expenditure level 48V, because the 48V battery is fully charged at about 60V, then high will burn, if your battery is higher than 48V, please choose other models.

Q: Relay crackles after power on! Lights flashing?
A: this is the charging current is too large, or because you on the battery capacity is too small to cause a immediately reaches the upper limit of voltage, electric relay disconnect, disconnect, voltage lower limit, voltage and quickly fell to start charging and cycle, at this point you have to reduce the charging current and charging current is usually battery capacity of one over ten to 1.5, like 20 ah battery charging current at around 2-3 a! Note that high current charging can cause battery heating, accelerated aging, bulging and even explosion!

Q: What kind of control? Can automatic cycle charge? Can you charge it while using it? Can you limit the current?
A: This is voltage control. For example, set the voltage lower limit at 12.0V and the voltage upper limit at 14.5V. When the voltage reaches 14.5V, the power will be cut off. When the voltage drops to 12.0V, the relay will close again and start charging. Can be used while charging, voltage control mode only to turn off and on, cannot limit the current, charging current completely depends on your charger!

Q: Can a 24V battery be charged with 12V or a 48V battery be charged with 12V?
A: this is a simple voltage controller, only play the role of switch, cannot change
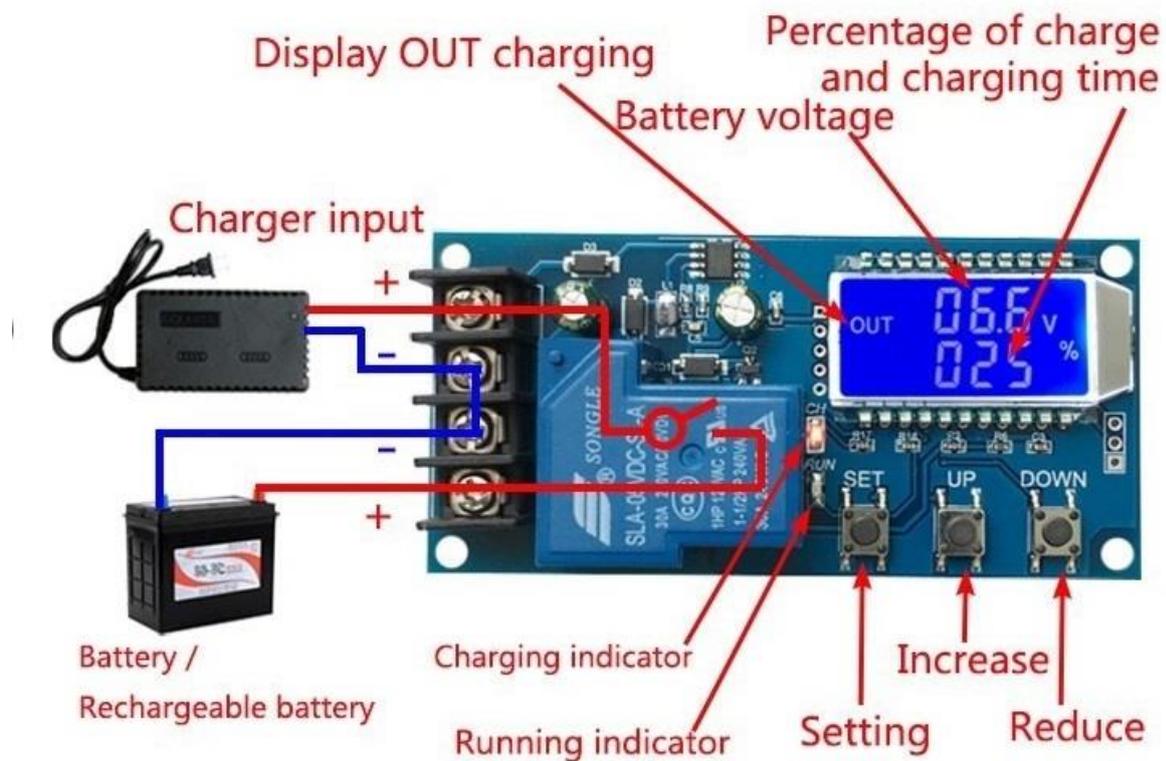
the voltage to charge the battery, so you want to charge what battery will be ready to what kind of charger! A must!

Video Instructions

https://www.youtube.com/watch?v=nOF7AJ4gRns&t=220s

Package includes:

• 1 x XY-L30A

Product Name: **NC charging module**

Product model : : **XY-L30A**

Control voltage : **DC6-60V**

Control current:**≤30A**

Control accuracy : **0.1V**

Type of output : **Direct output**

Voltage error : **±0.1V**

Scope of application : Various battery lithium batteries

Size : **92*45mm**