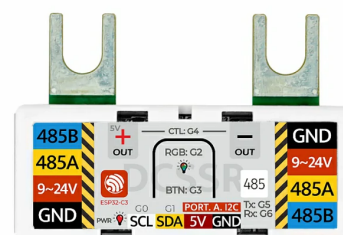
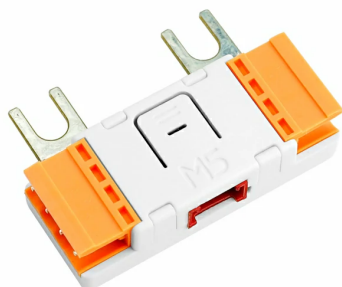
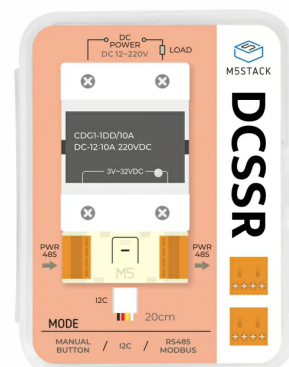


Unit DCSSR

SKU:U140



Description

Unit DCSSR is a DC-to-DC single-phase solid-state relay controller kit, which includes a single-phase solid-state relay + ESP32C3 core control board. It supports three working modes: **button control**, **I2C slave**, and **Modbus networking**. The integrated programmable full-color RGB LED can be used for various status indications. Compared to traditional mechanical relays, this relay is a contactless switch assembled and solidified using semiconductor components. It has a series of advantages such as fast switching speed, high operating

frequency, long service life, low noise, and reliable operation without sparks. It is commonly employed in digital program-controlled devices, motor control devices, temperature control devices, data processing systems, and computer terminal interface circuits, and is particularly well-suited for special occasions with frequent actions, explosion-proof, moisture-proof, and corrosion-resistant requirements.

Tutorial



Arduino IDE

This tutorial will introduce how to program and control the Unit DCSSR device through Arduino IDE.

Features

- Single-phase solid-state relay
- Three working modes:
 - Button control
 - I2C slave (supports device I2C address configuration)
 - Modbus networking (supports device ID configuration)
- Programmable full-color RGB LED
- RS485PWR interface (supports 9-24V device power supply)

Includes

- 1x Unit DCSSR
- 1x Single-phase solid-state relay
- 2 x 3.96-4P terminal blocks
- 1 x HY2.0-4P Grove connection cable (20cm)
- 1 x Communication protocol manual

Applications

- DC circuit on/off
- Motor equipment control
- Temperature control equipment

Specifications

Specification	Parameter
Controller MCU	ESP32C3
Communication Interface	I2C @0x50
Programmable RGB LED	SK6812
Load Current	10A
Input Control Voltage	DC 3 ~ 32V
Load Voltage	DC 24 ~ 220V
Input Control Current	5 ~ 20mA
Off-state Leakage	≤5mA
On-state Voltage Drop	≤1.6V
Safe Operating Current	Resistive load: 50% Inductive load: 50%
Electrical Life	≥1 million times
Indicator Light	Red (On: closed / Off: open)
Product Size	45.0 x 30.7 x 11.5mm
Package Size	147 x 90 x 40mm
Product Weight	112.6g
Gross Weight	137.8g

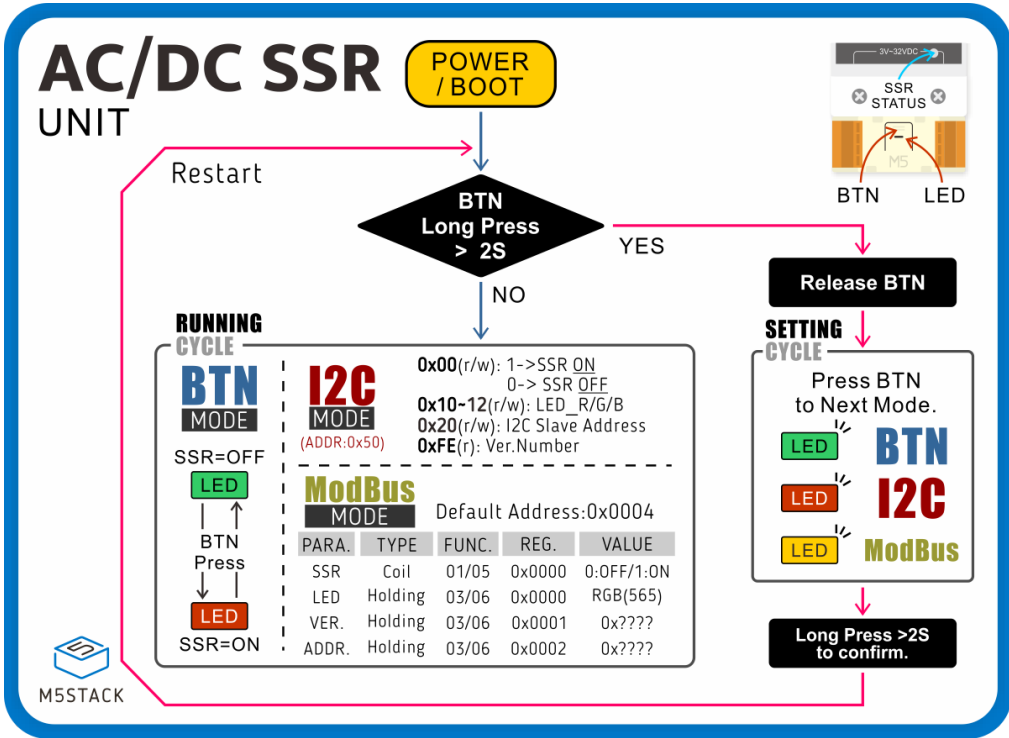
Learn

Working Mode Configuration

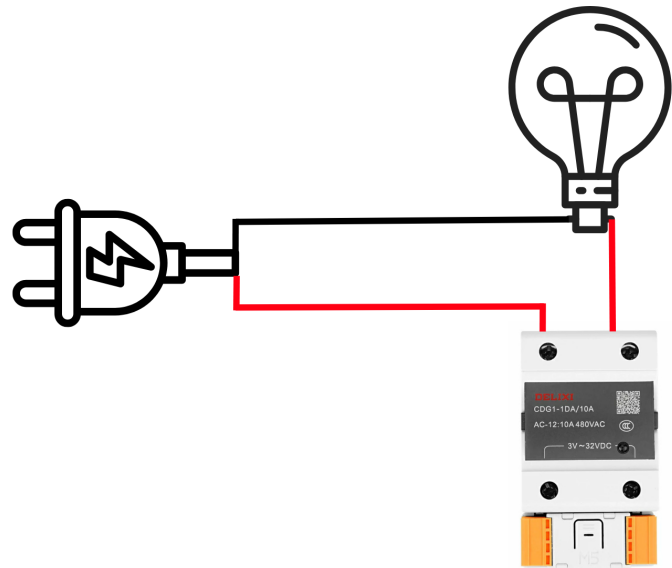
Before use, please refer to the following process to configure the working mode:

1. With the device powered off, press and hold the middle button.
2. Power on the device. When the RGB LED blinks rapidly, it indicates that it has entered mode configuration status.
3. Click the button to switch modes:
 - Green light: Manual button mode, where the middle button controls the ON/OFF during operation.
 - Red light: I2C communication mode, where the device connects to the I2C bus via the HY2.0-4P Grove interface for control.
 - Yellow light: Modbus communication mode, where the device connects to the Modbus bus via the HT3.96-4P interfaces on both ends for control.
4. Press and hold the button to select and save the current mode.

[unit_dcscr_mode_change_guide_01.mp4](#)



o Load wiring example diagram

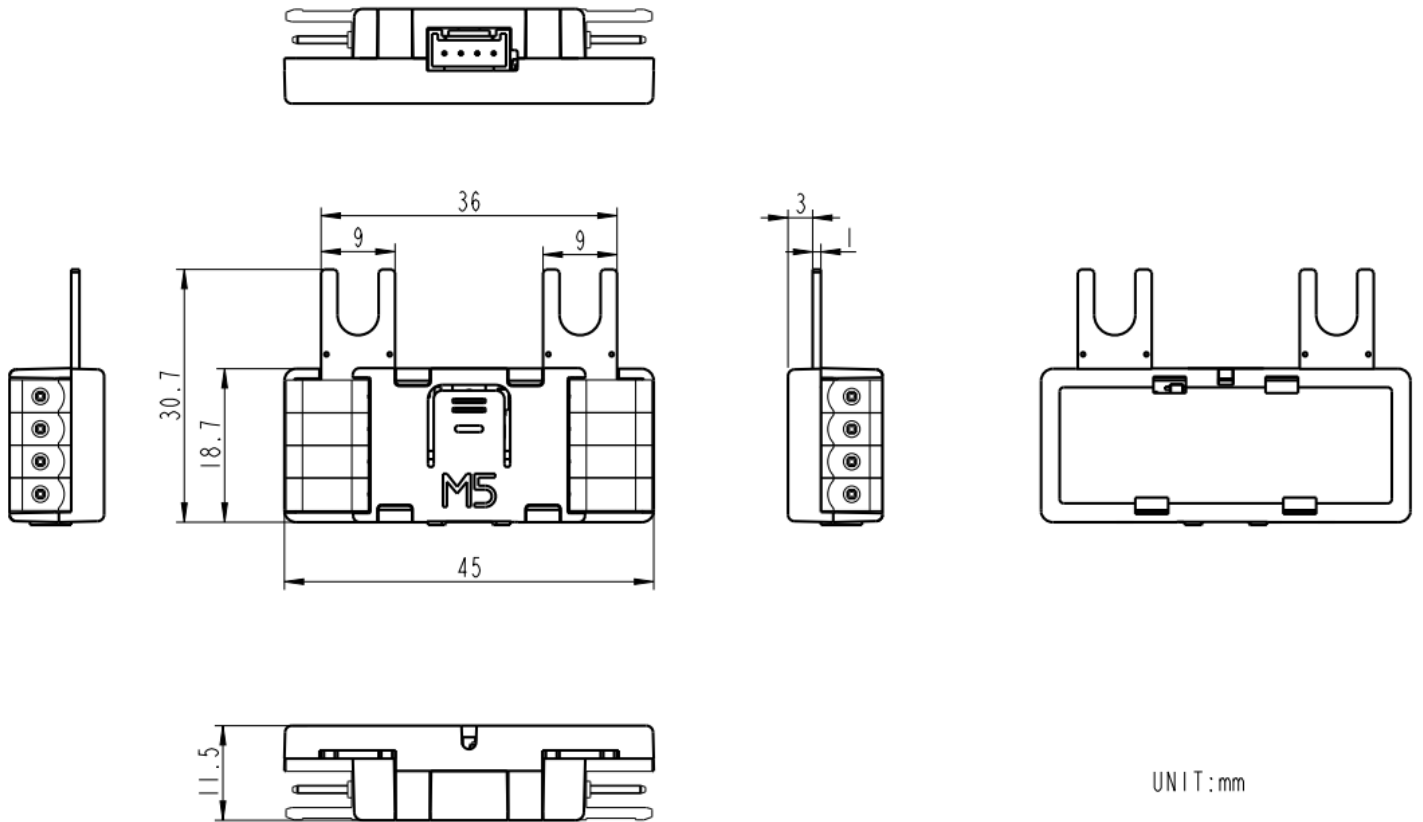


PinMap

Unit DCSSR

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

Model Size



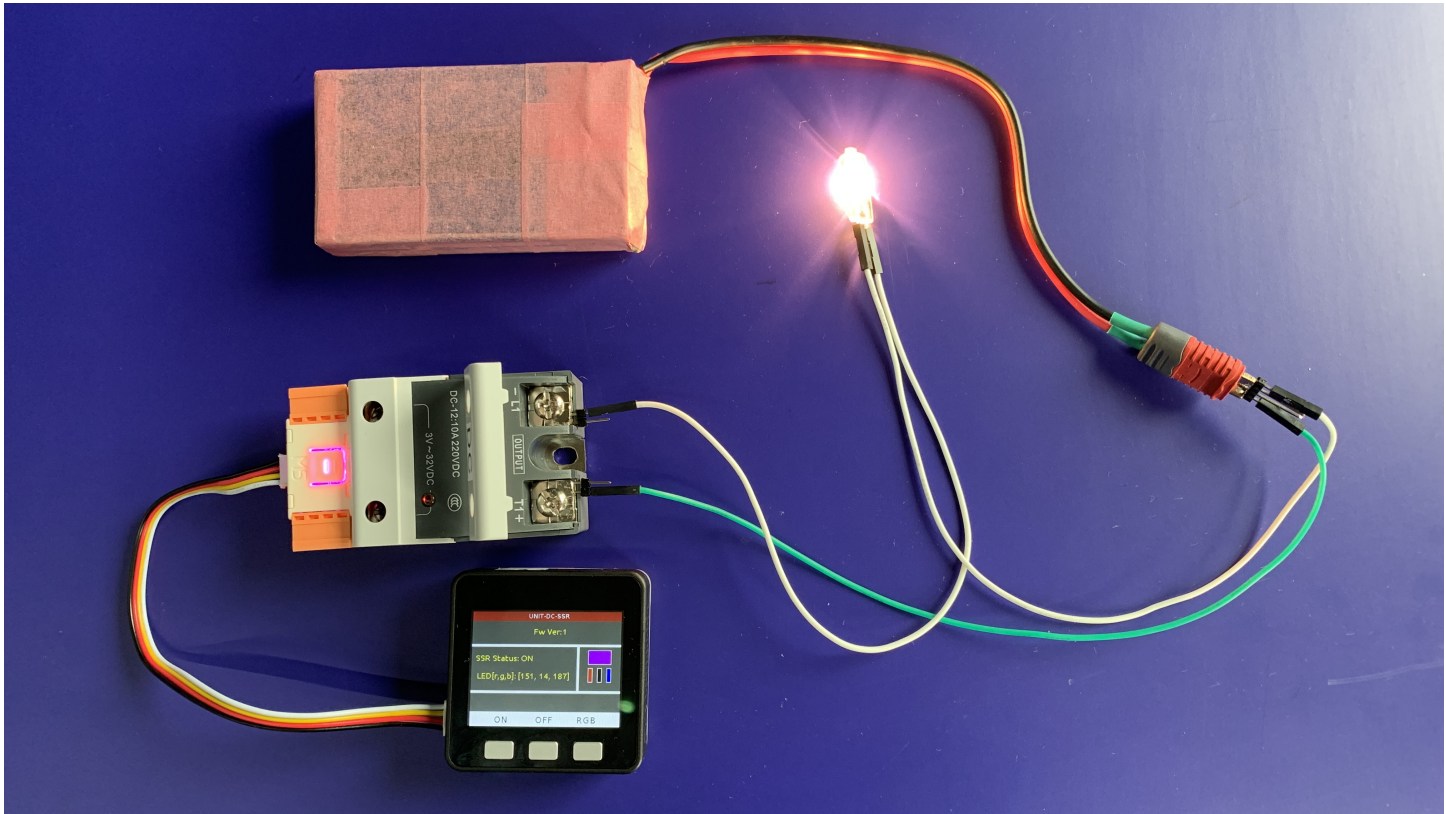
Structure

- [Unit DCSSR Structure Files](#)

Softwares

Arduino

- [Unit DCSSR Arduino Library](#)
- [Unit DCSSR Arduino Tutorial](#)
- [Arduino485](#)
- [ArduinoModbus](#)



UiFlow1

- [Unit DCSSR UiFlow1 Docs](#)

UiFlow2

- [Unit DCSSR UiFlow2 Docs](#)

| Video
