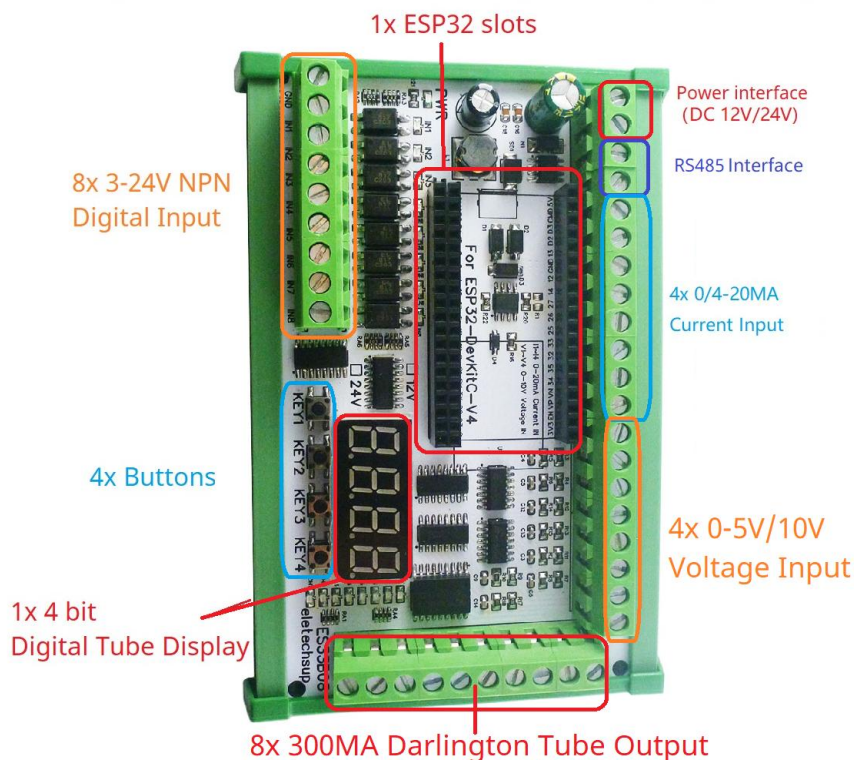# ES33B08　ESP32 8 CH Expansion Board Manual

38-pin ESP32 Board 1 : Width is about 27.5MM (Pin header spacing: 25.4MM)
38-pin ESP32 Board 2 : Width is about 25MM (Pin header spacing: 22.5MM)

1x ESP32 slots

Power interface
(DC 12V/24V)

RS485 Interface

8x 3-24V NPN
Digital Input

4x 0/4-20MA
Current Input

4x Buttons

4x 0-5V/10V
Voltage Input

1x 4 bit
Digital Tube Display

8x 300MA Darlington Tube Output

Product Features:

1 Operating voltage: DC 11-28V

2 Operating Current : 14-42MA

3 on-board resources: 1x RS485 Interface 8x opto-isolated inputs (low level trigger, NPN type), 4x 0/4-20MA Current Input,4x 0-5V/10V Voltage Input,4x buttons, 1x 4 bit digital tube display, 1x NANO V3.0 slots, 8x 300MA Darlington Tube Output

4 size   123*72*20mm(Only Board)
5 Weight : 93g(Only Board), 184g(with shell)

As long as you write ESP32 code,You can use it to achieve a variety of delay timer function,such as:
WIFI remote control switch
WIFI Current and voltage collection
RS485 Master-Slave Device(PLC MCU),
4x 0/4-20MA Current Collection,
4x 0-5V/10V Voltage Collection,
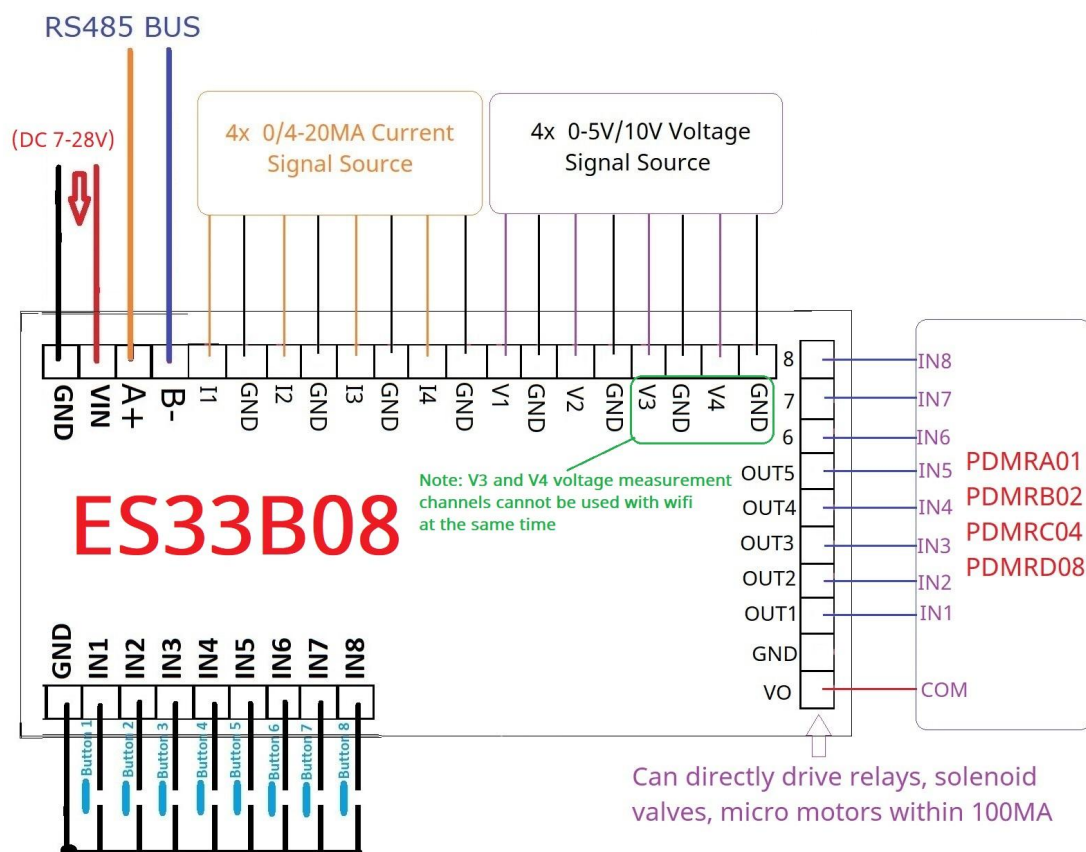Motor forward and reverse,
Timing on,

Timing off,
Power-up delay,
Trigger delay,
Infinite loop delay,
A finite number of cyclic delays,
Power sequencer,
And so on.

This is an expansion board based on 38PIN ESP32. We only provide three vscode codes for testing the hardware. More codes and functions need to be developed by yourself.

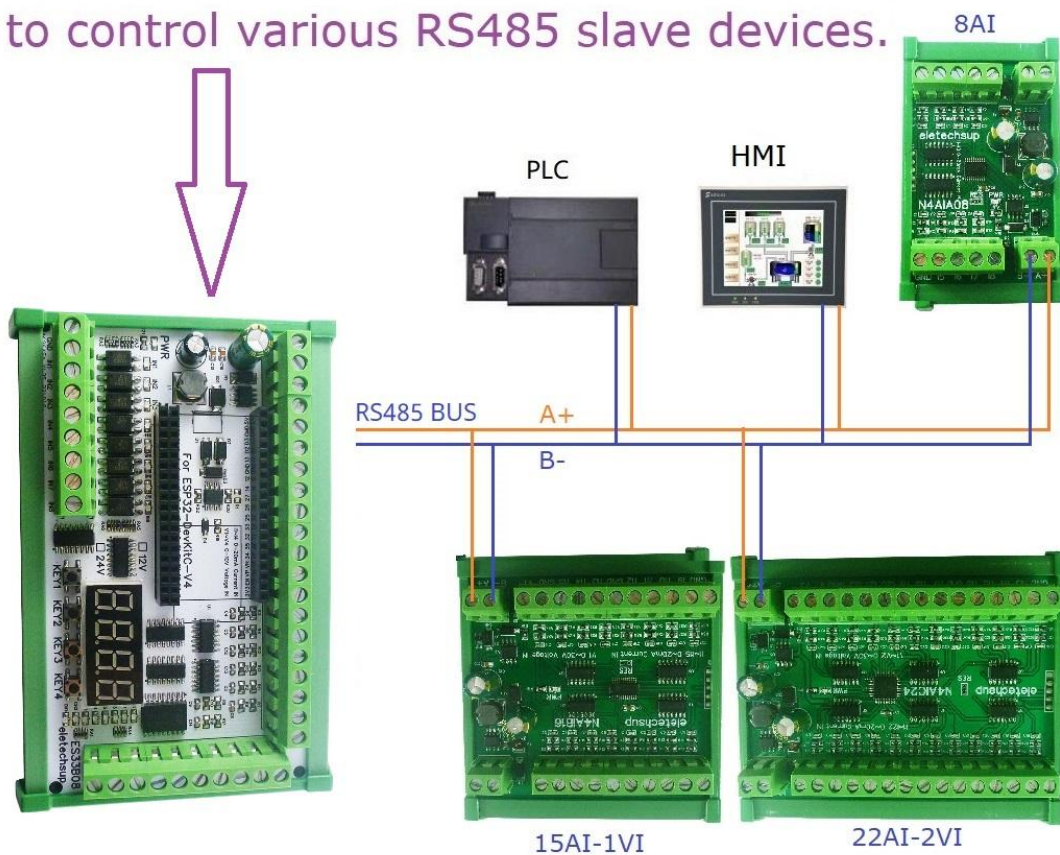If you need more functionality, write your own code. We do not provide additional code and technical support

Note: ES32A08 can not work independently, must be under the control of the 38PIN ESP32 board to work,If you do not have a 38PIN ESP32 board, purchase it separately or purchase a kit with 38PIN ESP32

Application : Through the programming of ESP32 , various delay customization functions can be realized instead of PLC.

RS485 BUS

(DC 7-28V)

4x 0/4-20MA Current Signal Source

4x 0-5V/10V Voltage Signal Source

GND VIN A+ B- I1 GND I2 GND I3 GND I4 GND V1 GND V2 GND V3 GND V4 GND

Note: V3 and V4 voltage measurement channels cannot be used with wifi at the same time

ES33B08

8 IN8
7 IN7
6 IN6
OUT5 IN5 PDMRA01
OUT4 IN4 PDMRB02
OUT3 IN3 PDMRC04
OUT2 IN2 PDMRD08
OUT1 IN1
GND
VO COM

GND IN1 IN2 IN3 IN4 IN5 IN6 IN7 IN8

Button 1 Button 2 Button 3 Button 4 Button 5 Button 6 Button 7 Button 8

Can directly drive relays, solenoid valves, micro motors within 100MA

NOTE: This is an ESP32 expansion board only, you also need to plug in an ESP32 board for it to work properly

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Application 2: It can be used as an RS485 master device instead of PLC/PC/touch screen to control various RS485 slave devices.

NOTE: This is an ESP32 expansion board only, you also need to plug in an ESP32 board for it to work properly