EnerCon

User Manual

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1.1 Content Overview

This manual is meant to provide detailed product information and installation/operation guidelines for users of the Energy Controller (hereinafter referred to as "EnerCon"), developed and manufactured by Shenzhen ATESS Power Technology Co., Ltd. (hereinafter referred to as "ATESS").

Please read this manual carefully before using the product and keep it in an accessible location for installation, operation, and maintenance personnel.

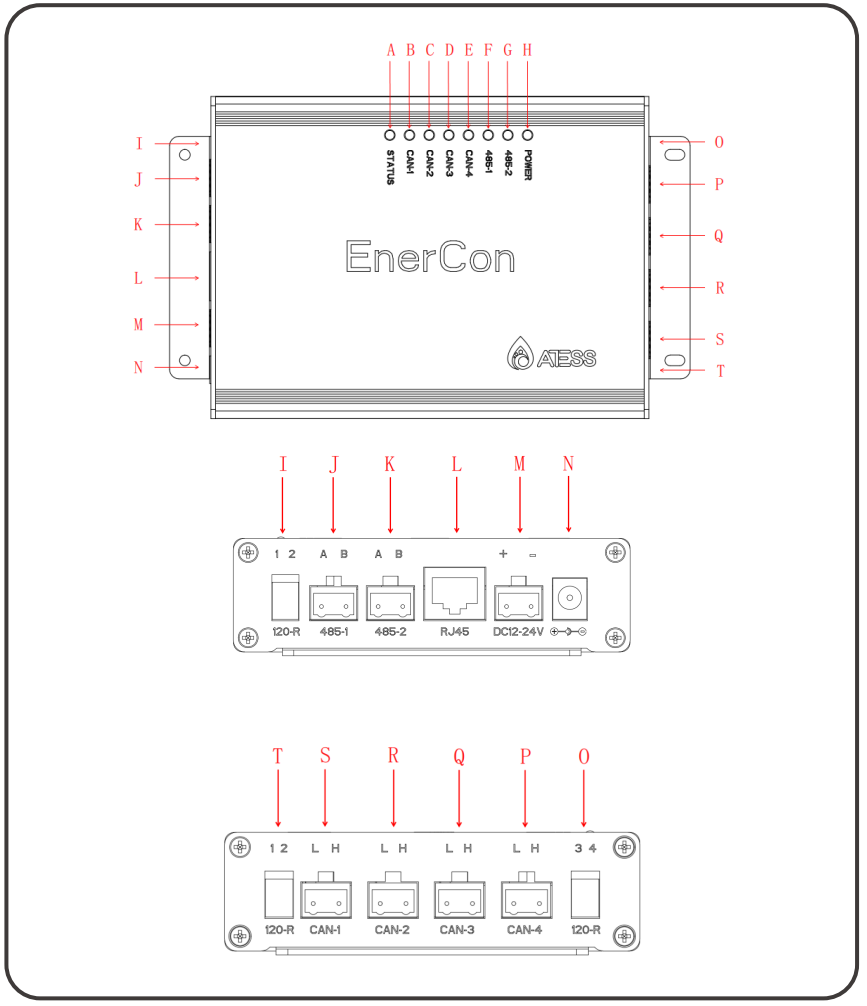
ATESS reserves the right to modify this manual without prior notice. The content is subject to updates and corrections, and discrepancies or errors may exist. For the latest version, please refer to the actual product or contact your local distributor, or visit our official website: www.atesspower.com.

1.2 Target Audience

This manual is intended for technicians responsible for installing, commissioning, and maintaining EnerCon, as well as end-users performing daily operations. This manual does not cover electrical connection instructions or precautions for other energy storage devices. For related information, please refer to ATESS's corresponding user documentation.

2 Product Description

2.1 EnerCon Appearance



2.1.1 Interface Description

The interface locations are shown in Section 2.1. The functions of each interface are described below:

No.	Name	Function Description
I	120-R(1)	120Ω terminal resistor DIP switch for 485-1 and 485-2
J	485-1	485 channel for connecting monitoring devices to upload EnerCon data
K	485-2	Reserved 485 channel
L	RJ45	Ethernet port for connecting to a computer to upgrade EnerCon firmware
M	Power Port 2	Backup power input (12-24V DC). For details, refer to Section 3.2.1
N	Power Port 1	12V power adapter interface for primary power supply
O	120-R(2)	120Ω terminal resistor DIP switch for CAN-3 and CAN-4
P	CAN-4	CAN channel for connecting RTF devices
Q	CAN-3	CAN channel for connecting PCS devices
R	CAN-2	CAN channel for connecting PBD250 devices
S	CAN-1	CAN channel for connecting PBD250 devices
T	120-R(1)	120Ω terminal resistor DIP switch for CAN-1 and CAN-2

Table 2-1

2.1.2 LED Status Indicators

EnerCon has 8 LEDs to indicate operational status:

No.	Name	Function
A	STATUS LED	System status indicator. Intermittent blinking: Normal operation.
B	CAN-1 LED	Blinks when PBD data is transmitted.
C	CAN-2 LED	Blinks when PBD data is transmitted.
D	CAN-3 LED	Blinks when PCS data is transmitted.
E	CAN-4 LED	Blinks when RTF data is transmitted.
F	485-1 LED	Blinks when connected to monitoring devices with active communication.
G	485-2 LED	Reserved (currently inactive).
H	POWER LED	Power indicator. Steady on: Normal power supply. Off: Power failure.

Table 2-2

2.2 Packaging Information

2.2.1 Packaging List

The package includes the following items:

No.	Item	Amount
1	EnerCon	1 unit
2	12V Power Adapter with Plug Converters	1 set
3	RS485/CAN/Power Port 2 Terminals	7 pieces
4	EnerCon User Manual	1 copy
5	Ethernet Cable (1m)	1 piece
6	ATESS Certificate of Compliance	1 copy

Table 2-3

2.2.2 Serial Number

The Serial Number (SN) is a unique alphanumeric code printed on the EnerCon packaging and chassis.

2.3 Functional Overview

EnerCon is primarily designed for DC-coupled systems with multiple devices. It replaces the PCS host in transmitting and receiving PBD and RTF data, reducing communication load on the PCS host.

Installation and Connection 3

3.1 Installation Environment

Requirements for installation and communication:

1. Indoor installation. Operating temperature: -25℃ to 55℃. Avoid humidity and direct sunlight.

2. Maximum RS485/CAN communication distance: 500m. Use shielded twisted-pair cables to prevent electromagnetic interference.

3. Recommended power supply: UPS.

3.2 installation Method

3.2.1 Installation Steps

1. Place EnerCon vertically or horizontally on a stable surface.

2. Connect CAN interfaces between EnerCon and devices.

3. Power connection options (choose one):

   a. Use the included 12V DC power adapter with plug converters (China, UK, US, EU, Australia) for international compatibility.

   b. Connect to the 12-24V DC input port (observe polarity).

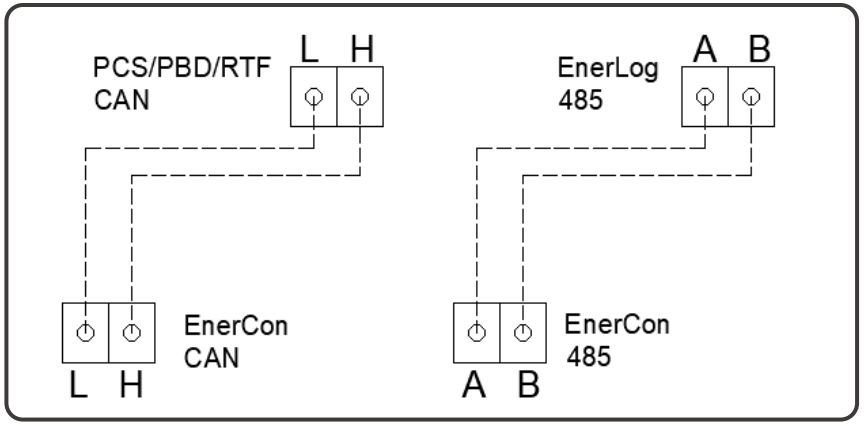
   c. Use a UPS for power supply.

3.3 Device Connection

EnerCon can communicate with PBD, PCS, RTF and other devices, so as to achieve the purpose of data interaction and energy scheduling.

3.3.1 Communication Connections

1.EnerCon communicates with PBD, PCS, and RTF devices via CAN bus. Match device CAN ports (L to L, H to H) and 485 ports (A to A, B to B).



2.EnerCon has 4 CAN channels:

CAN-1/CAN-2: Connect to PBD250 devices (up to 20 per channel).

CAN-3: Connect to PCS devices.

CAN-4: Connect to RTF devices.

3.EnerCon has 2 RS485 channels:

485-1: Connects to EnerLog for data upload.

485-2: Reserved.

4.Notes:

a. Shielded layers should be grounded (PE) for stable communication.

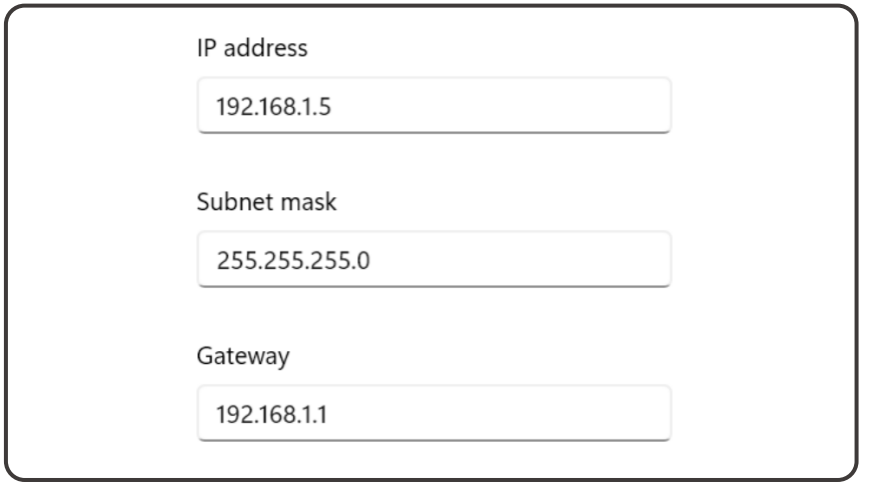
b. Use DIP switches to adjust 120Ω terminal resistors for CAN/485 buses.

EnerCon Internal Page 4 Parameter Setting

4.1 Accessing the Built-in Page

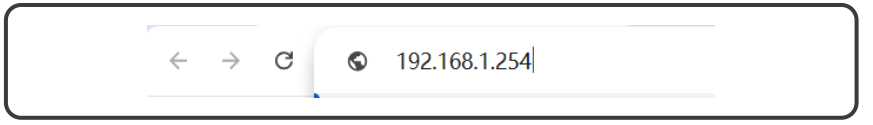
4.1.1 Ethernet Connection and Computer IP Configuration

Connect EnerCon's RJ45 port to a computer via Ethernet. Configure the computer's IP address as shown below

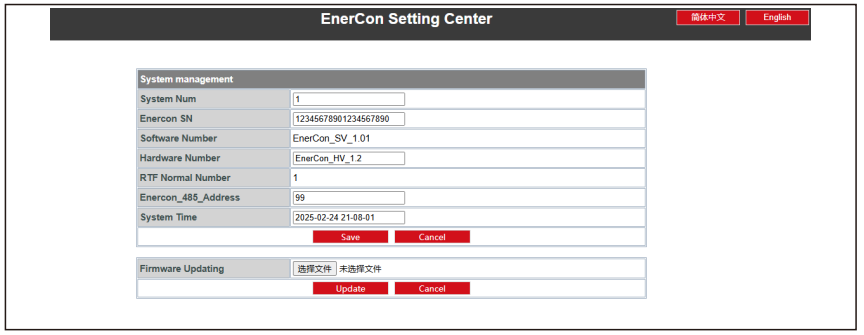


4.2 Login and Parameter Configuration

Ensure communication cables are securely connected. Open a web browser and enter 192.168.1.254 to access the built-in page.

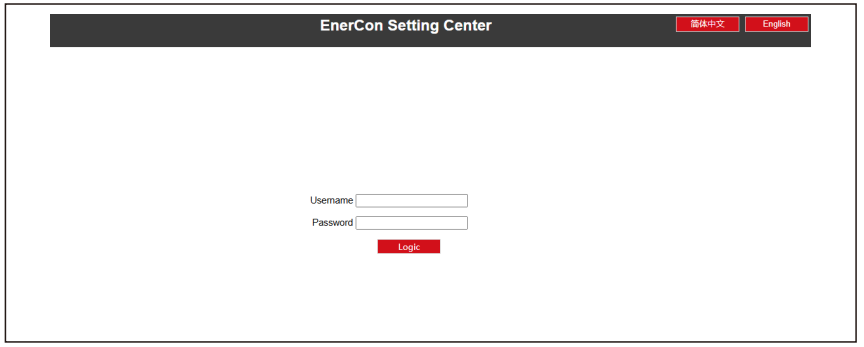


Note: The computer and EnerCon must be on the same subnet.



Default Login Credentials:

- Username: admin
- Password: admin



Parameter Settings:

- ●System Num： System group ID for monitoring (must match PCS settings).
- ●EnerCon SN: EnerCon serial number.
- ●Software Number: Firmware version (predefined).
- ●Hardware Number: Hardware PCBA version.
- ●RTF Normal Number: Number of online RTF devices.
- ●EnerCon_485_Address: RS485 address of EnerCon.
- ●System Time: System time configuration.

Maintenance 5

1. Avoid frequent power cycling. Handle with care to prevent damage.
2. EnerCon is designed for indoor use. Avoid exposure to moisture or direct sunlight.

Technical Specifications 6

General Specifications

Dimension (L×W×H) (mm)	170*105*31
Weight(g)	336

Operating Environment

Temperature Range	-25℃ ~ 55℃
Location	Indoor

Communication Specifications

Rs485 Communication Distance	Up to 500m (shielded twisted-pair cable with grounded shield)
CAN Communication Distance	Up to 500m (shielded twisted-pair cable with grounded shield)

7 Contact Us

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