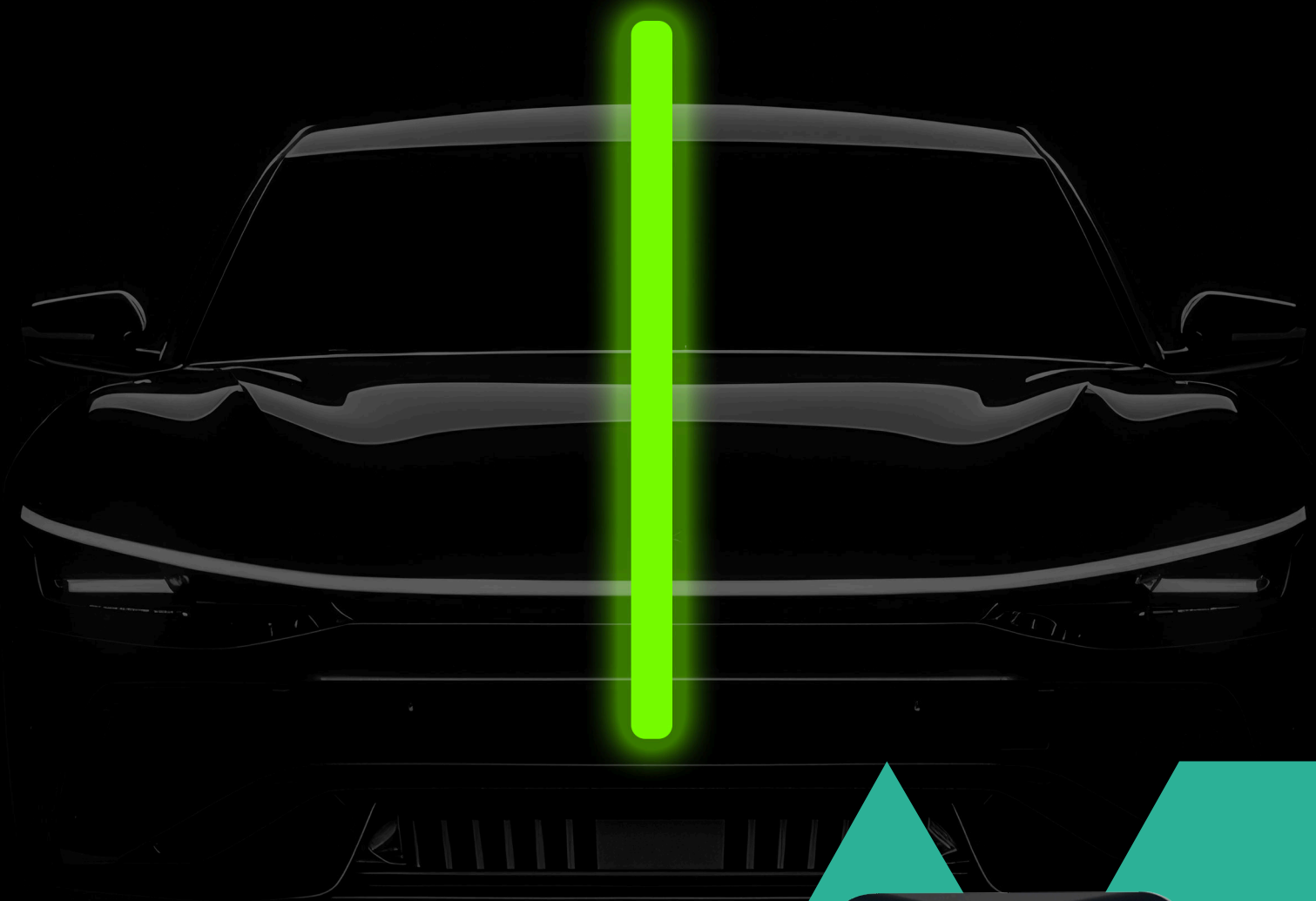


# NRGCHARGE

Velox - 7KW / 22kW Electric Vehicle Charger



[Datasheet](#)

Think out of the box, with our creatively designed  
Velox - 7kW/22kW Domestic and Commercial EVC





## Velox - 7KW / 22kW Electric Vehicle Charger

### Product specifications

- Product name: Velox Charger - 7KW/22KW- Gun Line Tethered/Gun Mount Untethered
- Product specifications: 230/400Vac 50Hz/60HZ Max.7/22KW



The 7kW (Residential) and 22kW (Commercial) Electric Vehicle (EV) Charge Point is engineered with a modular, three-part design that provides numerous benefits. The first module, the back box, contains all the essential electrical connections. (load balancing, and communication). The back box is non-electronic, and once installed by a qualified engineer, it serves as a foundational connection point. The second module, the main body, integrates with the back box using guided pins, establishing a secure link between the back box and the electronic components. This part is fully encapsulated, tamper-proof, and sealed to ensure durability. Finally, the cover plate clicks into place to complete the unit.

This modular approach enables a streamlined service plan, eliminating the need for site visits by a qualified engineer. The unit includes a standard 3-years warranty, which can be extended to 5 years due to reduced reliance on on-site servicing. Additionally, this design offers convenience for property developers, allowing the installation of the back box at the first fix phase without any electronics, and thus no immediate value, until the main body is added later on.

### Product features:

- Multiple Charging modes RFID, Plug and Charge and App
- IEC62955 Certified for OPDD protection, Over Current, Under / Over Voltage , Ground Fault, Thermal Shutdown and Tamper Proof
- Modular design includes a base box that contains the wiring of the charger, this enables a fast replacement process
- Cybersecure encrypted ISO/IEC 18031 certified
- x2 Key fob RFID tags
- Scheduled charging
- Load balancing via Current transformer
- Surplus solar generation utilised by the charger with second Current Transformer installed.
- Dynamic Load balancing via Current Transformer hub and one master to slave solution
- Bluetooth / LAN/ Wi-Fi connectivity
- Optional 4G
- Durable design IK10 rated



## 1. Product appearance



## 2. Main features and technical parameters

No.	Aspect	Parameter
1.	capacity	(Yet to be done)
2.	product size	(Yet to be done)
3.	package size	(Yet to be done)
4.	net weight	(Yet to be done)
5.	gross weight	(Yet to be done)
6.	rated voltage	Single-phase 180-270V, Three-phase 270-460
7.	rated power	7/22kw
8.	operating temperature	temperature: -30-50°C, humidity:5%-95%
9.	certification	CE/UK

## 3. Overview of key components

### 3.1. Measurement Accuracy:

Voltage Accuracy and Operating Range:

Voltage: **single phase 180-270V, three phase 270-460V**

Accuracy: **1.5%**

Current accuracy and operating range:

Current: **6~32A**

Accuracy: **1.5%**

### 3.2. Power accuracy and operating range:

Power: **3.6~22kW**

Accuracy: **3%**

### 3.3 Time accuracy and range:

Difference should be no more than 5S each hour

### 3.4. CP sampling

CP voltage: **0-13V**, Accuracy: **±0.3V**

CP duty cycle: **6%-53.2%**, Accuracy: **±1%**

CP frequency: **1KHZ**, Accuracy: **±3HZ**

### 3.5. External CT current accuracy and range:

Current: **3~120A**

Accuracy: **2.5% or 1A, (the larger val ue of either)**

### 3.6. Functional requirements:

- Multiple protections
- Type A+dc6mA RCD
- Over current protection
- Over voltage & under voltage protection
- PE ground protection
- Over thermal protection
- CP diode protection
- Relay protection
- Internal thermal protection
- Diode detection and protection
- OPEN protection
- Electronic lock control protection
- Intrusion/cover opening protection
- High reliability
- IP54 waterproof rating
- High performance relay, capacity for large current, magnet-holding, low temperature rise.
- Modular AC/DC power module, higher stability
- Internal NTC temperature curve protection, lowering power or break charging
- Incoming and outgoing cable connections are fixed with screws, preventing pulling and reliable use.
- Indicator lights display status and fault indication
- Self-inspecting
- After powering on, the system will complete self-test. If there is a fault, charging cannot be started.
- Before each charge, a leakage self-test will be performed to check whether the leakage detection module is normal.
- Internal thermal monitoring
- Built-in NTC temperature sensor, automatically reduces load or disconnects charging when abnormal temperature is detected
- Internet/networking function
- Supports TLS available network connection
- The networking interface supports automatic switching between Ethernet, Wi-Fi, and 4G.
- Dynamic Load Balancing function
- Need to be used with current transformer (Open CT)- ESCT-TA16 120A/40mA



- Single phase requires 1 CT, three phase requires 3 CTs
- Solar current detection function
- Charging mode
- Plug and charge
- Charge by swiping card (RFID)
- APP charging mode
- function instruction

Before leaving the factory, the product must pass burn-in, comprehensive tester test, manual test and burn the SN number and URL address

## 4. Environmental Requirements/circumstances

Operating Temperature: **-30°C to + 50°C**

Storage temperature: **-40°C to + 75°C**

Humidity: **5% ~ 95%**

Altitude: **less than 2000M**

Magnetic field: **not exceeding 5 times the Earth's magnetic field**

Voltage distortion: **not exceeding 5% of the standard**

## 5. Design compliance

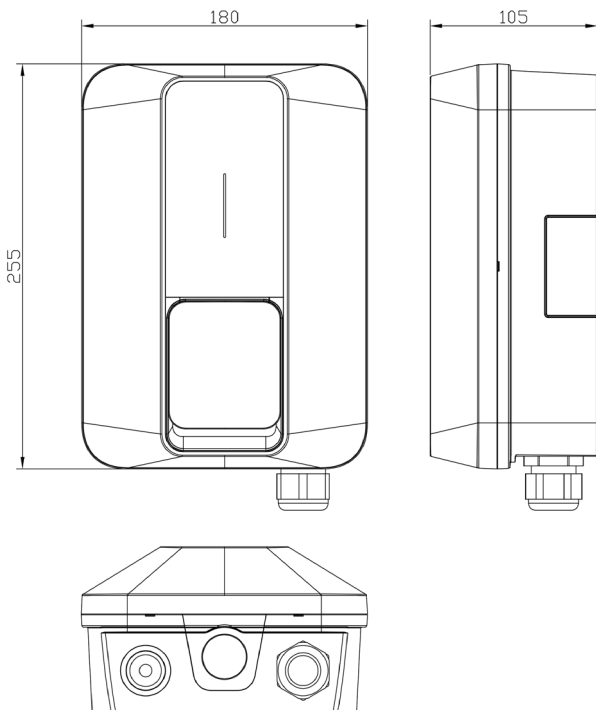
IEC62955-2018

IEC61851-1-2017

IEC61851-21-2

IEC62196-1-2014

## 6. Dimensions



## 7. Installation Instructions



### Mount the Back Box

Secure the back box (1) to the wall.



### Connect Power Cables

- For **single-phase (1p2W, 7kW)**: Connect **Live (L), Neutral (N) and Earth (PE)** to the correct terminals.
- For **three-phase (3p4W, 22kW)**: Connect **L1, L2, L3, Neutral (N) and Earth (PE)** to the corresponding terminals.
- Route the cable through either: **Point A** (rear entry), or **Point B** (bottom gland).



### Connect Additional Components

- Attach the **Current Transformer (CT)** for **dynamic load balancing** through **Point C**.
- If using a **LAN connection**, run the cable through **Point C** as well.



### Assemble the Unit

- Slide and secure **component (2)** into the back box using the push-in connections.
- Fasten with the **tamper-proof screws** to lock it in place.
- To finish the installation, click the **face plate (3)** onto the charger.