OCULAR

IQ TOWER INSTALLATION GUIDE

ocularcharging.com.au

sales@ocularcharging.com.au

1300 912 650

CONTENTS

IMPORTANT!

Please read this entire document before installing or using the charger. Failure to do so or to follow any of the instructions and warnings in this document can result in fire, electrical shock, serious injury, or death.

The charger must be installed by a qualified electrician.

The entire installation must comply with the latest "AS/NZS3000:2018 & AS/NZS:3008 standards".

SPECIFICATIONS

Model Number	IOCAP26-7SE-RW4	IOCAP26-7TE-RW4	IOCAP26-22SE-RW4	IOCAP26-22TE-RW4
Power				
Number of Charging Ports	2			
Power Output	7.2kW (1-Phase) per port		22kW (3-Phase) per port	
EV Charging Connector	Type-2 Socket	4.8m Type-2 Cable	Type-2 Socket	4.8m Type-2 Cable
Input and Output Voltage	230V ± 20%		400V ± 20%	
Input and Output Current	32A max per phase per port			
Recommended Circuit Breaker	40A type A RCBO per port			
Frequency (Hz)	50/60Hz			
User Interaction				
Display	7" LCD Screen + LED indication lights			
RFID Reader	ISO14443 Type A cards compatible			
Charger Control Method	Mobile App, physical button, RFID, plug and charge			
Credit Card Payment Module	Optional upgrade available			
Safety				
Internal RCD	2 x 63A Type-B RCD			
Electrical Protection	Over current, Short circuit, Over voltage, Under voltage, Ground fault, Lightning surge, Over temperature			
Communication				
OCPP	1.6J and 2.0.1 (Firmware upgrade required)			
Internet Connection	Ethernet, Wi-Fi, 4G (Nano size sim)			
Communication Type	Modbus (TCP/IP)			
Energy Meter	2 x MID Meter, Optional NMI Pattern Approved			
Load Control	Compatible with Ocular Load Controller or OCPP smart profiles			
General Data				
Ambient Air Temperature for Operation	-30°C to +50°C			
Ambient Air Temperature for Storage	-40°C to +70°C			
Working Humidity	5% - 95% relative humidity, non-condensing			
Protection Rating	IP55, IK10			
Mounting	Floor mounted			
Dimension (H x W x D, mm)	1420 x 340 x 195 mm			
Net Weight	38 kg	48 kg	40 kg	50 kg
Certification	CE, IEC /EN 61851-1, IEC/EN 61851-21-2, IEC 62196-2, RCM			
Warranty	2 Years (Extended warranties available)			

PRODUCT OVERVIEW

No	Item
1	Wi-Fi & 4G Antenna
2	LED indicator
3	7" LCD screen
4	Universal Type-2 Socket
5	RFID card reader
6	MID Meter
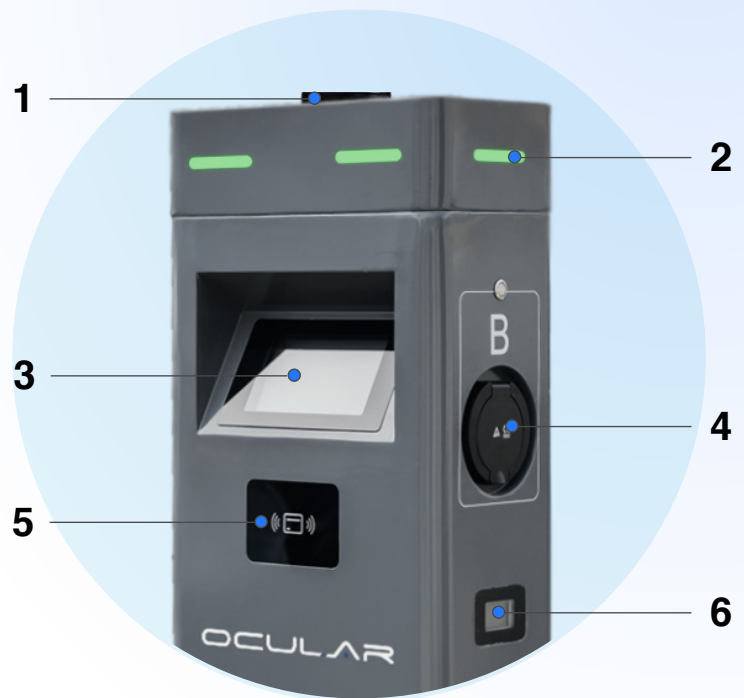
Integrated RCD Type B

The Ocular IQ Tower is designed to meet and comply with the AS/NZS3000:2018 Wiring Rules. .

LCD Screen & RFID Reader

The Ocular IQ Tower is equipped with a 7 inch LCD screen allowing users to know the status of the charger. Details about the LCD screen are on page 11.

The Ocular IQ Tower charger comes with an inbuilt RFID reader to allow for access control to the charging station. The RFID Reader is compatible with all ISO 14443 A/B RFID Cards.

Self-Monitoring & Recovery

The charger will automatically resume charging after a minor fault such as OVP, UVP, OTP or OCP with no user intervention required.

OCPP 1.6J, 2.0 Full Profiles & Smart Charging Support

The charger supports OCPP 1.6J, 2.0 full profiles, including the latest smart charging to balance the load of charging stations with limited power supply.

SAFETY INSTRUCTIONS

WARNINGS ⚠️

Do not install or use the charger near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.

Turn off input power at the circuit breaker before installing or maintaining.

Do not use or stop using the charger if it is defective, appears cracked, frayed, broken or other- wise damaged, or fails to operate.

Do not attempt to open, disassemble, repair, tamper with, or modify the charger. The charger is not user serviceable. Contact your installer for any repairs.

Do not use the charger when either you, the vehicle or the charger is exposed to severe rain, snow, electrical storm or other inclement weather.

Do not touch the charger sockets with sharp metallic objects, such as wire, tools or needles.

Do not put fingers into the charger sockets.

Do not use this charger if the EV charging cable is frayed, has broken insulation, or displays any other indication of damage.

Do not use this charger if the enclosure or the EV charging connector is broken, cracked, open, or shows any other indication of damage.

Ferrules must be used to ensure warranty is valid

CAUTIONS ⚠️

The charger should be installed only by a qualified electrician.

Make sure that the materials used and the installation procedures follow local building codes and safety standards.

Incorrect installation and testing of the charger could potentially damage either the vehicle's battery and/or the charger itself. Any resulting damage is excluded from the warranty for both the vehicle and the charger. Do not operate the charger in temperatures outside its operating range of -30°C to +50°C.

Ensure that the EV charging cable is positioned properly to the charging sockets.
Do not use cleaning solvents to clean any of the charger's components.

Be careful not to damage the circuit board when removing the power entry knock-out.

EXAMPLE WIRING DIAGRAM

Regarding the installation of the Ocular Tower, each charger will need 2 connections to allow smart charging with Energy Tracking, Smart Control and Load Management.

- Power connection
- Internet connection

Regarding the power connection of the chargers, each charger will have its own designated circuit from the distribution board as per required in Appendix P, AS 3000:2018 Australia Standard for EV charging stations. We recommend 40A CB for each port. (2 x circuits per Tower)

Regarding the Internet connection, we recommend running an Ethernet cable from the communication infrastructure comms cabinet to the charger for internet connection or connecting a 4G sim card if reception is strong (minimum 4 bars connection).
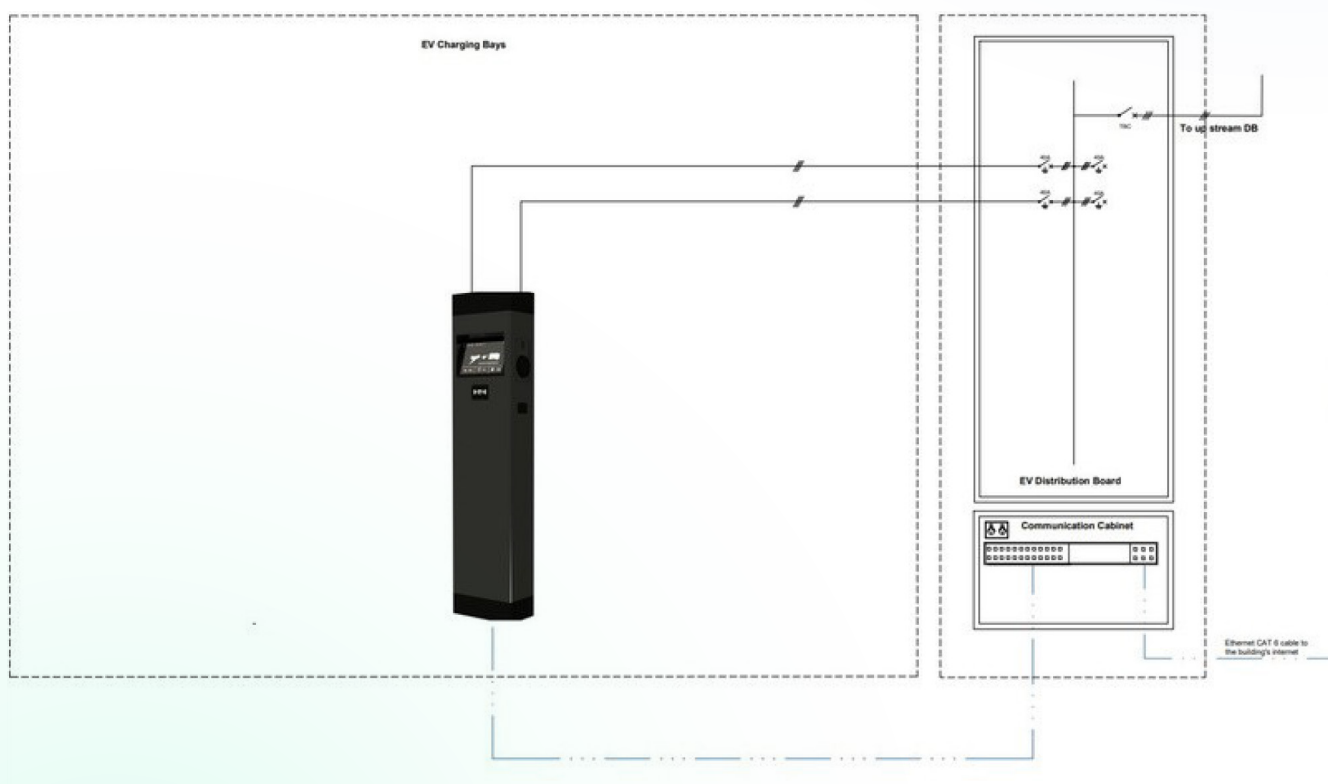
INSTALLATION

TOOLS REQUIRED

- Slotted #6 screwdriver
- Philips #2 screwdriver
- Terminal crimper
- Adjustable spanner

OVERVIEW OF STEPS

TURN OFF THE POWER SUPPLY
Then follow these steps to install the Charger:

1. Check box contents.
2. Concrete anchoring.
3. Power cable wiring.
4. Internet connection.
5. Verify the installation.
6. Secure cover and power up.

STEP 1 - Check box contents

If any components are damaged or missing, please contact your installer or Ocular Charging.

Backplate key x 1

Ferrule crimps x 3

Ferrules must be used to ensure warranty is valid

Avoid scratching metallic casing to prevent the formation of rust

EV Charger

STEP 2 - Floor mounting

1. Open the charger backplate with the key provided.

2. Remove the screws and open the guard plate.
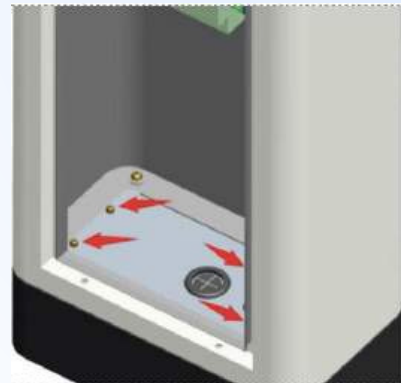
3. Anchor the charger to the concrete basement.
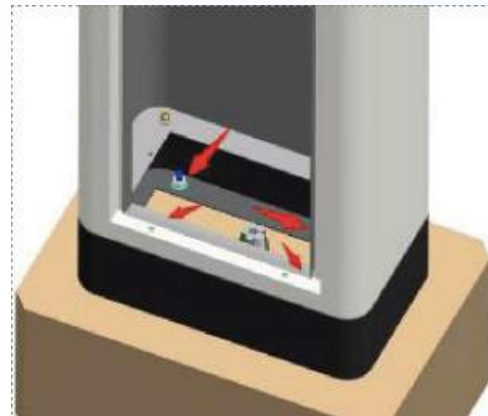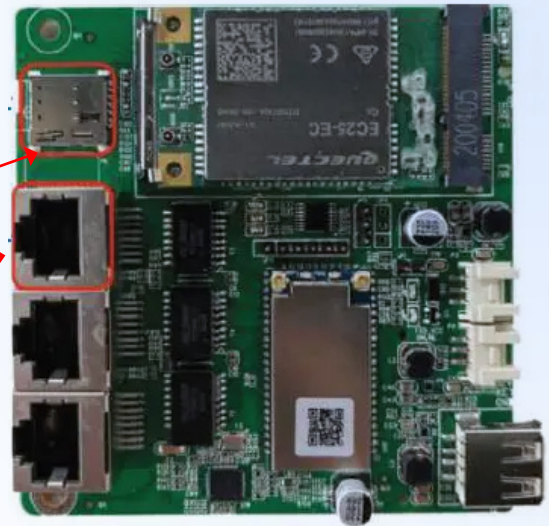

STEP 3 - Power cable wiring

1. Cross the power cables through guard plate.

2. Connect the power cables to the connector board.
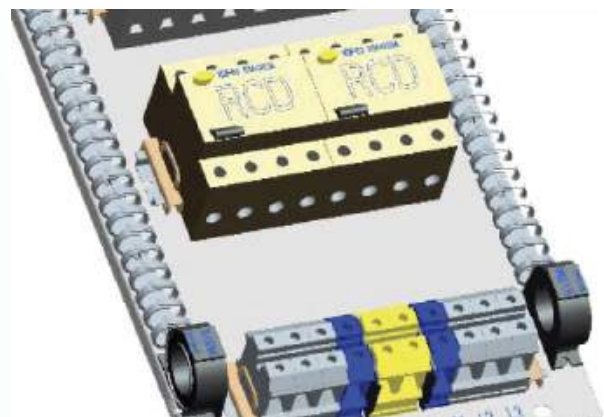
STEP 4 - Internet Connection

Option 01. Cellular & Ethernet

1. Insert SIM card to the card slot for cellular connection.
2. Connect the internet cable for Ethernet connection.

Option 02. Wi-Fi (Not recommended in commercial installations)
Do not change settings other than outlined below as this may affect operations.

1. Find the chargers' local hotspot
   This hot spot will have the following SSID: IOC – 2.4GHz - ******
   The password for this Hotspot is: IOC12345

2. Navigate to the web-interface of the Ocular Charger
   After being connected to the Hotspot, open Microsoft Edge or Google Chrome and navigate to: 192.168.10.1:8900 The web interface will ask for Username and Password, the information is:

   Username : install
   Password : installer123

3. Navigate to the Network and set up WIFI configuration
   Ocular charger support connection via WiFi. Simply press the "Scan" button to start scanning for available WiFi network.

   After this, press the down arrow in the drop list to see all the available WiFi networks

   Choose the Wi-Fi SSID that you prefer, and then input the Wi-Fi Password


4. Submit and reboot the charger to apply for changes
   If Static IP address is required, contact the internet provider & Ocular charging for instructions.

STEP 5 - Verify the installation

1. Verify the power cables are wired properly
2. Close the RCD to power on the charger unit, and you should see the LED lights sequentially illuminate green.
3. If the LED red light illuminates or flashes, refer to the Troubleshooting table on page 12.
4. Check on the screen display whether internet is available and back office is connected, refer to page 11.
5. Test the live charging process with simulator or electric vehicle if the installation is completely verified.

STEP 6 - Secure cover

1. Reposition the backplate to the charger and lock it with the key.
2. Seal the back cover.
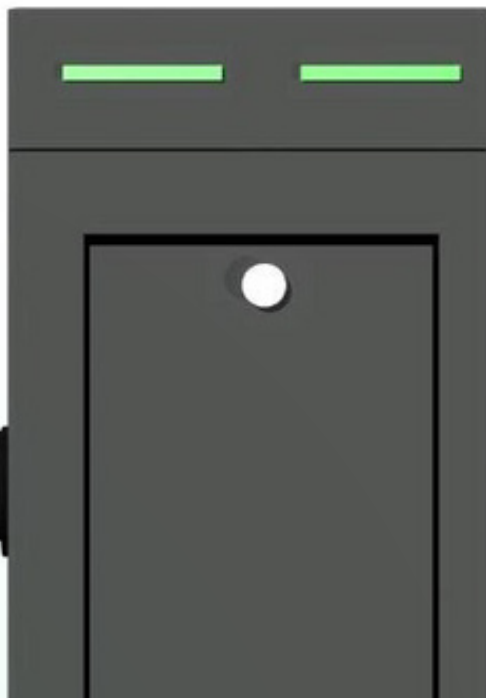
LCD DISPLAY SCREEN

Welcome Screen

Scan the QR code or swipe the RFID card to start charging
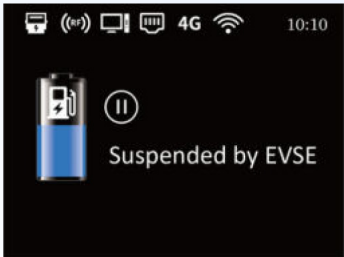

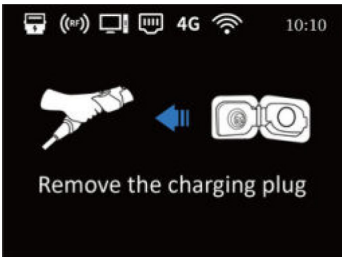Connect the charging plug
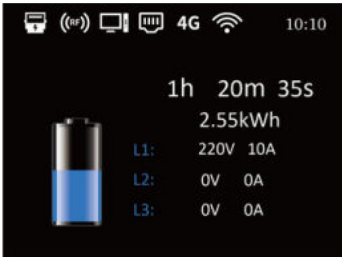
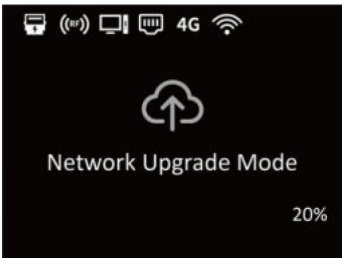Charging in process
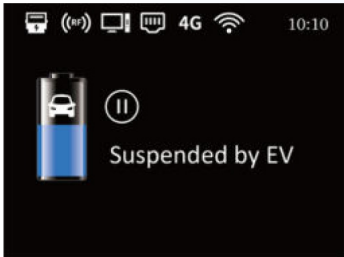
Suspended by EV
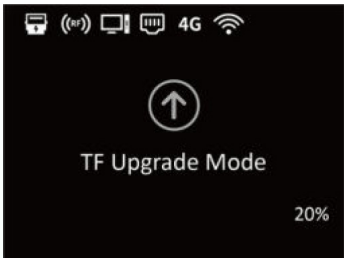

Suspended by EVSE

Remove the charging plug

Automatic upgrade mode activated

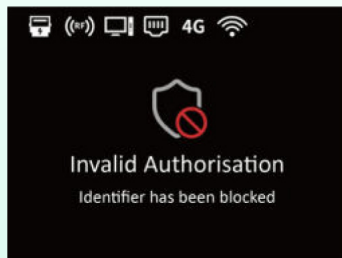Software downloading and upgrading automatically

Network upgrade mode
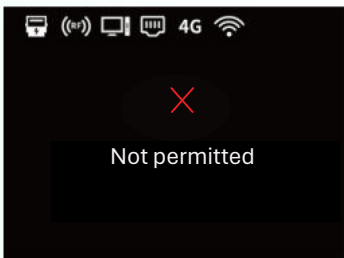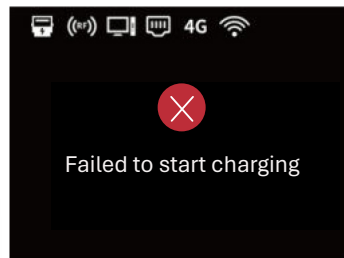

Micro SD card upgrade mode

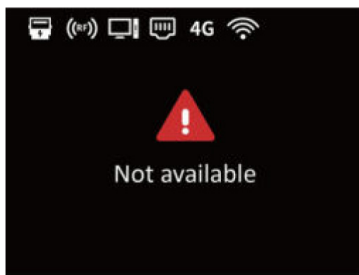Factory reset activated

Invalid authorisation

Not permitted to charge

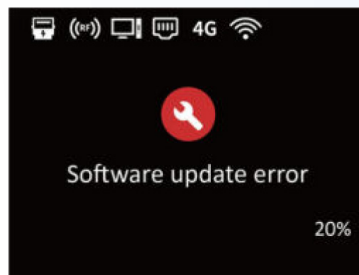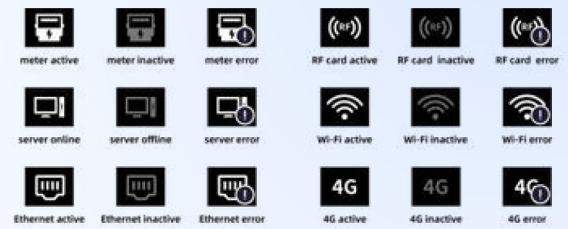Failed to start charging

LCD DISPLAY SCREEN

Service not available

Software update error

Explanation of icons

TROUBLESHOOTING

Situations		Actions
Status indicator is not green after the charger is powered on	1	Make sure the AC power input is connected correctly.
	2	Turn OFF the charger and then back ON using the switch.
	3	If the problem persists, contact your installer or Ocular Charging.
Status indicator does not flash green when the charger is connected to the EV	1	Unplug the charging plug and reconnect it fully to the receptacle on the EV.
	2	Inspect the cable and plug for damage.
	3	Inspect the EV and its receptacle for damage.
	4	Try to charge with the portable cord set that came with the vehicle; if the problem persists, please contact your installer or Ocular Charging.
Status indicator flashes red while charging	1	There is a temporary error.
	2	Wait until the temporary error is resolved and the pedestal charger returns to normal condition. It usually takes less than 10 seconds.
	3	If the status indicator doesn't return to green, turn OFF the pedestal charger, and then back ON using the switch.
	4	If the problem persists, please contact your installer or Ocular Charging.
Status indicator is solid red	1	There is a critical error.
	2	Unplug the charging plug from the EV immediately.
	3	Turn OFF the pedestal charger and then back ON using the switch.
	4	If the problem persists, please contact your installer or Ocular Charging.

MAINTENANCE & REPAIR

- Regularly inspect the Charger. If damage is found, contact your installer or Ocular Charging.
- The Charger contains no user-serviceable components. If unit is not operating correctly, contact your installer or Ocular Charging.
- Wipe the outside of the Pedestal Charger regularly with a clean damp cloth to remove any accumulation of dust and dirt to prevent rust.

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