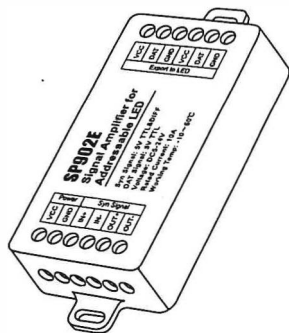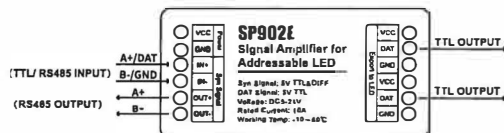# Instructions

SP902E Signal Amplifier

Product Features

1. Compatible with both TTL and RS485 signal inputs;

2. Two channels of strong-drive TTL signal output to meet users' needs for multiple strong signal control of lighting;

3. Differential RS485 signal is used for cascading between amplifiers to achieve long-distance signal transmission;

4. Can be used alone or in cascade with multiple units;

5. Supports wide voltage input from DCS to 24V, with reverse connection protection function.

Precautions

1. The current passed by the controller is limited. If the LED lighting requires a current that exceeds the limit, additional power supply is needed to prevent overheating and damage to the amplifier;

2. The strength of the TTL signal output by the amplifier is related to the type of chip used in the connected LED, the length and thickness of the connecting wires, and the number of LED connected in parallel. Please use it within a reasonable range according to the actual situation;

3. The transmission distance between amplifiers is affected by the type of wire used and the surrounding environment. If you need to transmit signals over a long distance or in a complex environment with a lot of interference, please use shielded twisted pair or CAT5 or higher Ethernet cables.

Port Descriptions

Power	Power input port——VCC is connected to the positive terminal of the power supply and GND is connected to the negative terminal, It supports a wide voltage input range of DC5V-24V
Syn Signal	Cascading signal input and output port——Compatible with both TTL and RS485 signal inputs ▶ "IN+/IN-" : Cascading signal input port (When connecting to the main controller, DAT of the main controller is connected to "IN+", and GND is connected to "IN-"; When cascading with sub-amplifier, "OUT+" of the previous sub-amplifier is connected to "IN+" and "OUT-" is connected to "IN-") ▶ "OUT+/OUT-" : Cascading signal output port ("OUT+" and "OUT-" are respectively connected to "IN+" and "IN-" of the next sub-amplifier)
Export to LED	Port for connecting two sets of LED ▶ VCC DAT GND : Signal output and power output for the LED

Wiring Instructions