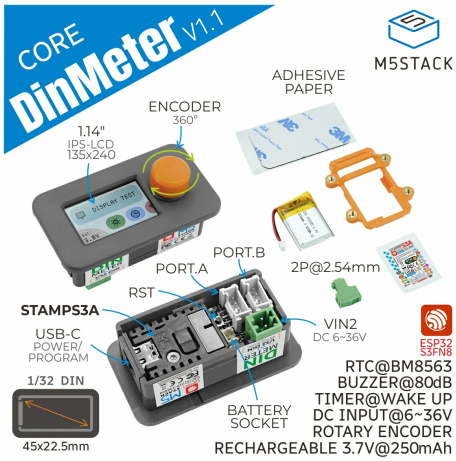
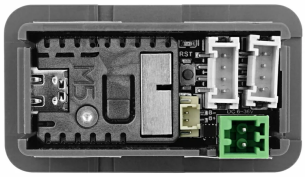
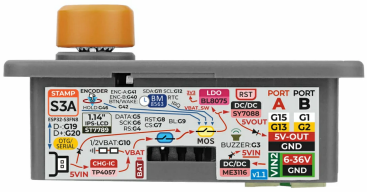
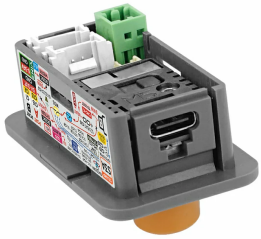
DinMeter v1.1

SKU:K134-V11









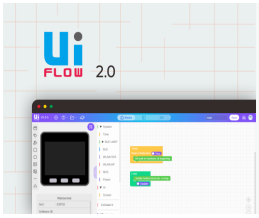
Description

DinMeter v1.1 is an iterative upgrade of the DinMeter product, with the core enhancement being the main control module upgraded from Stamp-S3 to Stamp-S3A. **DinMeter v1.1** adopts the 1/32 DIN standard digital meter cutout size, allowing direct installation into reserved mounting openings of mainstream equipment such as industrial control cabinets and PLC control boxes, without the need for custom brackets or panel modifications. This significantly reduces integration cost and assembly time. It supports two mounting methods—double-sided adhesive and screw hole fixation—to meet installation requirements in different scenarios. The product integrates a 1.14-inch ST7789 display and a rotary encoder with button, enabling precise knob position tracking and interactive operation. An onboard RTC real-time clock, buzzer, and function buttons support scheduled reminders and wake-up functions. The power supply design is flexible, supporting a wide DC input range of 6 ~ 36V, and includes a lithium battery interface with charging circuitry to adapt to various power scenarios. In addition, the development board provides PORT.A and PORT.B expansion interfaces for easy connection of I2C and GPIO peripherals, making it suitable for various embedded instrumentation display and control input applications.

Tutorial

Arduino IDE

This tutorial introduces how to program and control the DinMeter v1.1 device using Arduino IDE.



UiFlow2

This tutorial introduces how to control the DinMeter v1.1 device using the UiFlow2 graphical programming platform.

Features

- ST7789P3 display
- Stamp-S3A as the main controller
- Rotary encoder
- Wide voltage input
- Reserved PORT.A and PORT.B interfaces
- Lithium battery interface (rechargeable)
- 1/32 DIN standard (45 x 22.5mm)
- Two mounting methods:
  - Double-sided adhesive
  - Screw hole fixation
- Development Platform
  - UiFlow2
  - Arduino IDE
  - ESP-IDF
  - PlatformIO

Includes

- 1 x DinMeter v1.1
- 1 x 250mAh Polymer Lithium Battery
- 1 x 2.54-2P Terminal
- 1 x Plastic Back Clip
- 1 x Adhesive Tape
- 1 x Pin Sticker

Applications

- Smart home monitoring and control systems
- Access control systems
- Industrial control
- Maker and DIY projects

Specifications

Specification	Parameter
SoC	ESP32-S3FN8 @ Xtensa LX7 Dual-core, 240MHz
Flash	8MB
Wi-Fi	2.4 GHz Wi-Fi
USB	USB OTG, USB Serial/JTAG
Wide Voltage Input Range	6 ~ 36V
Display Driver	ST7789P3
Display Resolution	135 x 240
Charging Current	100mA
Grove Load Capability	PORT.A Load: DC 5V@220mA PORT.B Load: DC 5V@220mA
Standby Current (Battery Power)	DC 4.2V@38.4uA
Battery Socket Specification	1.25mm-2P
Power Supply Methods	USB / DC Power / Battery
Operating Temperature	0 ~ 40°C
Product Size	53.0 x 30.0 x 32.0mm
Product Weight	17.8g
Package Size	136.0 x 95.0 x 24.0mm
Gross Weight	44.9g

Learn

Power On/Off

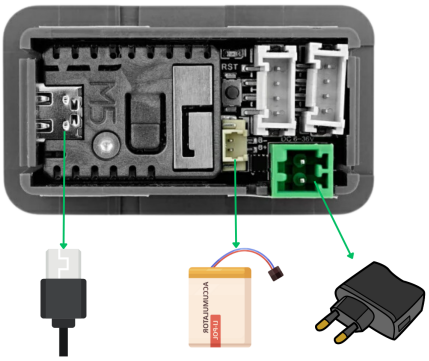
- **Power On**: When powered only by the battery, the device can be woken up by pressing the `WAKE` button or via an RTC scheduled interrupt (IRQ). After the wake-up signal is triggered, the initialization program must set the HOLD (GPIO46) pin to high level (1) to maintain power supply; otherwise, the device will return to sleep.
- **Power Off**: When there is no USB external power (battery power only), the device can be powered off using either of the following methods: (1) Press the RST button; (2) The program actively sets the HOLD (GPIO46) pin to low level (0) to cut off battery power.

Download Mode

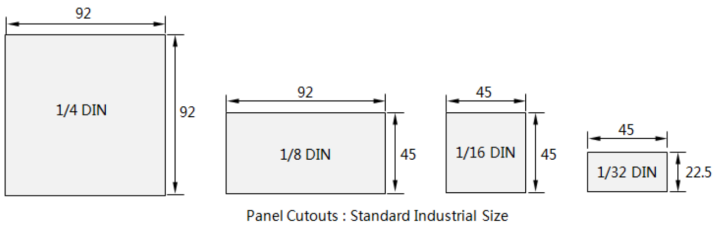
To enter download mode, press and hold the G0 button on the Stamp-S3A before powering on, then release it after power is applied.

Power Supply

Three power supply methods are provided: USB / DC / BAT



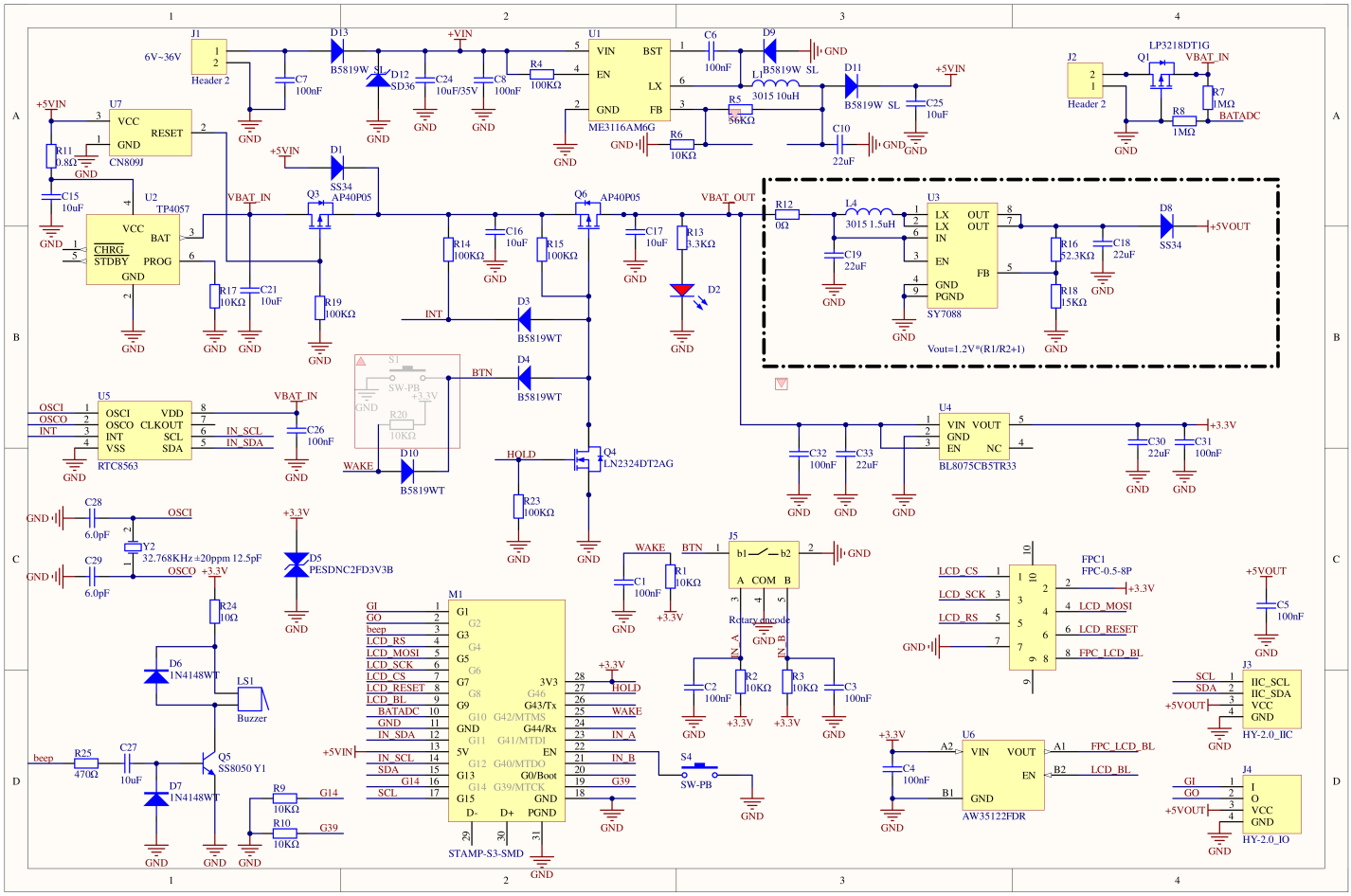
DIN Size Standard



Panel Cutouts : Standard Industrial Size

Schematics

- DinMeter v1.1 Schematics PDF



PinMap

RTC8563 & ENCODER

ESP32-S3FN8	G12	G11	G40	G41	G3	G42
RTC8563	SCL	SDA				
ENCODER			B	A		
BEEP					beep	
BUTTON (ENCODER)						BTN(WAKE)

ST7789P3

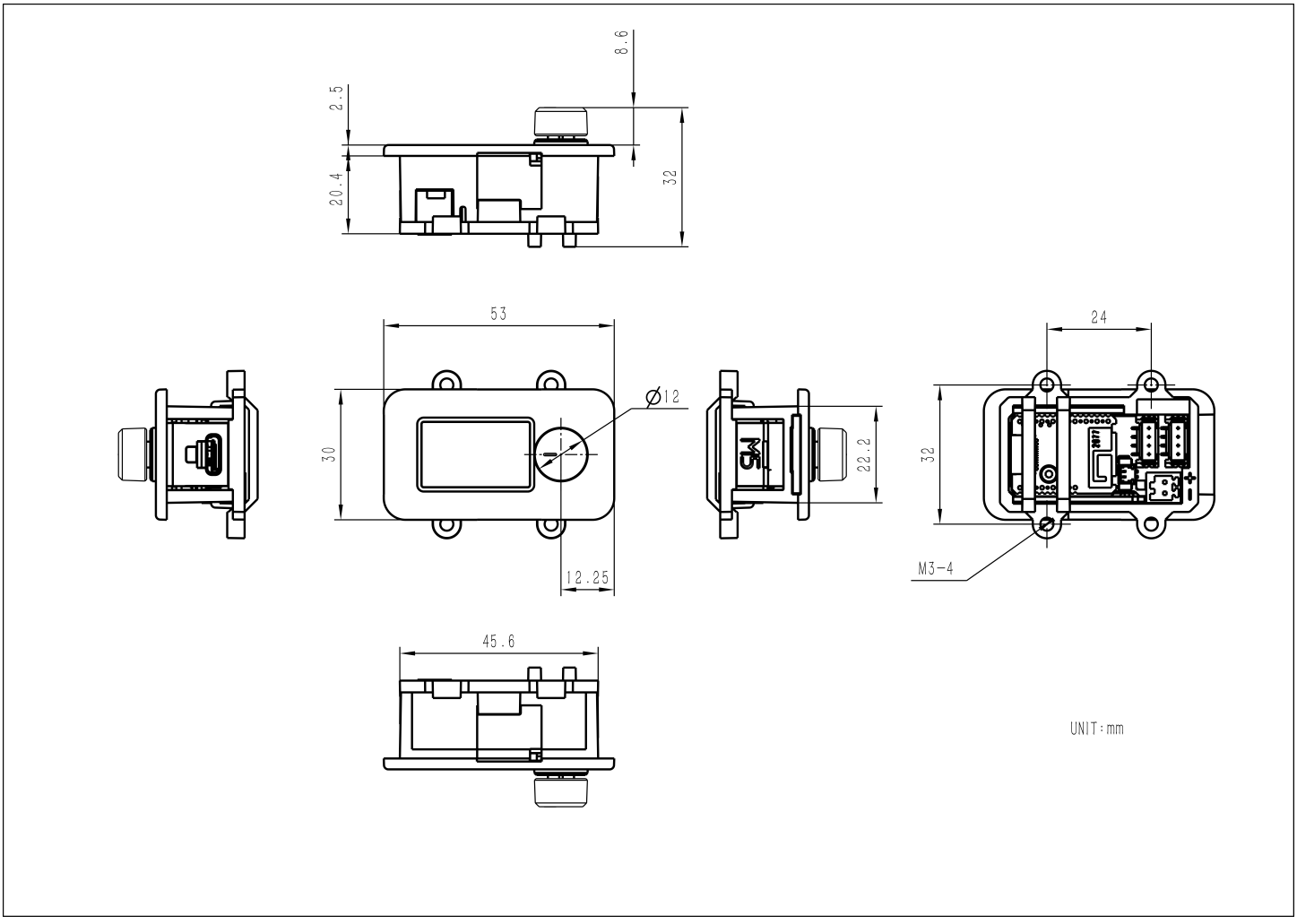
ESP32-S3FN8	G7	G6	G4	G5	G8	G9
ST7789P3	CS	SCK	RS	MOSI	RESET	BL

HY2.0-4P

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	G13	G15
PORT.B	GND	5V	G2	G1

Model Size

- DinMeter v1.1 Model Size PDF



Datasheets

- BM8563
- tp4057
- Spec of external DC power connector
- Lithium battery seat

Softwares

Quick Start

- DinMeter v1.1 Arduino Quick Start

Arduino

- DinMeter v1.1 Arduino Driver Library
- DinMeter v1.1 Factory Firmware

UiFlow2

- DinMeter v1.1 UiFlow2 Quick Start

Easyloader

Easyloader	Download	Note
DinMeter User Demo Easyloader	download	/

Video

Product Comparison

Product Compare	 DinMeter v1.1	 DinMeter
Main Controller	Stamp-S3A	Stamp-S3