ORBIS®

energía inteligente®

VIARIS UNI

INDEX

DESCRIPTION

The VIARIS UNI is an intelligent Mode 1, 2 or 3 Electric Vehicle charge point (EN 61851-1) with a Type 1 or Type 2 tethered cable that allows you to connect and charge your electric vehicle.

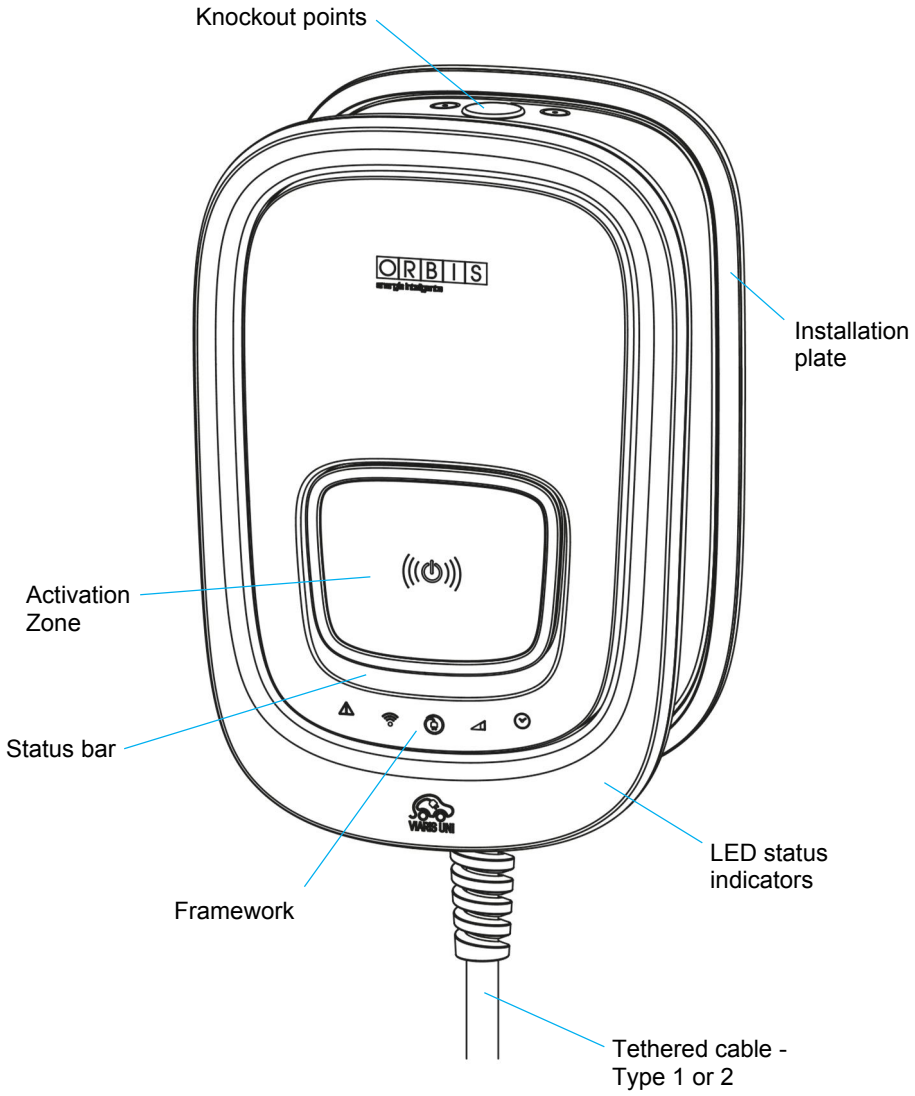
The VIARIS UNI has:

- Type 1 or Type 2 connection cable in 5- or 10-meters length, or with socket base (Type 2).
- Robust IK10 casing easily wall mounted and easy to use.
- LED operating status indicators.
- Power disconnection device in case of defect currents with a continuous component greater than 6 mA.
- A Charge Modulator enabling you to maximize your charge and minimize home disruption.
- *e-VIARIS* free App download available from Google Play and App Store.
- Ability to set desired charging times via the App.
- Optionally can include an additional Schuko input (load modes 1 and 2) limited to 14 A (N/A in UK).

Warning symbols used in this instruction manual:

ELECTRICAL RISK.
There is a risk of electrocution that can lead to bodily injury or death if the instructions are not followed.

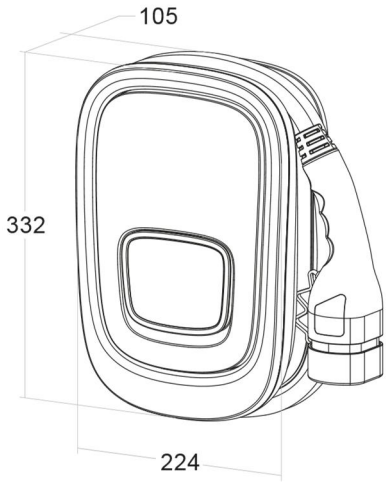
GENERAL ATTENTION


Knockout points
Installation plate
Activation Zone
Status bar
Framework
LED status indicators
Tethered cable - Type 1 or 2

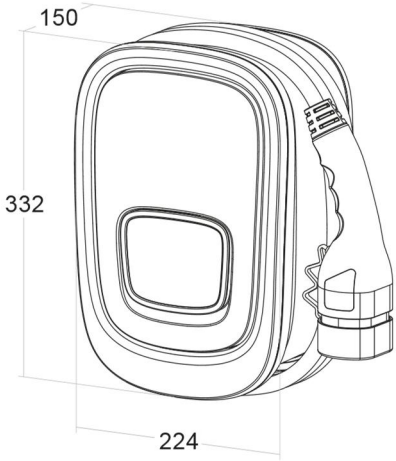
MODELS (DIMENSIONS)

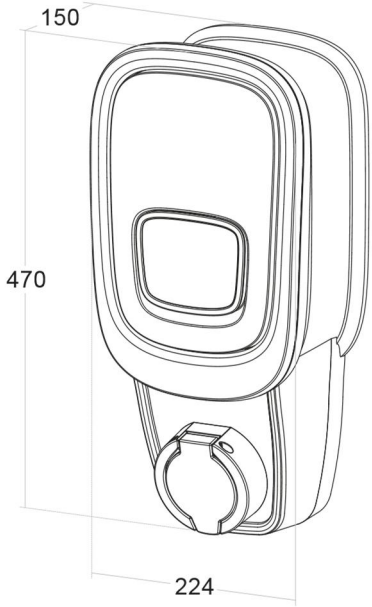
Depending on the charger options the dimensions will be different.

Standard models

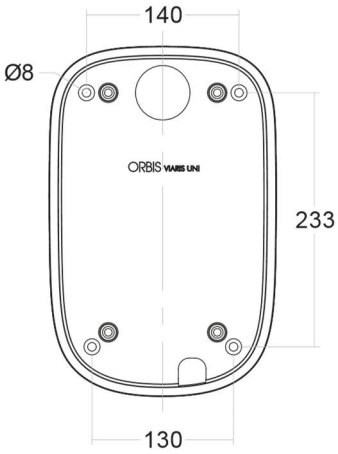


For options: Schuko socket outlet, 10-meter cable or with MID energy meter.





T2 socket outlet models



Wall fixing

INSTALLATION

Security warnings

The following instructions must be observed during installation and operation of equipment:

	▪ The equipment must be installed by authorised and qualified personnel who comply with the instructions of this manual. ▪ The equipment must be installed and activated in compliance with the current low voltage regulations. ▪ Do not use the equipment for purposes other than that specified. ▪ Before installing the smart charger, check that it is not damaged. ▪ Before accessing the connecting terminals, verify that the cables are not under electric voltage. The opening of the enclosure does not imply the absence of tension within it. It may only be opened by authorised and qualified personnel. ▪ In accordance with the applicable regulations, the installer should check whether overvoltage protection measures are necessary. ▪ Use only the specified charging cable for each electric vehicle. In no case should another type of extension cable be used. ▪ In case of malfunction, do not perform repairs and contact our Technical Services immediately. ▪ After installation, inaccessibility to connecting terminals without appropriate tools should be ensured. ▪ Ensure appropriate tools are always used. ▪ To protect the intelligent charger against potential vehicle impacts, the installation of a protective barrier is recommended.

Assembly requirements

	▪ The minimum installation height of the power outlets and connectors should be 0.6 m above ground level. If the charger is intended for public use, the maximum height shall be 1.2 m and in places for persons with reduced mobility, between 0.7 m and 1.2 m. (See the instructions of the country where the installation is carried out in case other heights are specified). ▪ The mounting plate must be located at a height between 0.4 m and 1.5 m above ground level. ▪ The charger must be installed upright and allow clearance for maintenance. ▪ Use seals or presses to ensure the level of IP protection of the charger.

Wall Mounting

- Remove the installation mounting plate.
- Check the spirit level bubble for correct positioning of drill holes.
- Drill 4 x 08 mm holes for rawl plugs (supplied).
- Bolt the installation plate to the wall. **Fig. 1**
- Attach the charger to mounting using four M6 screws (supplied). **Fig. 2**

Fig.1

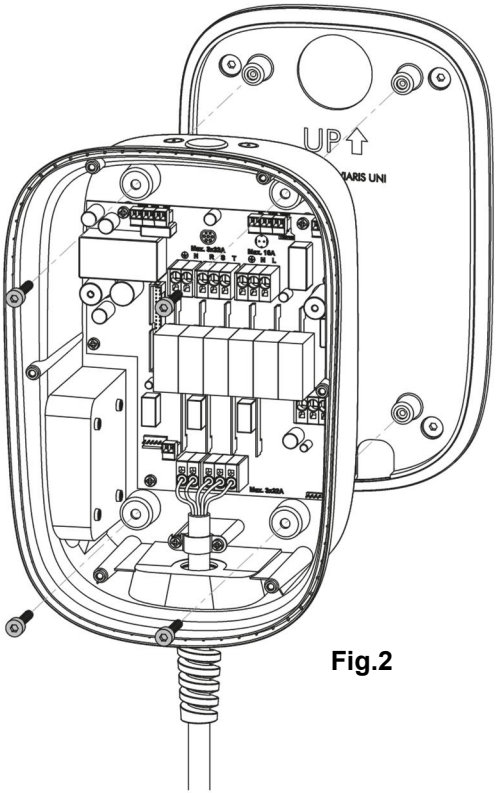
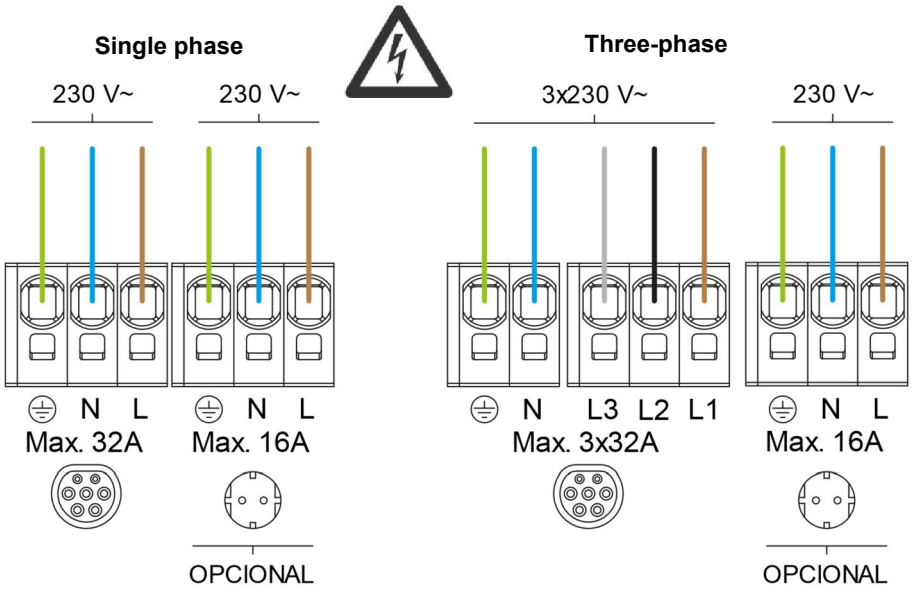


Fig.2

POWER CONNECTIONS

Before accessing the terminal connectors isolate the electrical supply.
The unit should only be opened by authorized and qualified / competent electricians.

Please refer to illustrations below for the connection terminals sequence:

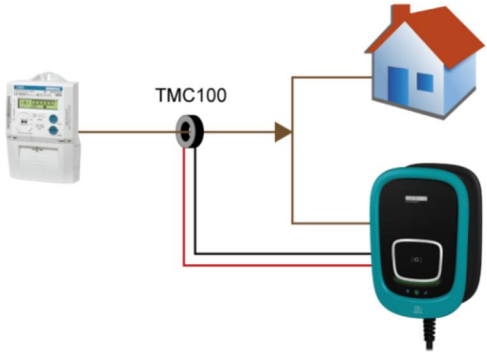


The terminals marked as Optional are to connect the supply of the additional Schuko output. This connection should be protected with independent protections.
If your VIARIS UNI does not have as option the additional Schuko output these terminals are not functional, avoid making a connection in them.

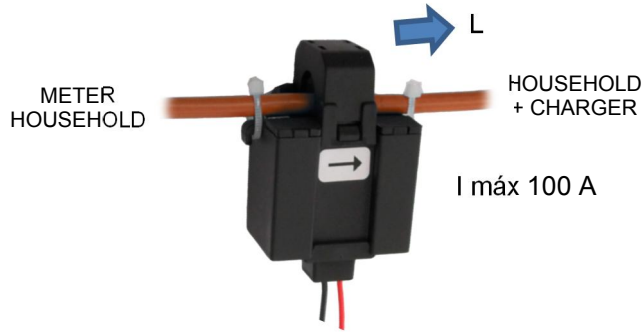
If your charger has the extra MID meter, the electrical supply connections will be made on the meter itself, respecting the order of the phases indicated on the device

Connection of the charger modulator

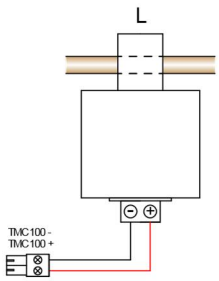
Open the **TMC100** transformer (included) and couple it on the phase cable (L) so that it measures the total consumption of the house and the charger VIARIS UNI.



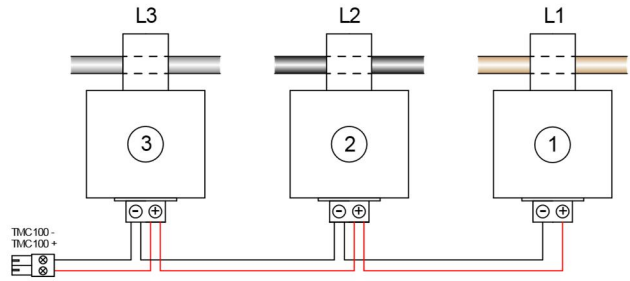
- ***TMC100 must be installed following the direction of the current as indicated by arrows in diagram below.***
- ***It should not be used in installations with currents exceeding 100 A since the measurement and therefore modulation may be incorrect.***



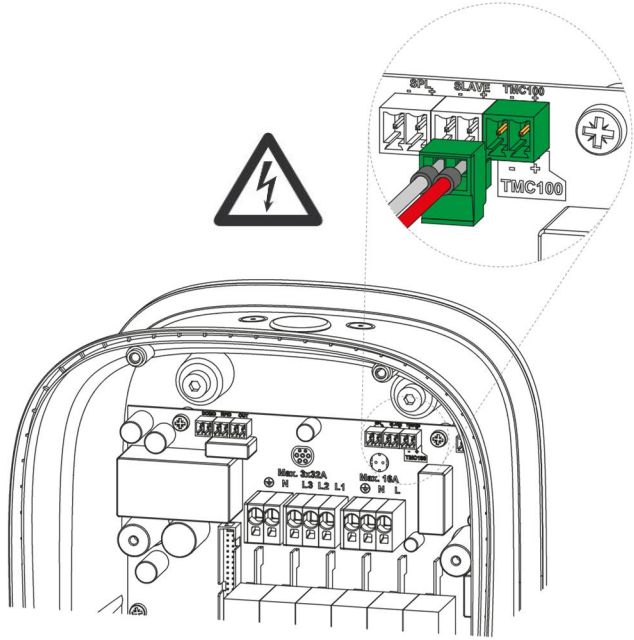
Single phase charger



Three-phase charger



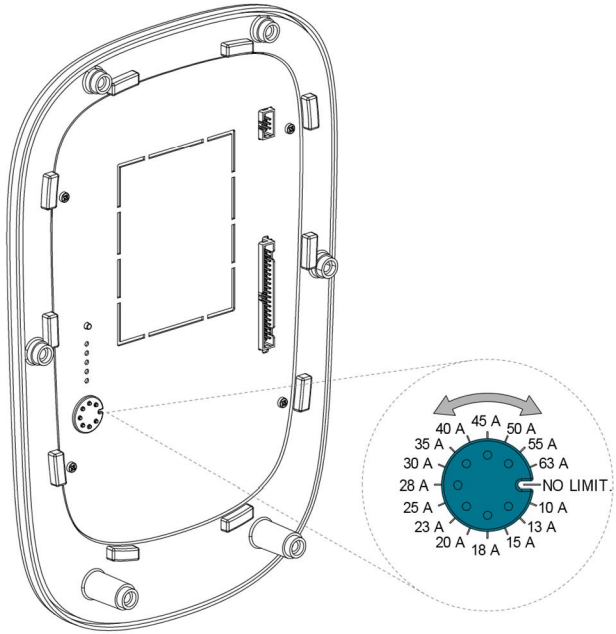
To ensure that the load measurement is correct, connect the **TMC100 Bus** to VIARIS UNI via the terminal connections as shown in the image below.



Braided torque cable with section 0.25-0.5 mm², maximum length 1000 m, and with a peeling of 6-7 mm and torque of 0.2 Nm.

Configuration according to the incoming electricity supply

To configure the equipment according to the incoming electricity supply, use the dial on the rear of the front panel or via the mobile/web app.
This adjustment is essential for the correct operation of the load modulator.
For app or web programming to take effect, the rotating selector must be in the "**NO LIMIT.**" position.



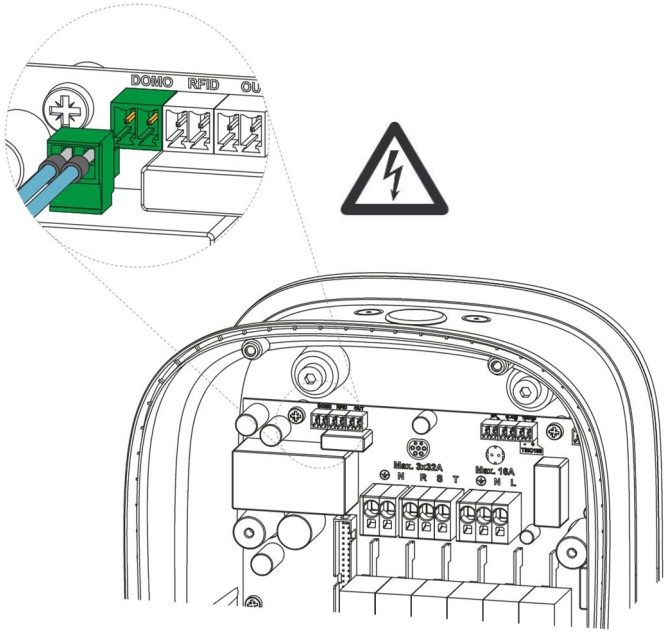
If the **TMC100** transformer is not installed, the position of the dial must be in the "NO LIMIT" position in order not to limit the load current.

Current	Single-phase power	Three-phase power
NO LIMIT.	NO LIMIT.	NO LIMIT.
10 A	2,3 kW	6,928 kW
13 A	3 kW	9 kW
15 A	3,45 kW	10,392 kW
18 A	4,14 kW	12,42 kW
20 A	4,6 kW	13,856 kW
23 A	5,3 kW	15,9 kW
25 A	5,75 kW	17,321 kW

Current	Single-phase power	Three-phase power
28 A	6,44 kW	19,32 kW
30 A	6,9 kW	20,785 kW
35 A	8,05 kW	24,249 kW
40 A	9,2 kW	27,713 kW
45 A	10,35 kW	31,177 kW
50 A	11,5 kW	34,641 kW
55 A	12,65 kW	37,95 kW
63 A	14,49 kW	43,648 kW

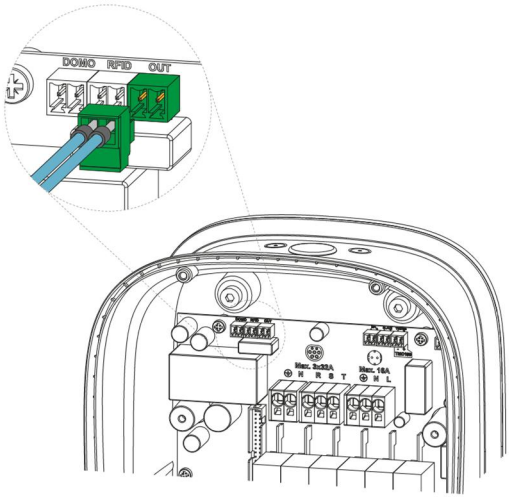
External activation connection

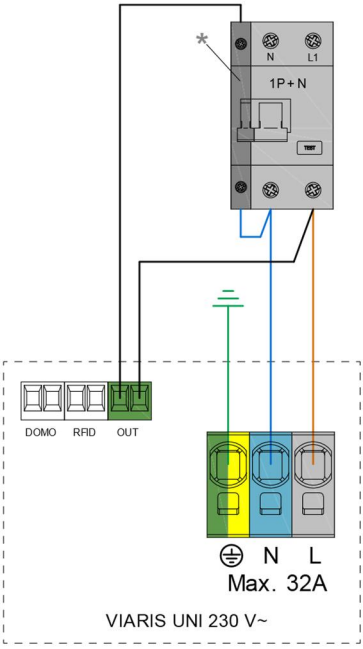
There is the possibility to activate the charger using an external signal (e.g. from a home automation system or from a prepaid system). This signal is priority over any other load activation system; therefore, if the external activation is activated, charging would start when the vehicle is connected to the charger.
The connection must be done by plugging the inputs of the **DOMO** connector with an external circuit free of potential.

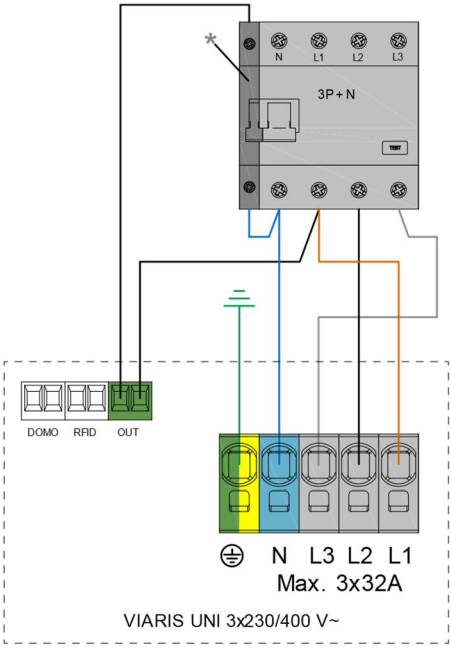


ADDITIONAL SAFETY PROTECTIONS

To ensure the electrical safety of the installation, the charging station is equipped with a fault monitoring system of the charger switching device. This system has potential-free outputs of 230 V ca and 5 A of maximum consumption, marked as **OUT**, which provide a signal operating a mechanical operation device (*remote firing reel, not included) over the protections (not included), which will cut the supply upstream, according to the following installation schemes:

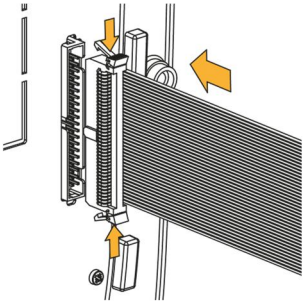






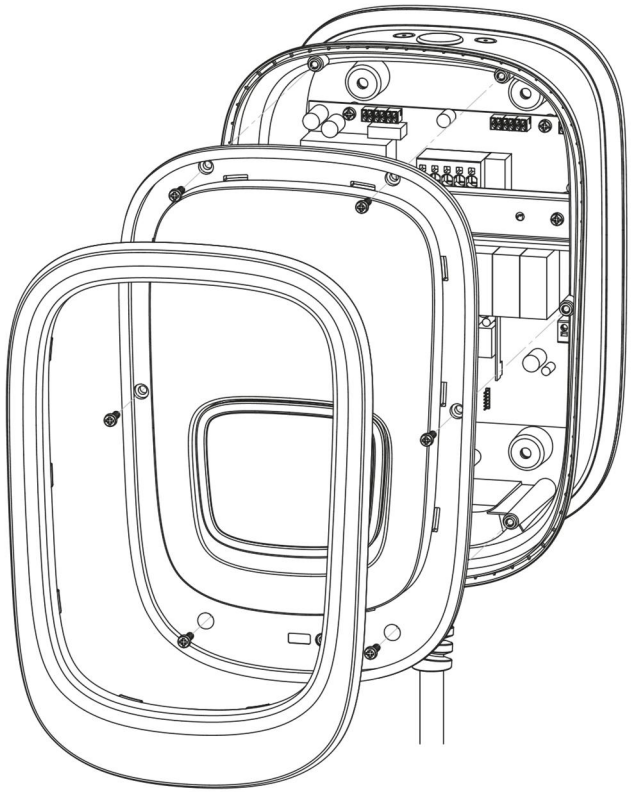
FINISH INSTALLATION

- Connect ribbon cable from charger to input on front panel (as shown below) ensuring it is firmly connected.



To remove the front panel, carefully disconnect the cable by pressing the eyelashes as indicated by the arrows.

- Secure the front panel to the installation base and secure with screws.
- Click the finishing frame firmly into place.



CHARGING PROCESS

VIARIS UNI can be activated by touch or RFID

- If configured for touch anyone can activate the charger.
- If configured for RFID card – only the RFID card holder can activate the charger.

These settings can only be configured via the e-VIARIS mobile app. (See mobile app setting below).

Starting vehicle charge

By Touch:

- Ensure charger is ON.
- Connect the electric vehicle to the Smart Charger.
- Start charge by touching activation zone.

By RFID:

- Ensure charger is ON
- Connect the electric vehicle to the Smart Charger.
- Hold the RFID card close to the activation zone until you hear a confirmation signal.
- The charging of the electric vehicle will begin.

Charging by Time Schedule:

- Ensure charger is ON.
- Connect the electric vehicle to the Smart Charger.
- Charging will begin at the programmed time.
- To recharge your electric vehicle manually when there is a time schedule, you must pass the RFID card twice.

NOTE: You will not be able to remove the charging cable from the vehicle during the charging process as it is locked by a safety system.

Stopping Vehicle Charge

To stop the charge manually tap activation with touch or RFID until confirmation signal is heard.

Fully Charged

Charging automatically ends when the vehicle is fully charged unless manually stopped by touch or RFID card.

LED STATUS INDICATORS

Connection cable indicators

- Off: available connector, unlocked and available.
- Green blinking: ready for connection.
- Fixed green: connected and waiting confirmation of vehicle.
- Fixed white: loading on process.

Other indicators

- ***Wi-Fi indicator***

- Flashing white light: establishing connection
- Solid blue light: connected to Wi-Fi.
- Flashing blue light: local connection to PC or mobile phone.
- Off: no Wi-Fi connection.

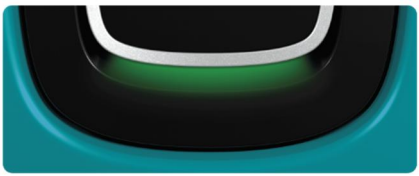
- ***Charge modulator indicator***

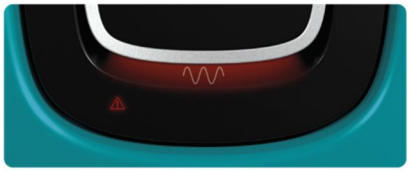
- Flashing blue light: Charging status.

- ***Time schedule indicator***

- Solid red light: desired charging times set

EV CHARGER STATES

Status Light	Activity	Description
	Solid green light	Charge Point: **ON**
	Green light illuminating from outside towards the centre	Connected to vehicle but **NOT** activated
	Flashing green light	Activated but vehicle **NOT** connected
	Solid blue light	Connected to vehicle and activated
	Blue light illuminating with varying intensity	Vehicle charging

	Flashing blue light	Vehicle charge complete
	Solid white light	Firmware / software update required
	White light illuminating from outside towards the centre.	Firmware / software update in progress
	Red light illuminating with varying intensity	Error - attention required (see TROUBLESHOOTING table)

VIARIS CHARGERS CONFIGURATION AND CONTROL VIA WEB PLATFORM OR e-VIARIS APPLICATION

To configure the VIARIS UNI chargers, you must connect to them through the web platform or the application for mobile devices e-VIARIS. Follow the steps indicated in the following QR link:

LINK

MAINTENANCE

It is envisaged the maintenance of the VIARIS chargers should be very low, limited to:

- Cleaning Tasks.
- Operation and voltage input voltage checks.
- Recommended annual service.

For cleaning and checking equipment connections charger MUST be disconnected from power supply.

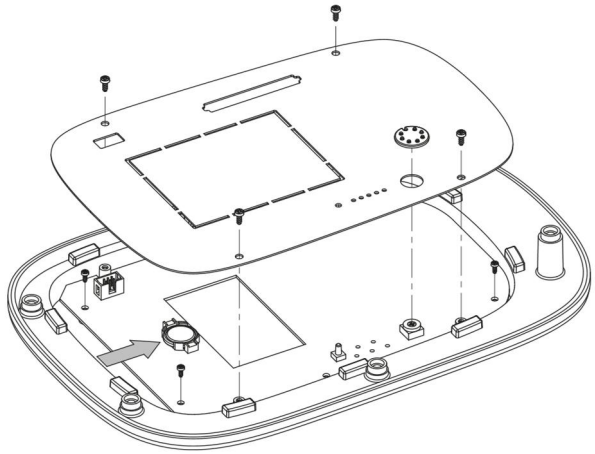
For the external cleaning of the equipment, it is recommended to use a soft, dry cloth, e.g. a microfiber cloth. Do not use abrasive materials or detergents.

REPLACEMENT OF THE BATTERY

	ATTENTION: This product incorporates a battery. Do not dispose of the product without taking the precaution of disassembling the battery and depositing it in a suitable container for recycling.

The equipment carries a CR2032 battery of 3 V.
To replace the battery or for its extraction at the end of the product life, remove the screws that fix the protection and the power selection dial to access the circuit where it is housed.

Any handling involving the opening of the equipment should be carried out by authorized and qualified installers.



TECHNICAL CHARACTERISTICS

Feeding	|	
Nominal frequency	| Depending on characteristics label	
Power	|	
	Single phase	*Three-phase*
Off load	4 W	4 W
Load function	7 W	14W
Charging modes (depending on model)	Modes 1 and 2 according to EN 61851-1 (Schuko) Mode 3 according to EN 61851-1	
Connector cable Type 2.	Load mode 3: according to EN 62196-2	
Communication Wi-Fi802.11	b/g/n	
Closing of the enclosure	with screws	
Protection class	Case II. Insulating envelope	
Degree of protection	IP54 according to EN 60529	
Degree of mechanical protection	IK10 according to EN 62262	
RCD-DD protection.	6 mA	
Activation / Stop modes	Touch or RFID configurable by App.	
Type of terminals	without screws	
Peeling length	12 mm	
Operating temperature	-30 °C to + 50 °C	

EXTRAS

VIARIS UNI chargers can incorporate, depending on the model:

- ***Base Schuko***

Charging modes 1 and 2 (N/A in UK)

- ***Single Phase / 3 Phase energy meter***

Certified according to the MID Directive (2004/22/EC) According to EN 50470-3

- ***Ethernet communication***

For installations requiring Ethernet communication.
The configuration is done by accessing the web platform of the charger.
You must choose between **DHCP** (dynamic IP assignment) or **IPStatic**, where you will have to fill in the ethernet network data (IP, MAC, Gateway, Subnet Mask, DNS Server) provided by the person responsible for it.

- ***Communication 4G***

Wireless communication can be installed using a Wi-Fi USB Dongle.
It is a requirement that you configure in the USB dongle an access point with SSID: **ORB_VIARIS_4G** and PASSWORD: **ORB1234$**, in addition to setting up the APN depending on the operator providing you with the SIM card.

TROUBLESHOOTING

Problem	*Solution*
The charger is powered, and no plug connected and with the light indicators off.	Check the power according to the connection scheme and that the protections are activated. Power down the charger, wait approximately 10 seconds and restart the charger
Charger connected to the vehicle, the status bar is solid green and does not charge.	There is no communication between the vehicle and the charger. Check the cable is correctly inserted into the vehicle and charger. Ensure cable is not damaged.
Charger connected to the vehicle, the status bar is in flashing green and does not charge.	Unauthorized RFID user Check the list of authorized cards.
Charger connected to the vehicle, the status bar is flashing green and when the RFID card passes the charger emits 5 "beeps" and the status bar flashes red and returns to solid green.	Unauthorized RFID user Check the list of authorized cards
Charger connected to the vehicle, the status bar is in solid blue and does not charge.	Check that there is no time schedule on either the charger ( ) or the vehicle. The vehicle may be in standby mode. Open the vehicle door to exit the standby mode.
Charger connected to the vehicle, the status bar is in blue of varying intensity and does not charge.	The load modulator icon ( ) is on; the installation does not have enough power to charge the vehicle.
Charger connected to the vehicle, the status bar is in flashing blue and does not charge.	The vehicle has finished charging, check that the battery is full or that the vehicle has no time schedule.
Charger connected to the vehicle, the status bar is solid red and does not charge.	Error; turn off the charger from the protections and switch back on.

Charger connected to the vehicle, the status bar is solid white and does not charge.	The charger is performing an update. Wait until the update completed.
The protections of the installation are triggered	If the charge modulation indicator is off, the TMC100 is not properly connected: Check connection to the terminals, direction of current and that the TMC100 securely fitted and clamped in position as indicated in the ***Charger Modulator*** section. If the charge modulation indicator is on ( ), the adjusted power does not match incoming power supply.
After manual deactivation or with RFID card the charge does not stop.	Disconnect the charger from the vehicle. If it has been activated with an RFID card, the same card must be used to deactivate. If the problem persists, release and disconnect the cable.
The charger could not connect to a WiFi network	If the Wi-Fi indicator ( ) is in flashing blue and does not pass to solid blue, the charger has not been correctly configured or the correct password has not been entered. If the Wi-Fi indicator is in solid blue it is connected to a Wi-Fi network without internet connection or the security of the network is blocking it.
Charge complete, but cable and vehicle remain locked with solid green status bar.	Preform reset: Reset the protected device, restart the charger to be allowed to remove the cable from the charger socket.
Exceeding maximum power	The modulator hasn't worked. Check the configuration according to the incoming power supply.
View basic charger data, set up power and scheduled load, or consult historical consumption, if I don't have coverage in my garage floor	Read the section of ***the instruction manual Smart charger control via web***. (Once connected to the Wi-Fi network with the password 12345678, we open a web browser and write 192.168.2.1)

It takes a long time to charge my vehicle with a three-phase supply.	If you are charging a single-phase vehicle, you will only be using approximately 1/3 of the charging supply
The charger is in *error mode and cuts off the load.*	To identify the type of error you must look at the number of repeats of beeps per sequence: AC leakage error: 1 beeping Relay opening error: 1 beep DC leakage error: 2 beeps Diode error: 3 beeps Earthing error: 4 beeps

DIRECTIVES AND REFERENCE STANDARDS

Hereby, ORBIS TECNOLOGÍA ELÉCTRICA S.A. declares that the type of VIARIS UNI wireless device is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following Internet address: http://www.orbis.es/downloads/declarations-of-conformity

Subject to technical changes – additional information at www.orbis.es