Eastron

Datasheet

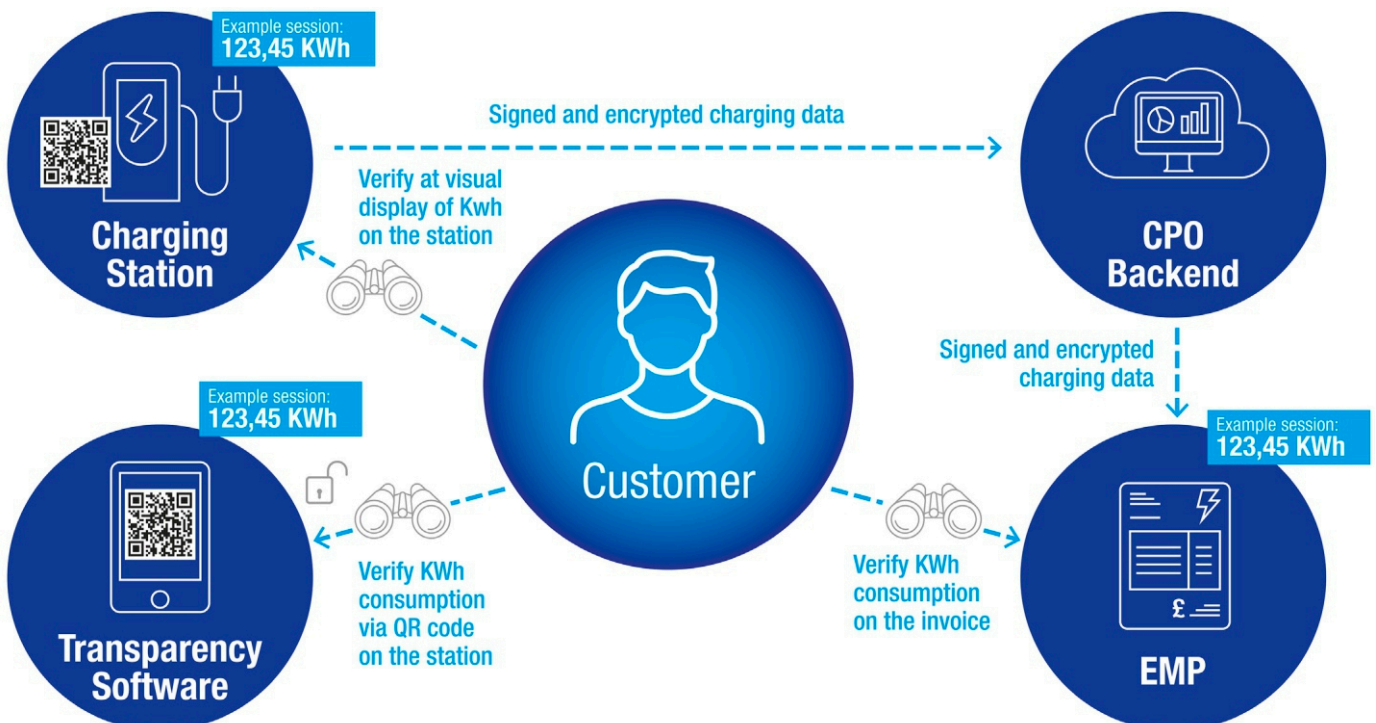Provisional Datasheet V1.0 - May 2023

Contents

1 Introduction

The DCM6 Series is a DC electricity meter for measurement within an e-mobility charging station. It has a dedicated microcontroller for crypto function in order to comply with **'Eichrecht'**.

Furthermore, all charging processes are stored within the internal data storage of the meter.

The Eichrecht measurement and calibration act, which is an amendment to Measuring and Verification Act (Mess und Eichgesetz / MessEG) and the Measuring and Verification Ordinance (Mess- und Eichverordnung / MessEV) is the solution giving the user transparency for detailed billing for each charging event.

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

www.eastrongroup.com

Provisional Datasheet V1.0 - May 2023

2 Techincal Specification

Current	DCM6-650	DCM6-200
Ist (Starting current)	0.52A	0.16A
Imin (Minimum current)	6.5A	1A
Itr (Current)	13A	4A
Iref (Normal current)	130A	40A
Imax (Maximum current)	650A	200A

Voltage	
Umax	1000V DC
Umin	150V DC
Auxiliary power supply voltage	9-40V DC

Accuracy	
Class	B

Active Energy	
Total Mains energy	+A/-A/+A + -A

Meter Constant	
LED	1000imp/kWh

Serial Output	
Type	2 x RS485 (RTU)
Ports	2 x RJ12 + 1 plug-in terminal
RS485 interface 1 and 2	
4800~115200bps (19200bps default) 8N1 (Settable)	
RS485 interface 3	
4800~115200bps (19200bps default) 8N1 (Settable)	

Power Consumption	
Voltage circuit	<0.5W@Un
Current Circuit	<0.12W/A @ Imax
Auxiliary power supply	<2W

Temperature range	
Operation	-40°C - +80°C
Storage	-40°C - +85°C

Humidity	
Max	97.5%, not condensing
	EN60068-2-30:1999

Environmental conditions	
Mechanical environmental conditions	M1
Electromagnetic environmental conditions	E2

Housing		
Dimensions	115mm (L) x 103mm (W) x 64mm (H)	
Material	Polycarbonate and Flame retardant	
Weight	DCM6-650	0.55kg
	DCM6-200	0.47kg

Storage	
Capacity for start and stop charge records	229000
Capacity of logbook	5000

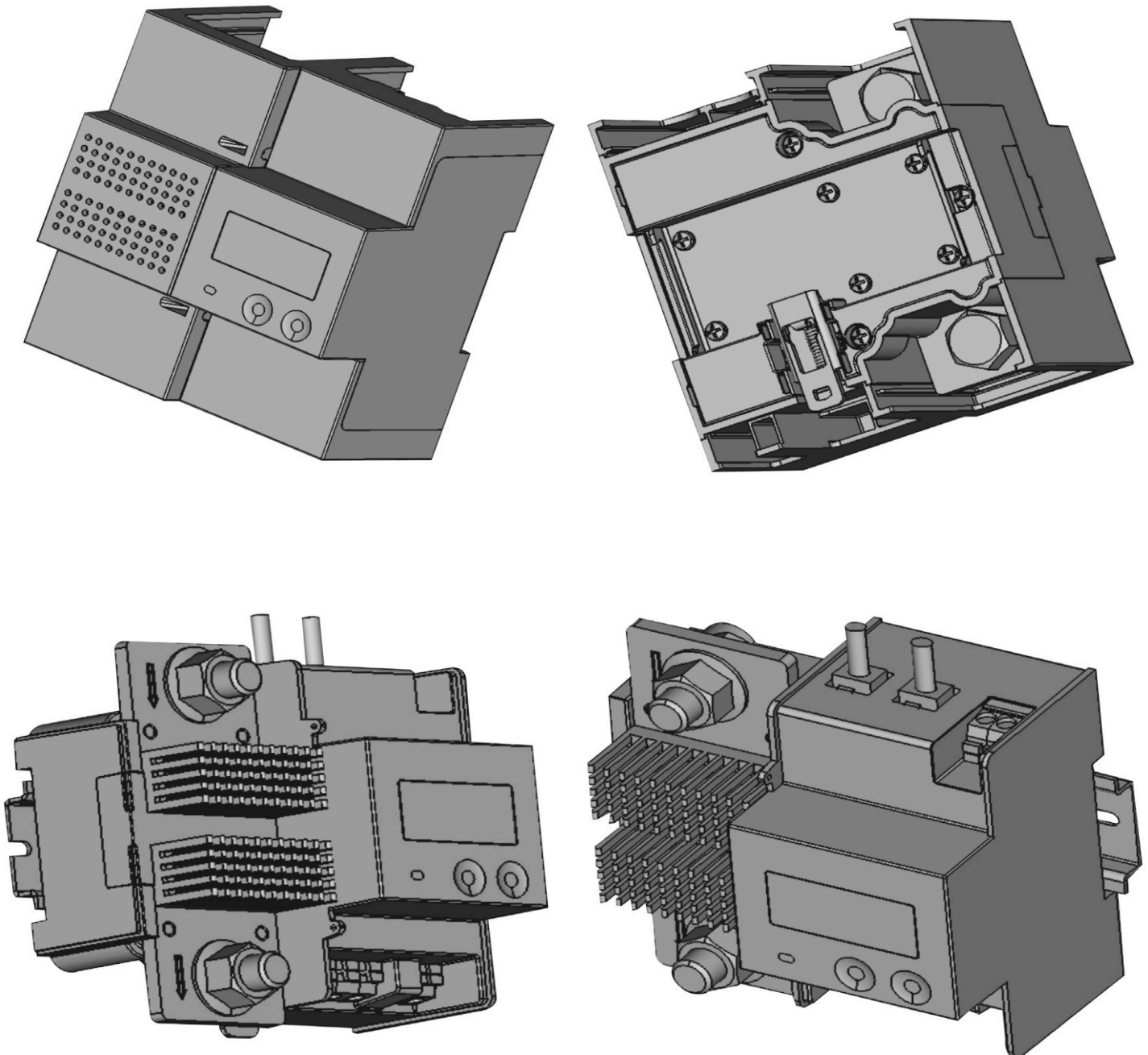| Display	
LCD	Dot Matrix
Life Cycle	>12 Years

2.1 Technical Standards

1. EN50470-1: " Allgemeine Anforderungen, Prüfungen und Prüfbedingungen - Messeinrichtungen (Genauigkeitsklassen A, B und C)", Revision date 21.02.2019

2. EN50470-3:" Besondere Anforderungen - Elektronische Wirkverbrauchszähler der Genauigkeitsklasse A, B und C", Revision date June 2007

3. IEC62052-41: "Electricity metering equipment (AC) – General requirements, tests and test conditions", Revision date February 2003

4. DIN EN62052-11: „Wechselstrom – Elektrizitätszähler Allgemeine Anforderungen, Prüfungen und Prüfbedingungen Teil 11: Messeinrichtungen", Revision date November 2003

5. VDE-AR-E 2418-3-100: „Elektromobilität – Messsysteme für Versorgungseinrichtungen", Revision date 29.08.2019

6. EN 62053-41: "Electrical Energy Measurement and Control", Revision date 17.04.2020

7. OCMF1.0: "Open Charge Metering Format", Revision date 21.02.2019

8. PTB – A 20.1: " Messgeräte für Elektrizität: Elektrizitätszähler und deren Zusatzeinrichtungen", Revision date December 2003

9. PTB – A 50.7: " Anforderungen an elektronische und softwaregesteuerte Messgeräte und Zusatzeinrichtungen für Elektrizität, Gas, Wasser und Wärme", Revision date April 2002

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

www.eastrongroup.com

2

Provisional Datasheet V1.0 - May 2023

3 Housing

3D CAD Drawing of the housing

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com
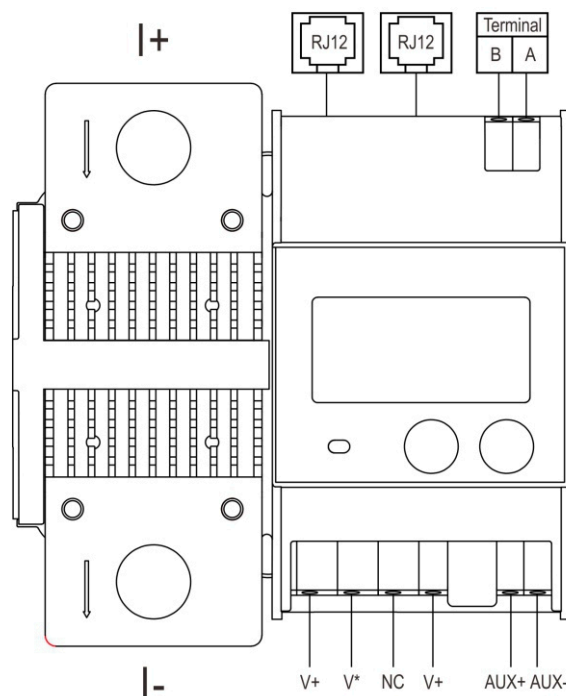
www.eastrongroup.com

3

Provisional Datasheet V1.0 - May 2023

4 Installation and Safety

4.1 Safety

- The meter and all associated components may only be installed in compliance with all safety regulations. Ignoring these instructions may endanger life and the manufacturer will not take any responsibility.

- It is always mandatory to ensure the maximum peak voltage and maximum peak. current of the desired application do not exceed the maximum peak values of the meter. Otherwise, the meter gets damaged due to overvoltage and or overcurrent. These peak values are 1000VDC (Max Voltage) + 3102V overvoltage margin and 650 A (Max Current) and 15 kA overcurrent margin.

- In order to ensure smooth operation of the meter, the manufacturer's seal of approval has to be obtained before installation. If this has expired or is missing, the meter has to be sent back to the manufacturer for a new test.

- The meter should be installed in dry and well-ventilated area. The meter should be installed on a top-hat rail away from flammable or vibrating components. During installation, the meter has to be ensured to operate properly. meter has to be prevented by protective measures such as enclosures or protective caps.

- The connection has to be made according to Figure 5. The current-carrying lines are connected to the shunt of the meter using M10 nut screws. In order to prevent damage or corrosion due to a bad connection, a tightening torque of 17.5 to 20 Nm has to be applied.

- If additional modules are used in conjunction with the meter, a communication link between these two devices can be established via one of the three RJ12 interfaces.

- After installation of the meter, it is mandatory to change the operating mode from assembling mode to normal mode. The manufacturer is not responsible for any damage caused by disregarding this instruction.
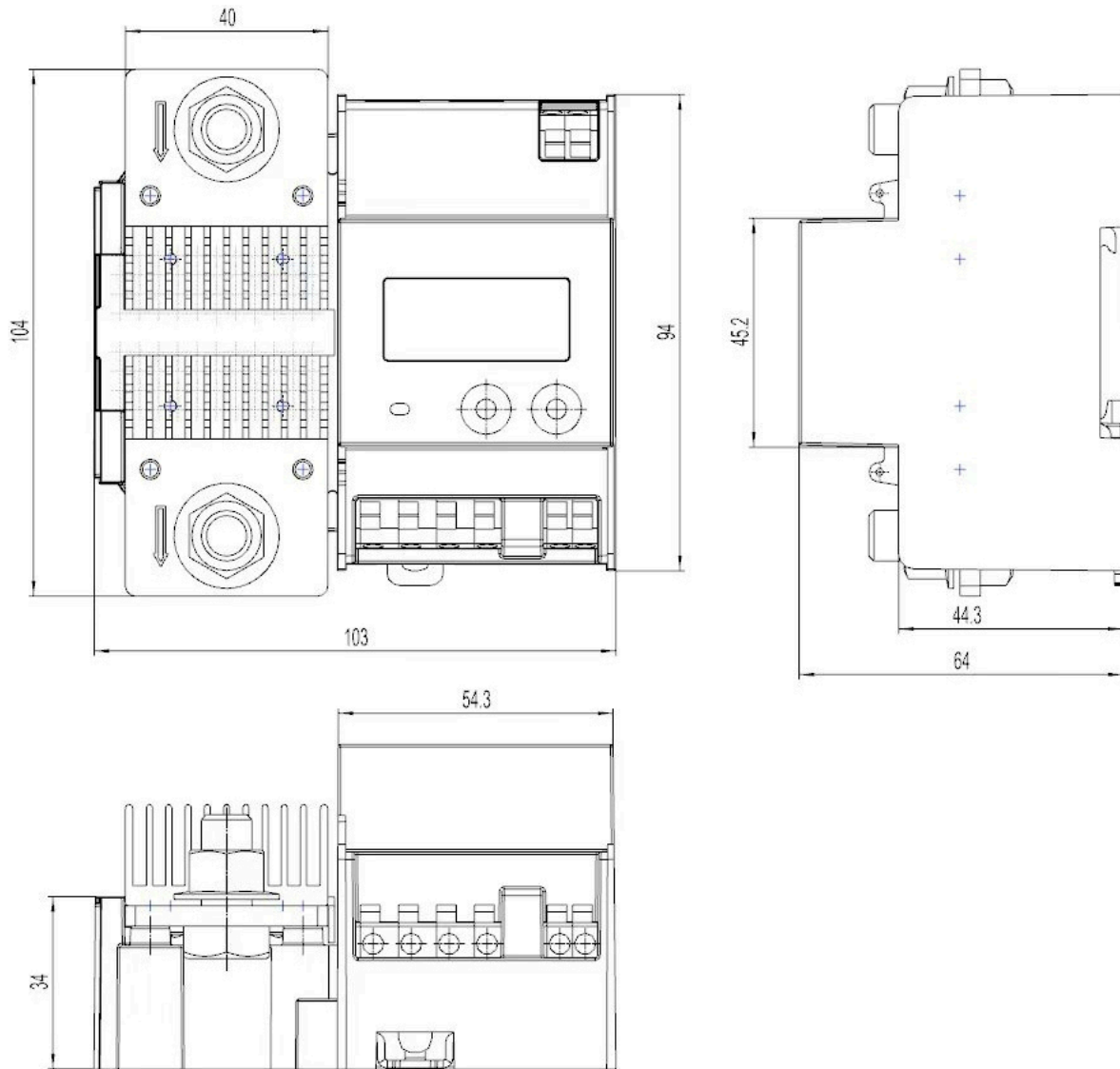
4.2 Wiring configuration

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

www.eastrongroup.com

4

Eastron

Datasheet

DCM6 Series
DC DIN rail mounted meter for direct
installation in e-mobility charging stations

Provisional Datasheet V1.0 - May 2023

4.3 Dimensions

**For more information on these products, please contact our sales
team on 86 0573 83698881 or email sales@eastrongroup.com**

www.eastrongroup.com

5

Eastron

DCM6 Series
DC DIN rail mounted meter for direct
installation in e-mobility charging stations

Datasheet

Provisional Datasheet V1.0 - May 2023

4.3 Dimensions (continued)

**For more information on these products, please contact our sales
team on 86 0573 83698881 or email sales@eastrongroup.com**

www.eastrongroup.com

6
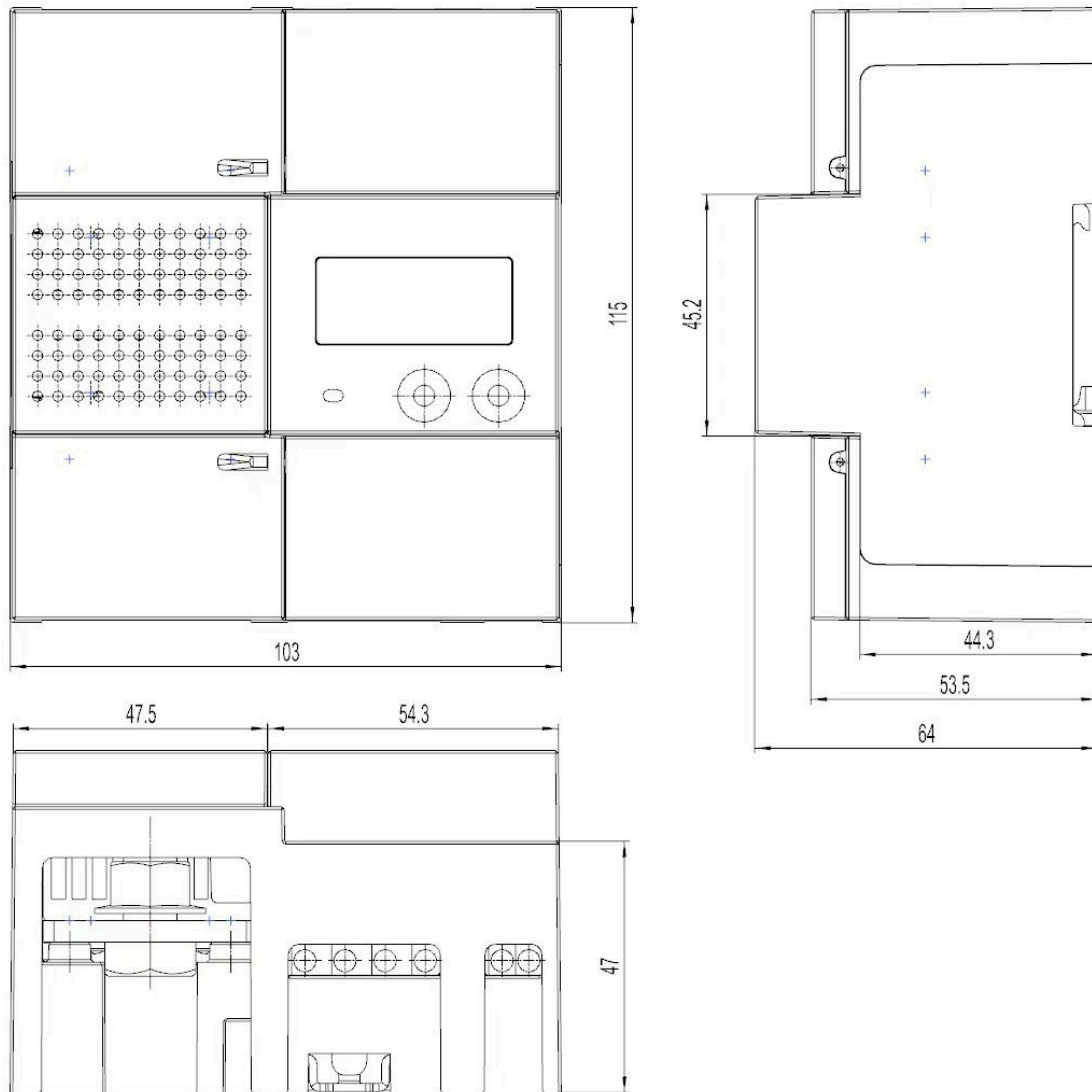
Datasheet

Provisional Datasheet V1.0 - May 2023

5 Operation

5.1 Display

The LCD is dot matrix type with resolution of 192 * 96, sized at 37x16mm

5.2 Buttons

There are two buttons at front of the meter panel.

Left button short press: scroll the display content

Left button long press: show the public key QR code

Right button long press: check historical charging records

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

www.eastrongroup.com

7