HMOD7

(7 Inch Industrial Modbus RTU HMI)

7-inch PCAP Touch	Industrial Power	Modbus RTU	Wireless
800 x 480, 700 cd/m^2	5-35 VDC input	RS-485 master	Wi-Fi + OTA

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Product Overview

The MODB-7-4L is a compact industrial HMI designed as a local user interface for Modbus RTU networks. It combines a bright 7-inch capacitive touchscreen, RS-485 communication, wide-range DC input and integrated Wi-Fi in a wall-mount enclosure. The HMI can discover and monitor compatible Modbus devices, display live values and status information, provide access to device configuration, and visualize stored measurement history.

- IP54 wall-mount plastic enclosure with click-on installation system
- Recommended for up to 10 Modbus devices; networks of up to 20 devices supported
- Integrated Wi-Fi for network functions and over-the-air firmware updates
- Operating temperature range: -20 °C to +70 °C
- Compact enclosure: 176.5 x 118.5 x 33.5 mm; weight: 42

Technical Specifications

Display & Touch

Display size	7 inch
Resolution	800 x 480 pixels
View direction	12 o'clock (12H)
Display interface	RGB
LCD driver IC	HX8264-E + HX8664-B
Brightness	700 cd/m²
Touch technology	Projected capacitive touch (PCAP)
Touch points	5-point multi-touch

Communication & System

Fieldbus	RS-485, Modbus RTU
HMI role	Modbus RTU master
Recommended devices	Up to 10 devices
Maximum supported devices	Up to 20 devices

Wireless	Integrated Wi-Fi
Data Logging & Storage	Local SQLite data logging on SD card
Firmware maintenance	OTA (Over-the-Air) firmware update
Device functions	Discovery, monitoring, configuration, status and history visualization

Electrical, Mechanical & Environmental

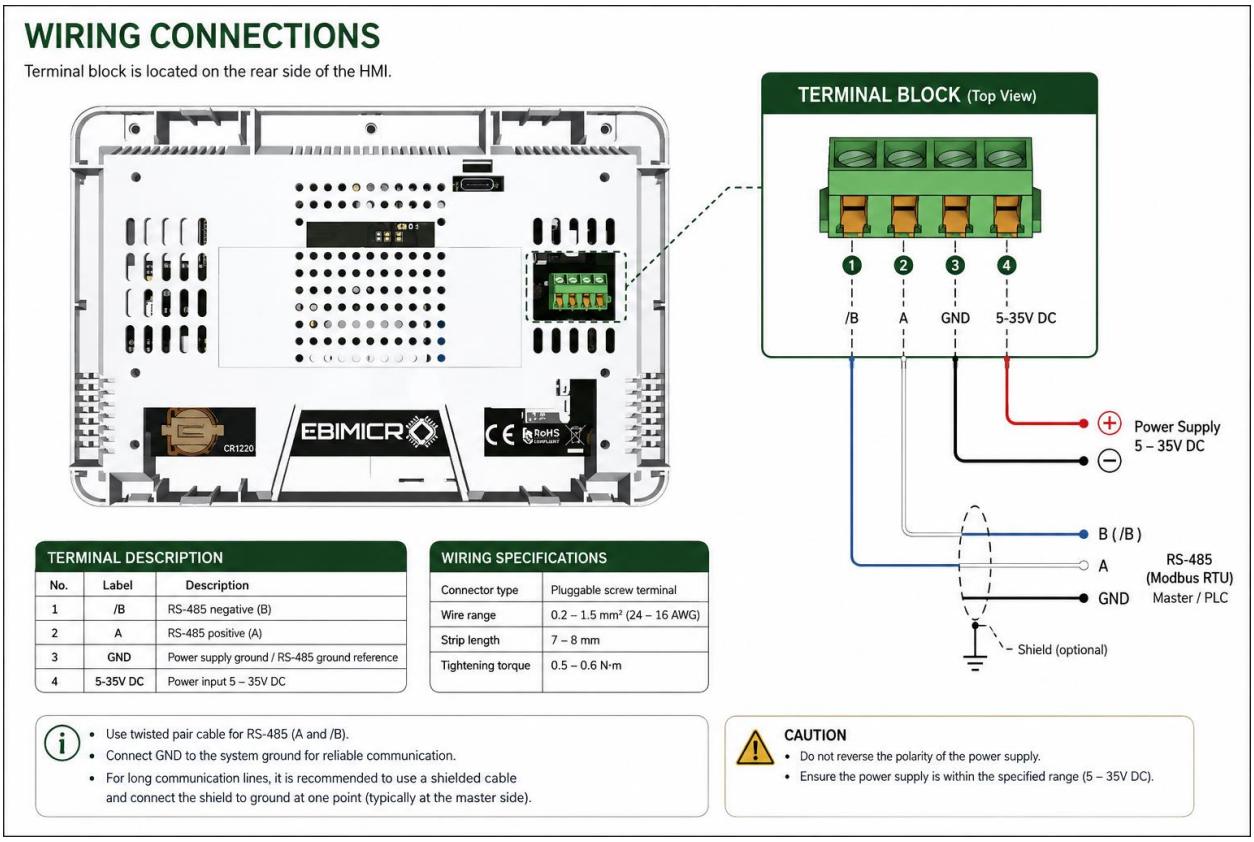
Supply voltage	5-35 VDC
Terminal block	4-position removable terminal block
Terminal order, left to right	/B, A, GND, 5-35 VDC
Enclosure size	176.5 x 118.5 x 33.5 mm (W x H x D)
Weight	425 g
Protection rating	IP54
Enclosure	Plastic, wall-mount
Operating temperature	-20 °C to +70 °C

Typical Applications

- HVAC and building automation
- CO_2 / temperature / humidity monitoring
- Refrigeration
- Environmental monitoring
- Industrial sensor networks
- Machine and process monitoring
- Local Modbus device configuration.

Wiring & Communication

The rear terminal block combines the RS-485 bus and DC power connection. Always disconnect power before wiring. Observe the terminal order shown below and maintain the same A/B polarity across all Modbus devices.



Rear view - the 4-position terminal block is located on the right side of the electronics assembly.

/B	A	GND	5-35 VDC
RS-485 B / negative line	RS-485 A / positive line	Power ground	DC supply positive

Typical RS-485 Connection

MODB-7-4L	Modbus Device 1	Modbus Device 2 ... n
Terminal /B	Connect to B	Connect to B
Terminal A	Connect to A	Connect to A
Terminal GND	Signal reference / GND*	Signal reference / GND*

* Connect signal reference/ground where required by the installation and connected equipment. For reliable industrial RS-485 operation, use suitable twisted-pair cabling, keep bus wiring in a daisy-chain

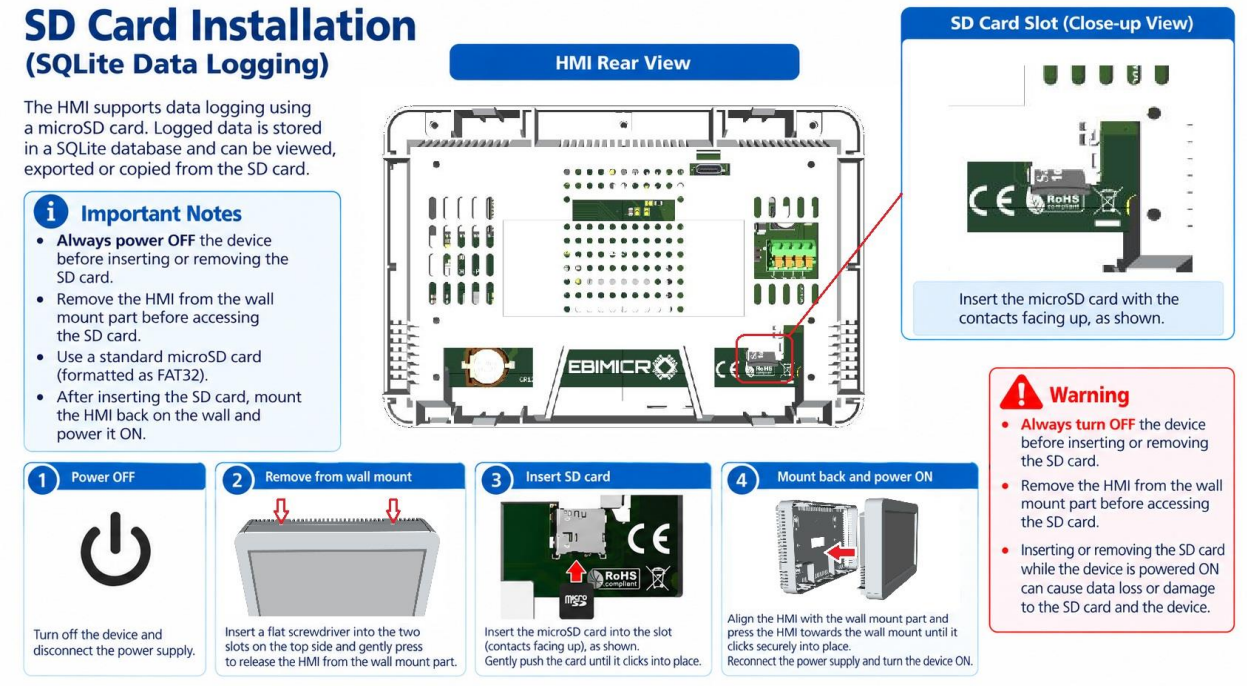
topology, and apply termination/biasing according to the complete network design and connected-device requirements.

> Important: The DC input is 5-35 VDC. Verify supply polarity and voltage before applying power. Do not connect the DC supply to the RS-485 terminals.

Local Data Logging

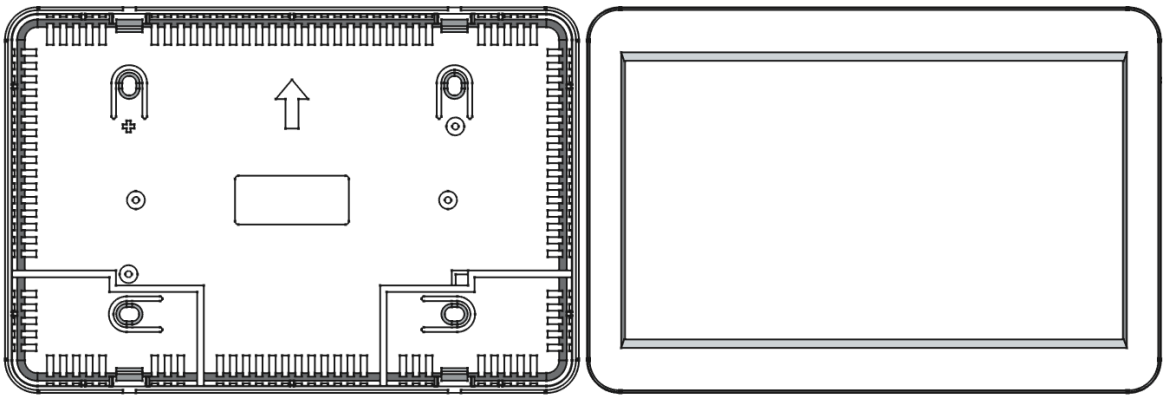
The HMOD7 supports local measurement logging to an **SQLite database stored on the SD card**. This allows measurement data from connected Modbus devices to be retained locally for historical analysis and trend visualization.

The database provides a structured storage format for recorded measurements, enabling future data-processing and export functionality.



Wall Installation

The enclosure uses a two-part wall-mount system. The rear mounting plate is fixed to the wall first; wiring is then connected before the HMI is aligned and clicked onto the plate.



Wall-mount plate (left) and HMI front enclosure (right).

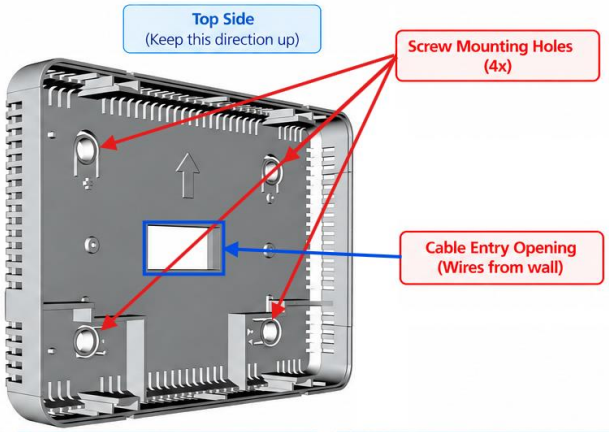
1. Prepare the location	Choose a flat mounting surface with adequate space for the 176.5 x 118.5 mm enclosure and cable routing.
2. Fix the wall plate	Orient the mounting plate using the molded upward arrow. Secure the plate through the provided mounting points using fasteners appropriate for the wall material.
3. Route and connect wiring	Bring the RS-485 and DC supply wiring to the terminal area. Connect /B, A, GND and 5-35 VDC in the specified left-to-right order.
4. Align the HMI	Position the HMI over the installed wall plate and align the enclosure with the plate's retaining features.
5. Click into position	Press the HMI evenly toward the wall until the retaining features engage and the enclosure is securely seated.
6. Power and commission	Apply DC power, verify startup, configure the Modbus network and confirm communication with the connected devices.

Wall Mount Installation
(Wall Mount Part)

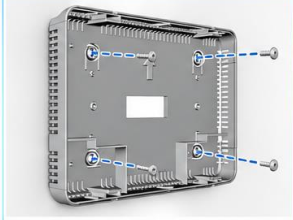
The HMI is supplied with a wall mount part for easy and secure installation. Follow the steps below to mount the wall part, connect the wires and attach the HMI.

Important Notes

- Install the wall mount part on a flat and stable surface.
- Ensure the correct orientation (arrow pointing up).
- Route the cables through the central opening.
- Connect the wires according to the wiring map.
- Use suitable screws and wall plugs for your wall type.
- Always power OFF the device before connecting or disconnecting wires and before attaching or removing the HMI.

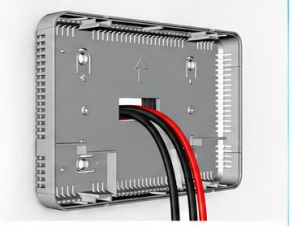


1 Fix the wall mount part



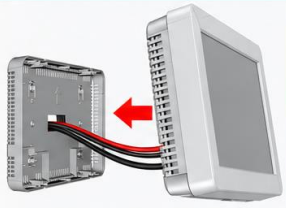
Use 4 screws (and wall plugs if required) to fix the wall mount part to the wall. Ensure it is level and the arrow is pointing up.

2 Route the cables



Route the required cables from the wall through the central opening.

3 Connect the wires and attach the HMI



Connect the wires to the HMI according to the wiring map, then align the HMI with the wall mount part and press it towards the wall mount until it clicks securely into place.

4 Installed

The HMI is now securely mounted and ready for use.

*Installation note: IP54 performance depends on correct installation and the complete assembled product. Use suitable cable routing and installation practices for the intended environment.