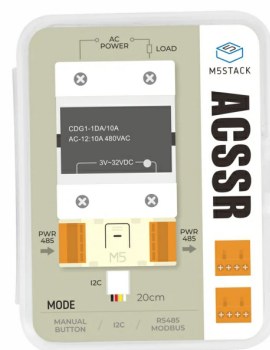
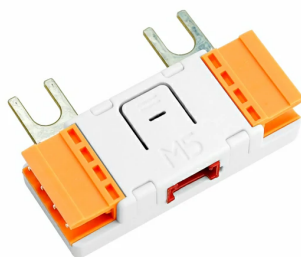


Unit ACSSR

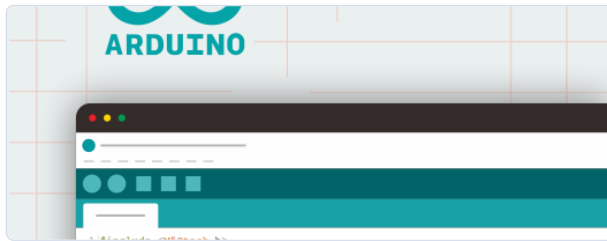
SKU:U139



Description

Unit ACSRR is a single-phase AC solid-state relay control kit, containing a single-phase solid-state relay and an ESP32C3 core control board. It supports three working modes: **Button Control, I2C Slave, and Modbus Networking**, and integrates a programmable full-color RGB LED for various status indications. Compared with traditional mechanical relays, solid-state relays are made of semiconductor devices, designed with no contacts, and have advantages such as **fast switching speed, high frequency, long life, low noise, reliable operation, and no arc spark**. This product is suitable for applications such as industrial automation, motor control, and temperature control systems.

Tutorial



Arduino IDE

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

Features

- Single-phase solid-state relay
- Supports load supply voltage: AC 24 ~ 480V
- Three working modes:
 - Button Control
 - I2C Mode (supports I2C address configuration)
 - Modbus Mode (supports device ID configuration)
- Programmable full-color RGB LED
- RS485PWR control interface
 - For Modbus control
 - Supports DC 9 ~ 24V power input
 - Communication rate configuration: 115200bps 8N1
 - Default ID: 0x0004
- HY2.0-4P Grove control interface
 - For I2C communication control
 - Supports DC 5V power input
 - 3.3V logic level communication

Includes

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

Applications

- AC circuit switching
- 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	AC 24 ~ 480V
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 Weight	112.6g
Gross Weight	137.8g
Product Size	80 x 45 x 31mm
Package Size	147 x 90 x 40mm

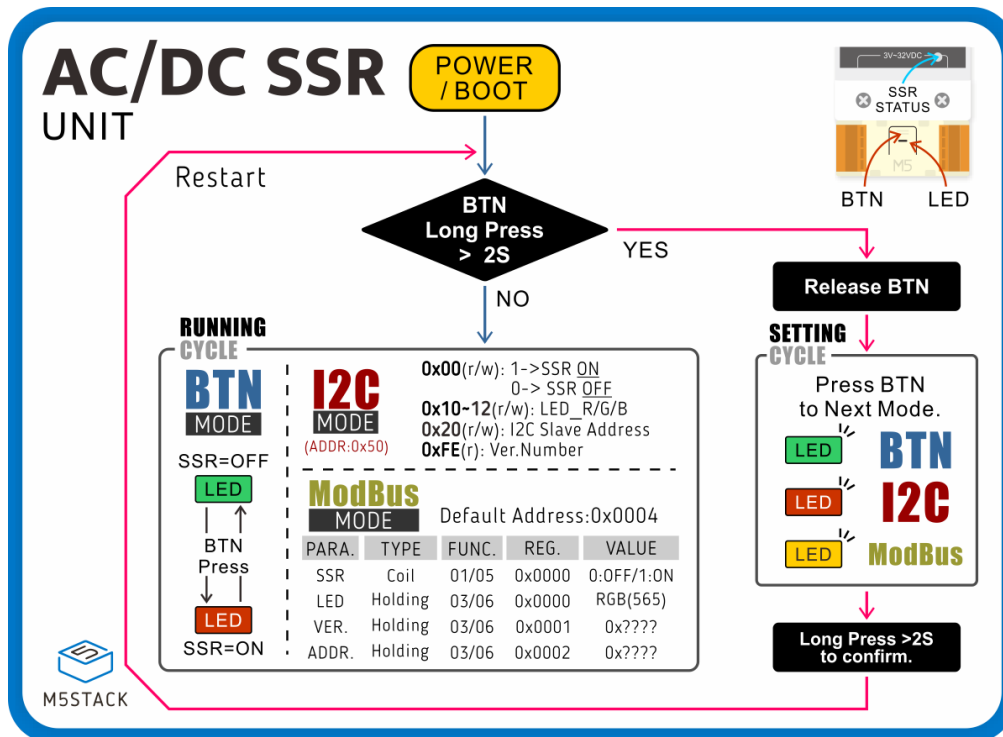
Learn

Working Mode Configuration

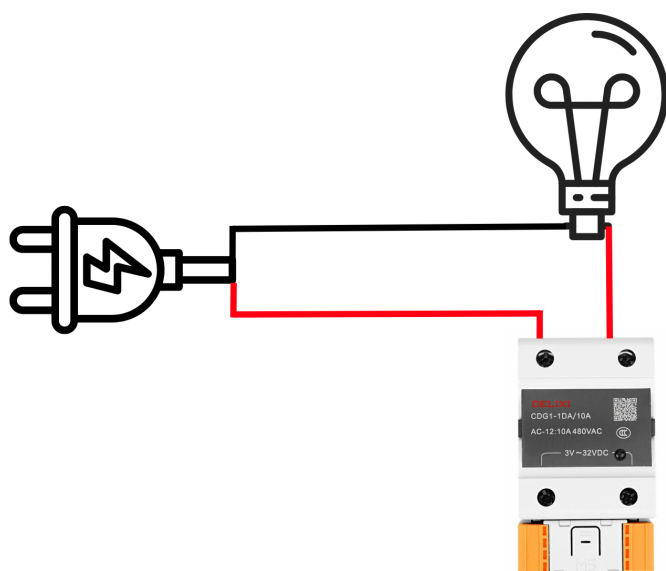
Before use, please refer to the following process to configure the working mode:

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](#)

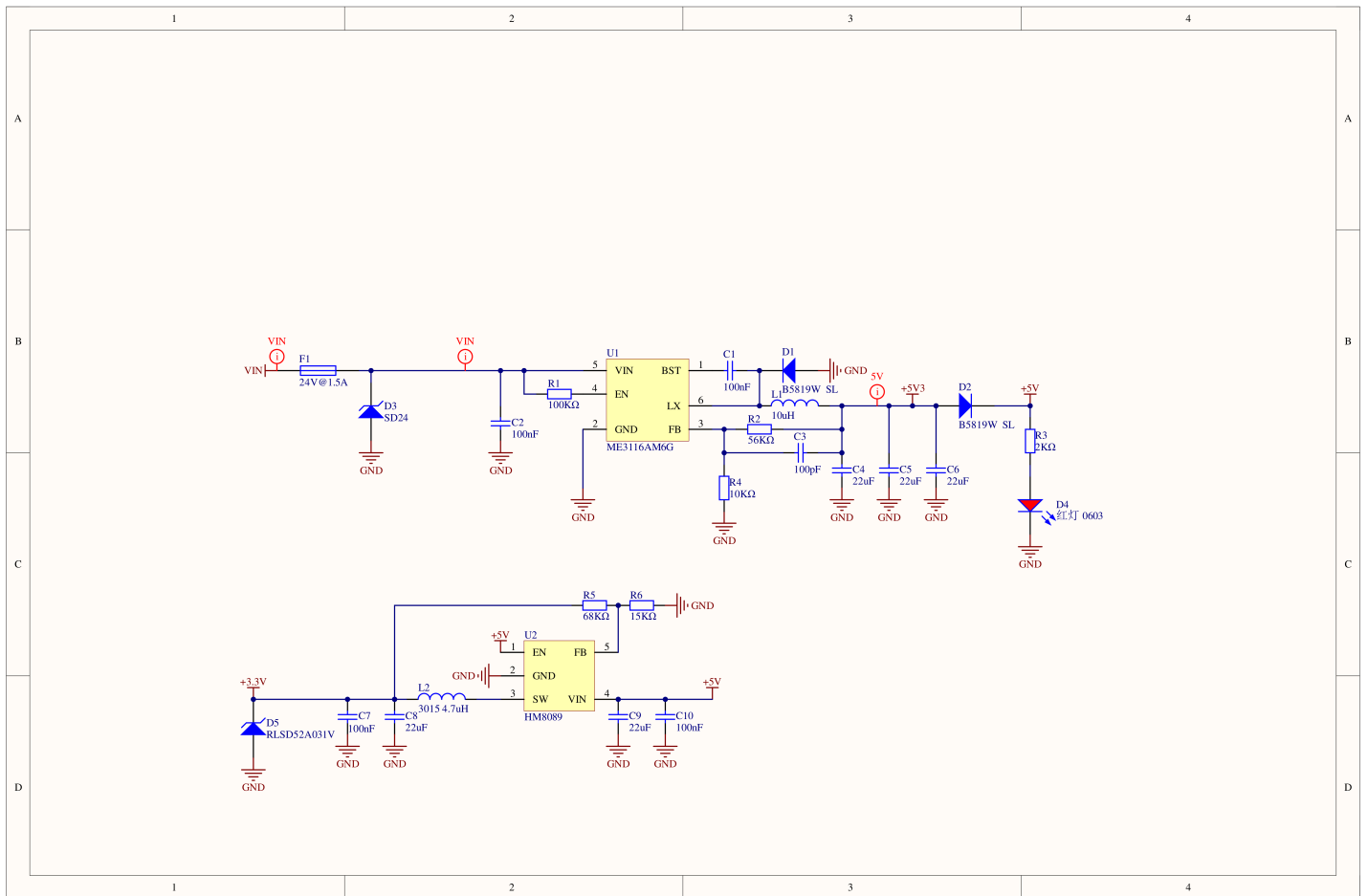
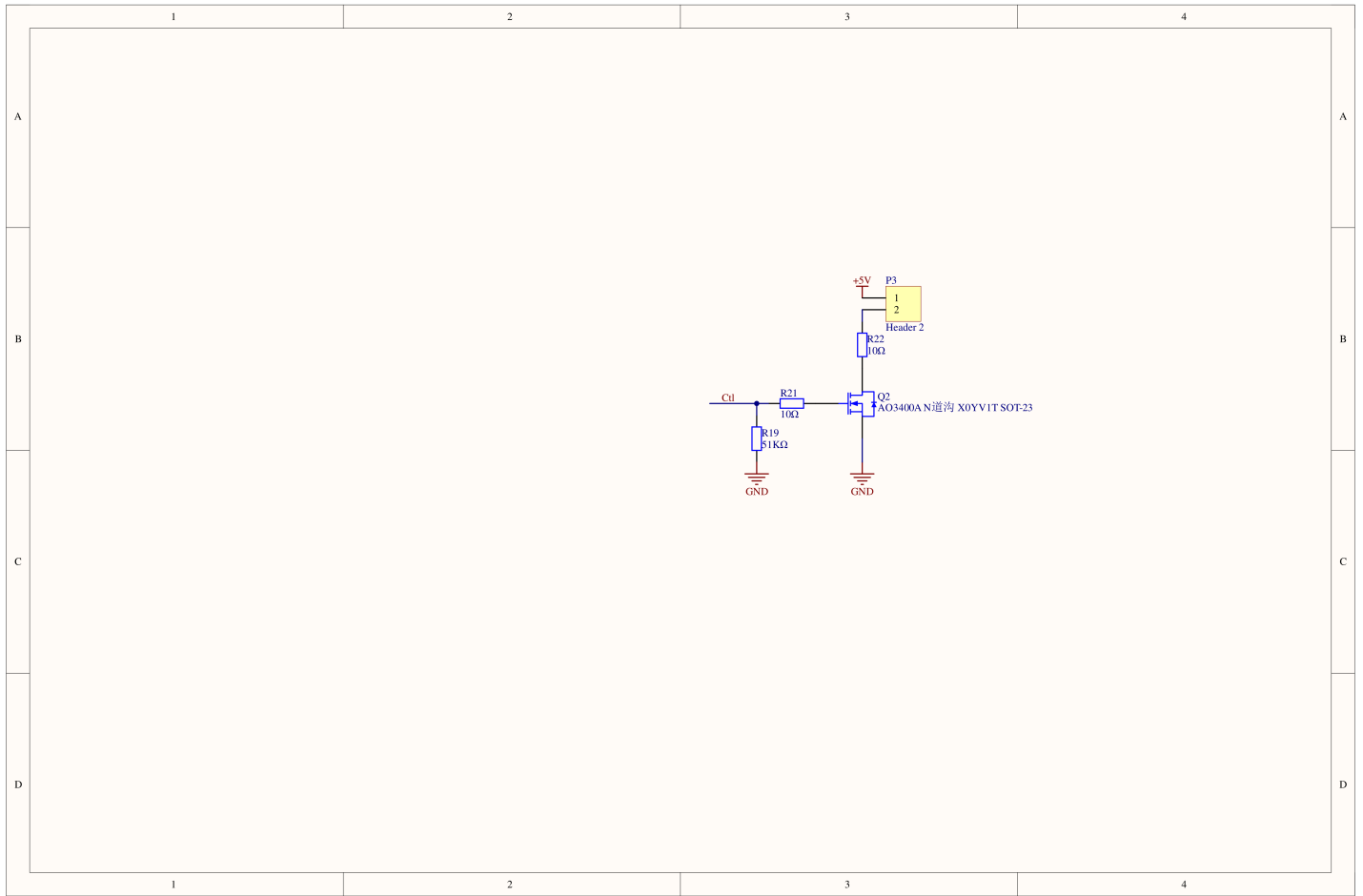


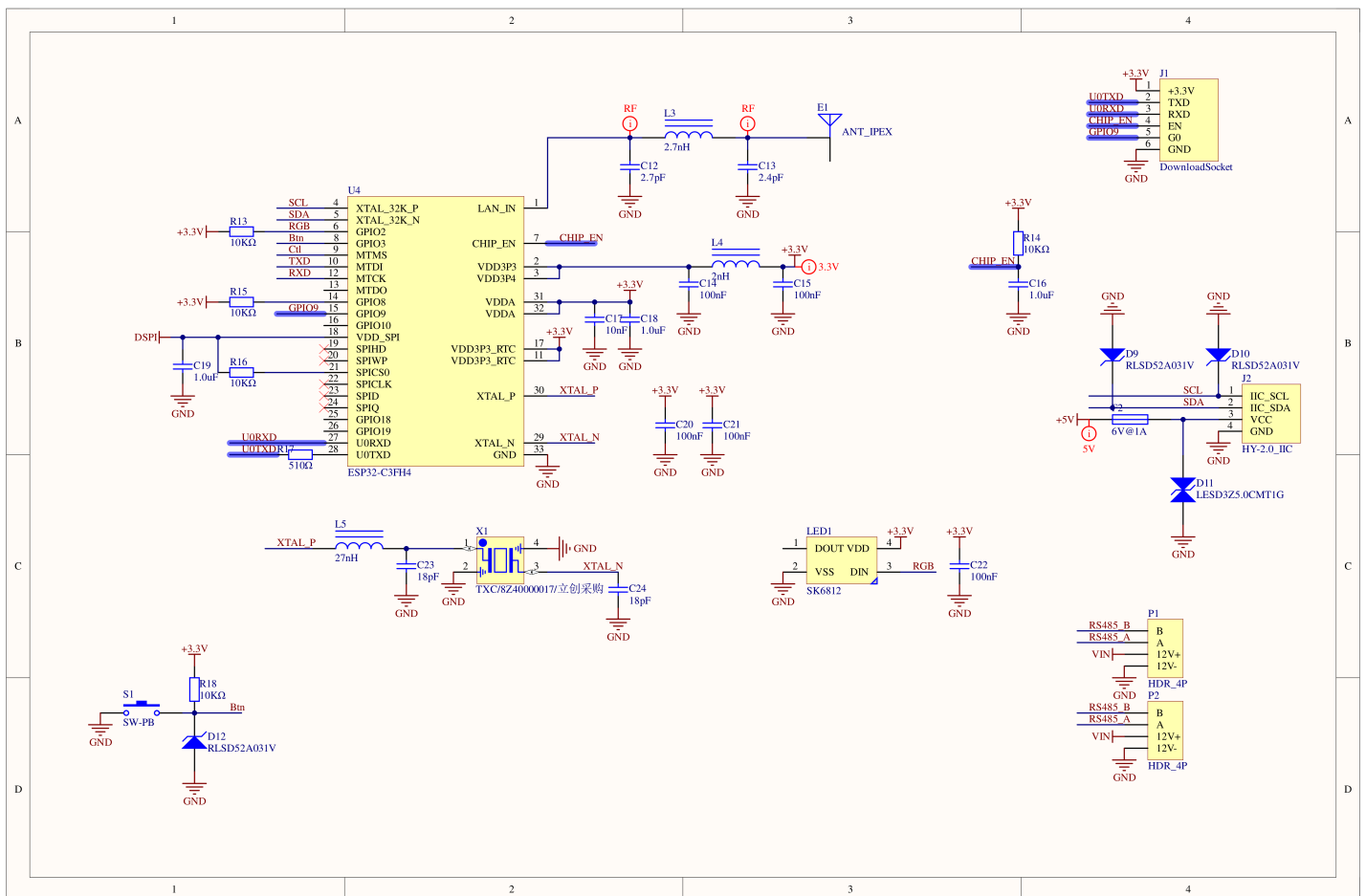
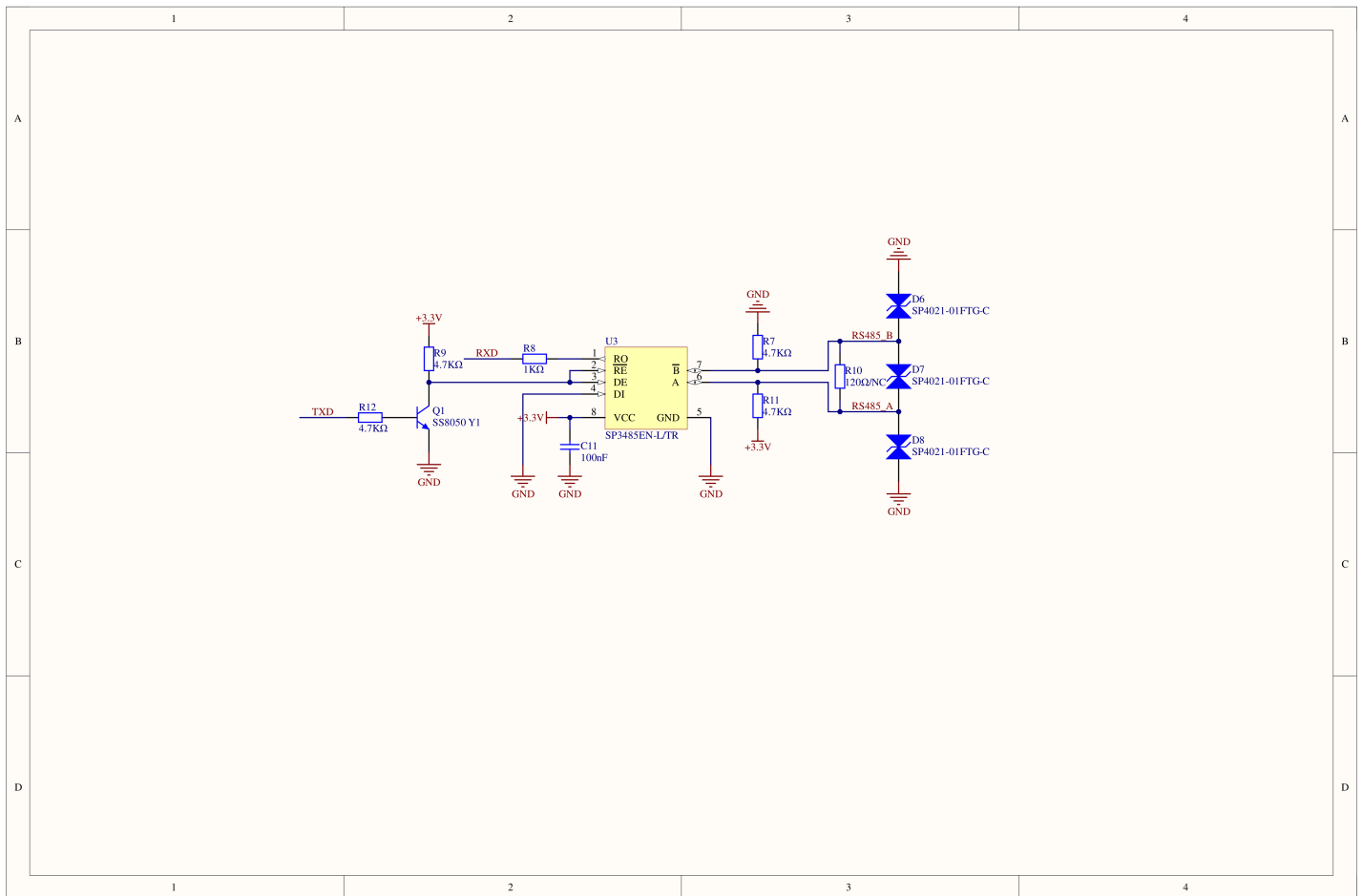
◦ Load wiring example diagram



Schematics

◦ [Unit ACSSR Schematics PDF](#)





PinMap

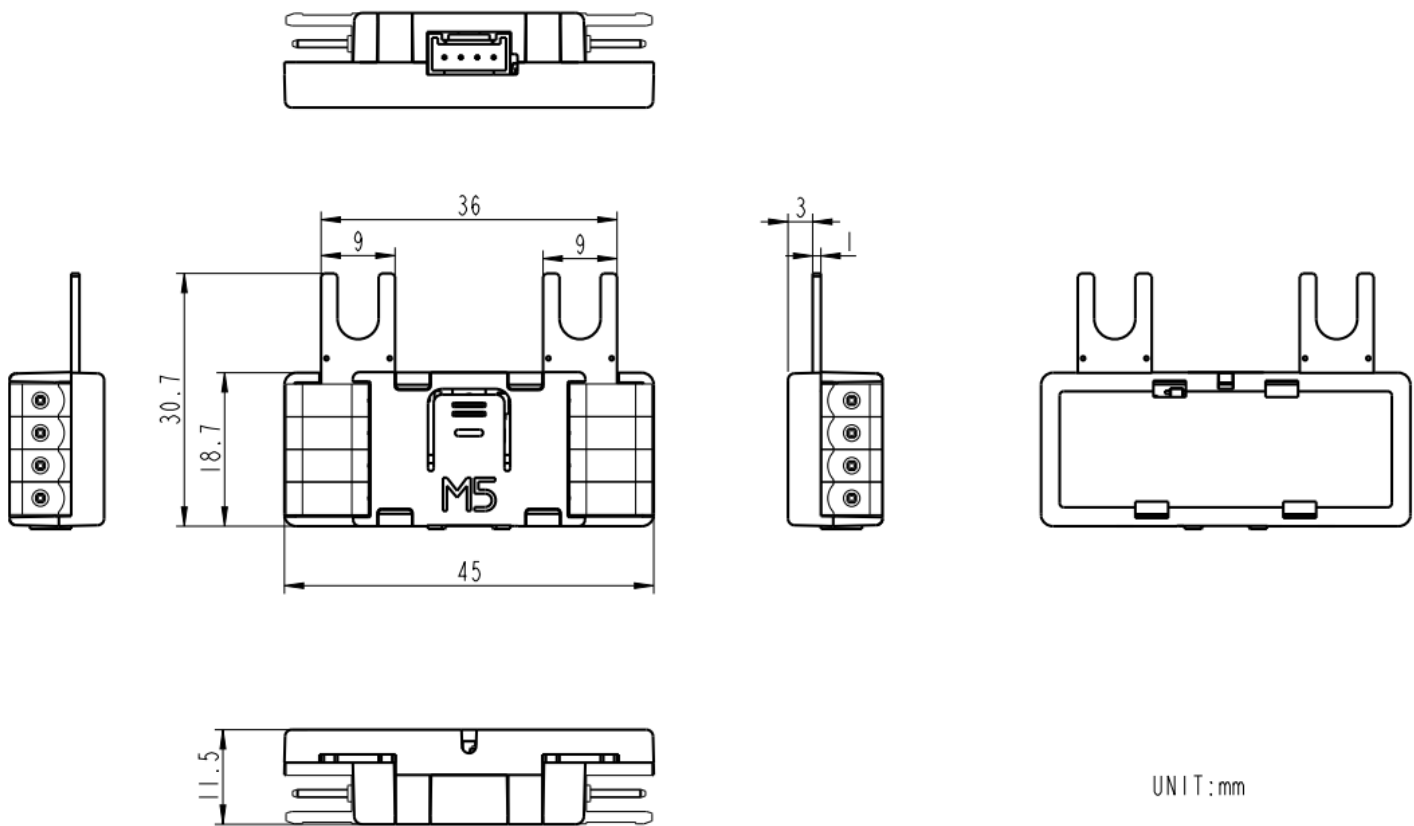
Unit ACSSR

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

ESP32-C3

ESP32-C3	G0	G1	G2	G3	G4	G5	G6
Unit ACSSR	SCL	SDA	RGB LED	BTN	RELAY CTL	RS485-TX	RS485-RX

Model Size



Structure

- Unit ACSSR Structure Files

Softwares

Arduino

- Unit ACSSR Arduino Tutorial
- Unit ACSSR Arduino Library
- ArduinoModbus Library
- Arduino485 Library

- [Unit ACSSR I2C Relay Control Example](#)
- [Unit ACSSR I2C Addr Config Example](#)
- [Unit ACSSR Modbus Relay Control Example](#)
- [Unit ACSSR Modbus Slave ID Config Example](#)

UiFlow1

- [Unit ACSSR UiFlow1 Docs](#)

UiFlow2

- [Unit ACSSR UiFlow2 Docs](#)

| Video
