POWER ELECTRONICS

NUBE

EV CHARGING SOLUTIONS

CHARGING STATIONS & HEAVY VEHICLES

URBAN & LIGHT FLEET

HOME & CAR PARK

EV CHARGERS

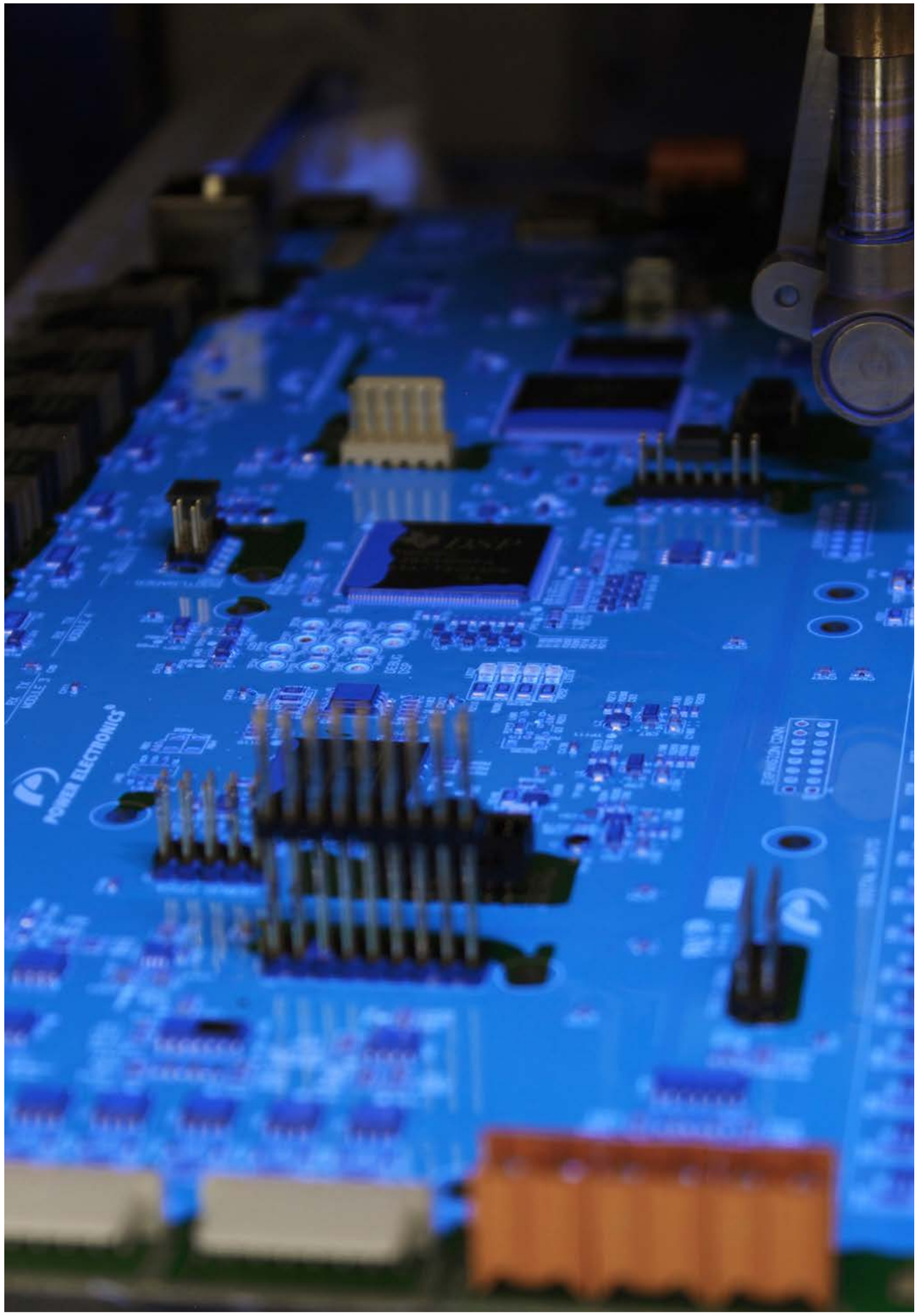
Electric vehicles are the means of transport that will lead us to a sustainable, clean and pollution-free world for our children and future generations, a world powered by renewable energy and independent from fossil fuels.

Contents

Since 1987, Power Electronics has been producing high-power soft starters and variable speed drives for low and medium voltage AC motor applications, as well as solar inverters for photovoltaic power generation. Today, it also manufactures equipment for the charging of all types of electric vehicles, as a result of the company's commitment to electric mobility. All this experience has enabled Power Electronics to position itself as a leading manufacturer of power electronics thanks to the unique characteristics of its products, its design patents and the fastest delivery time in the market, as well as unique customer service and reference in the sector, Power On Support 24/7.

- **30 YEARS OF PRODUCT EXCELLENCE**
- **24/7 POWER ON SUPPORT**
- **INTERNATIONAL PRESENCE**
- **FINANCIAL STABILITY AND STRENGTH**
- **INDEPENDENT REPORTS AND CERTIFICATIONS**
- **SUSTAINABLE GROWTH**

"We design, manufacture and test
the electronic boards of all our products"



Engineering & Consulting

Energy projects often require customer specific solutions, for this reason our clients also have our Engineering and Consulting department at their disposal, which is comprised of a wide number of highly skilled and experienced engineers that are available to modify our standard product to suit customer demands and ensure our clients get the product they need.

TECHNICAL ADVICE
ENGINEERING
CUSTOMIZED SOLUTIONS
PROJECT MANAGEMENT
COMMISSIONING
24/7 SERVICE

Vertical integration

Flexibility and specialization play a key role in the manufacture of standard products, but even more so in personalized products. We integrate the mechanics of our equipment into our design and manufacturing. Vertical integration gives us the flexibility to adapt to customer requirements and still provide very short delivery times.

INNOVATION & DESIGN FLEXIBILITY
HIGH QUALITY COMPONENTS
RELIABLE ENGINEERING
FACTORY TESTED
VALUE CHAIN SUPERVISION
IMMEDIATE DELIVERY

AVAILABILITY

COMMISSIONING

CUSTOMER SUPPORT

ON-SITE ASSISTANCE

SPARE PARTS WARRANTY

TRAINING SEMINARS

WARRANTY

POWER ON SUPPORT

Power on Support is the concept of a customer oriented strategy implemented by Power Electronics since its origins more than 30 years ago with 24/7 after sales service available for all our customers and end users without the need for a signed O&M contract.

Customer Oriented Strategy.

Worldwide Presence

From the beginning, customer service and internationalization have been key elements for the development of the company. Thanks to the global expansion in the five continents, today we have presence and provide technical service throughout the world.

HEADQUARTERS

+28
DELEGATIONS

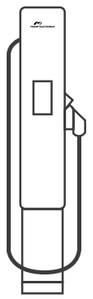
+100
SALES COUNTRIES

+21GW
SOLAR INVERTERS INSTALLED

+14GW
ANNUAL CAPACITY PRODUCTION

Product Range

Charging Stations & Heavy Vehicle Solutions

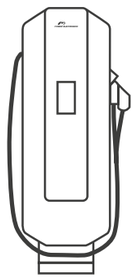


Nube Station
250 kW / 500 kW
50 - 500 Vdc

Nube Station Plus
1000 kW / 1500 kW / 2000 kW
150 - 1000 Vdc

Nube Station Plus with Pantograph
1000 kW / 1500 kW / 2000 kW
150 - 1000 Vdc

P. 16-41

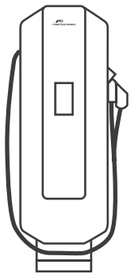


Nube 50
50 kW
50 - 500 Vdc

P. 42-53

Product Range

Urban & Light Fleet Solutions



Nube 50
50 kW
50 - 500 Vdc

P. 42-53

Nube City
Up to 2 x 22 kW 400 Vac (IEC)
Up to 2 x 7.7 kW 240 Vac (US)

P. 54-69

Nube Wall
Up to 2 x 22 kW 400 Vac (IEC)
Up to 2 x 7.7 kW 240 Vac (US)

P. 70-83

Product Range

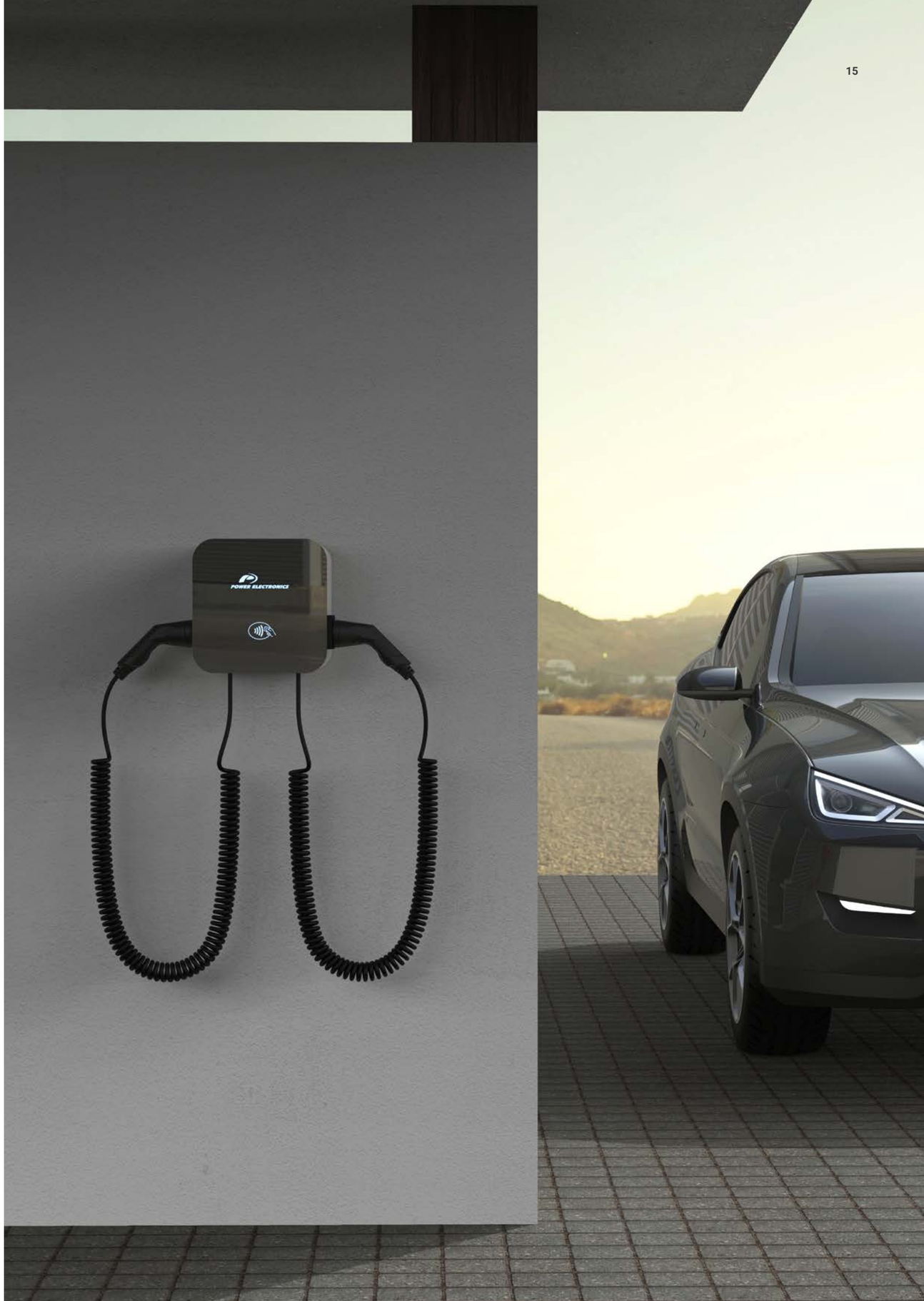
Home & Car Park Solutions

Nube City
Up to 2 x 22 kW 400 Vac (IEC)
Up to 2 x 7.7 kW 240 Vac (US)

P. 54-69

Nube Wall
Up to 2 x 22 kW 400 Vac (IEC)
Up to 2 x 7.7 kW 240 Vac (US)

P. 70-83



Nube Station / Plus

FAST AND ULTRA FAST CHARGING

MULTI-STANDARD CONNECTORS

TURN-KEY SOLUTION

PLUG AND PLAY CONCEPT

SMART POWER BALANCE

HIGH EFFICIENCY

FRIENDLY USER EXPERIENCE

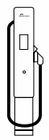
EASY BACK-OFFICE INTEGRATION

24/7 RELIABLE SERVICE

OUTDOOR DURABILITY

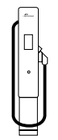
THE FUTURE OF SMART E-MOBILITY

DELIVERING MORE ELECTRIC KM IN A SHORTER CHARGING PERIOD



<10 MIN

Nube Station Plus



<30 MIN

Nube Station

Nube Station offers a complete flexible turn-key solution with its successful and revolutionary outdoor design based on our more than 30 years of experience in the manufacture of power electronics.

Modular Design
With a modular design including all the elements required such as MV switchgear, MV transformer, metering supervision equipment and payment terminals among others, it is the most suitable solution for motorway service stations, shopping centres, industrial estates and commercial areas.

Connector Types
Designing close to car OEMs, Power Electronics Nube Station is compatible with the most extended DC connectors and EV charging protocols, CHAdeMO, CCS Type 1 and 2 and GB/T.

User-friendly Interface
With a user-friendly interface, its daylight readable touch screen display with graphic visualization of charging progress, and its RFID and mobile phone authorization, will provide EV drivers a quick, safe and easy EV Charging experience today and in the future.

Smart Design
Due to its smart design (keeping in mind durability, reliability and maintainability), where no civil works are required and its maintenance requirements are reduced, it allows reducing the CAPEX and OPEX.

Standard-based APIs
For running successfully your charging business, Power Electronics offers an easy integration to any back-office systems using standard-based APIs, payment services and energy management solutions, based on OCPP communication protocol.

Ultra-fast Charging
Nube Station offers DC charging mode 4 and ultra-fast charging mode, with both stand-alone posts and pantograph charging solutions for heavy duty electric vehicles such as buses.

Field Replaceable Power Stages
Following a modular philosophy, Nube Station is composed of field replaceable units (FRUs), designed to be easily replaceable on site without the need of advanced technical service personnel, providing a safe, reliable and fast Plug&Play assembly system. In the event of a fault, the faulty module is taken off-line and its power is distributed evenly among the remaining functioning FRUs. It is a solution to be easily upgraded for the next EV generation and the most reliable charger in the market.

Charging times may vary depending on the charging conditions.

TURN-KEY SOLUTION

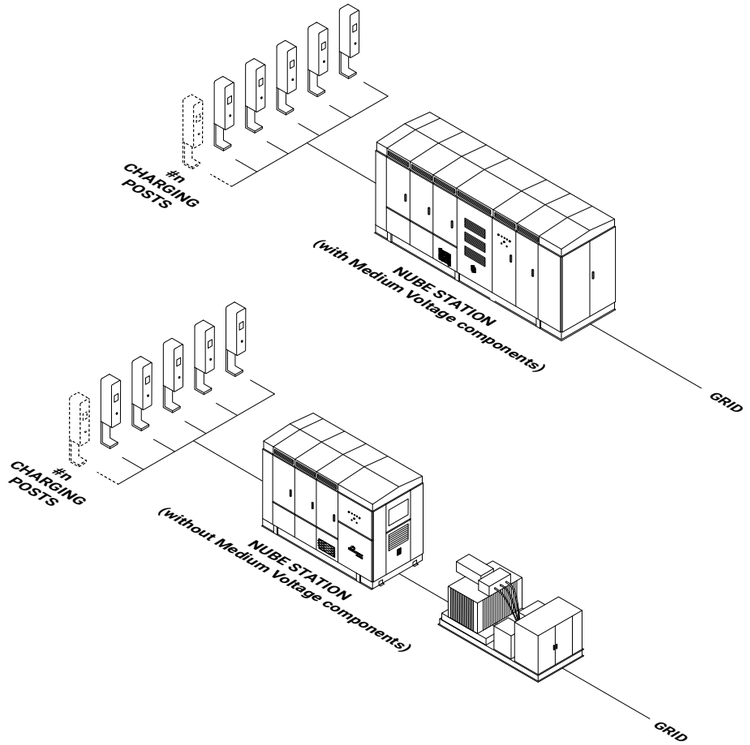
Nube Station reduces site design, simplifies the installation and significantly reduces connection costs and resources needed.

Nube Station consists of a central power station which supplies energy to recharging posts, designed for an easy interaction with the EV driver and following the current standards of user safety.

Being expandable over time, the central power station, has been developed to be able to increase the charging power, offering a solution which can grow with the EV market demand and the batteries technologies.

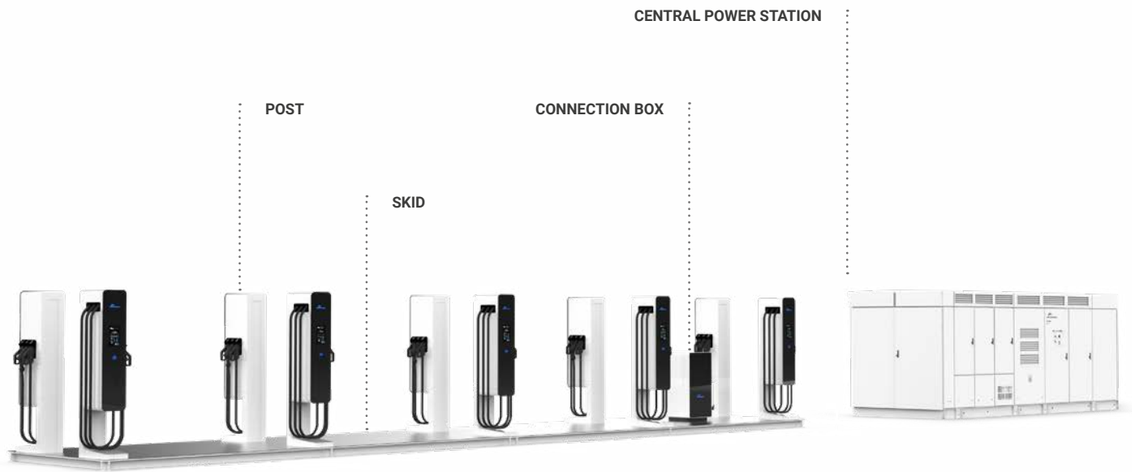
The central power station according to the client's needs can integrate the following medium voltage components:

· MV switchgear.
· MV transformer.
· Metering supervision equipment.
· Customizable user cabinet with an independent electric circuit for the client's needs.



Speed up your charging installation with a flexible turn-key platform.

Depending on the output power required, the client can choose a wide number of recharging posts to fit any project and to configure the best layout. The skid solution, which is based on an outdoor platform made of high resistance galvanized steel with a non-slip surface, offers a plug and play solution. In the skid, all posts are pre-wired and a connection box is included to connect to the central power station.

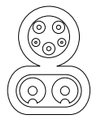
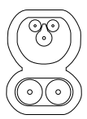
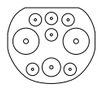


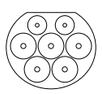
SUPPORTING ALL EV CHARGING STANDARDS GLOBALLY

Power Electronics Nube Station, has been designed close to car OEMS offering a solution compatible with the most extended EV connector types in the market (CHAdeMO, CCS Type 1 and 2, GB/T and AC Type 1 and Type 2).

Nube Station posts offer the possibility to choose the number of connectors and type in each post, to fit every EV in the market.

CHARGING CONNECTORS

	CCS-1	CCS-2	CHAdeMO	GB/T
Nube Station Plus **Ultra fast charging** Time / 100km: 10 min				
Nube Station **Rapid charging** Time / 100km: 30 min				

	AC Type 1	AC Type 2
Nube Station | Station Plus **Fast charging** Time / 100km: 1-2 h		

Charging times may vary depending on the charging conditions.

READY FOR AN EASY INSTALLATION IN ANY PLACE

EV Charging Stations
Highways
Shopping Centers
Workplaces
Car Parks
Hotels

EASY TO USE
JUST TAP

User-friendly Interface
With a user-friendly interface, its daylight readable 10” touch screen display with graphic visualization so drivers can easily identify which posts are available.

Status Indicator
Power Electronics posts integrate a status indicator, so drivers can easily identify which posts are available.

Payment and Authentication System
Every charging post is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer.

RFID
Drivers can launch a charging session by tapping their RFID card.

Credit / Debit Card
Compatibility with contact-less (NFC) solutions, letting drivers initiate the charging process by simply tapping their credit/debit card.

Pin Code
With its intuitive interface, it guides EV drivers through all the steps to follow during a charging session, using the most secure payment and authentication methods.

Smartphone
Compatible with the most extended apps in the market. These Apps for EV drivers are able to start a charging session, reserve a post at any time, or simply manage their historical charging sessions.

FULL 360º SERVICE

Power Electronics offers an innovative charging solution adapted to every client's needs. With its advanced connectivity, the Nube Station allows having the main services to operate, use and manage EV networks now and in the future.

- Compatible with any back-office (OCPP 1.6 and customized).
- Easy interaction with electricity companies via IEC 60870.
- O&M platform based on IoT (Internet of Things).
- Compatible with any payment management platform.
- PC and mobile monitoring tools (Android & iOS).

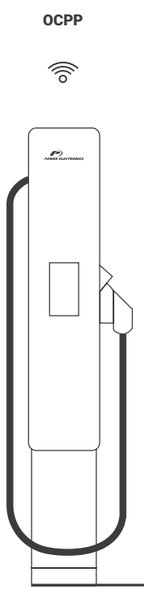
Fundamental services to operate succesfully every Nube Station.

O&M
Fault diagnosis
Remote troubleshooting
Charging point status
Software updating
Charging station management APIs

Customer Back-office
Client authentification
Payment platform
Charging point reserve
Charging station location

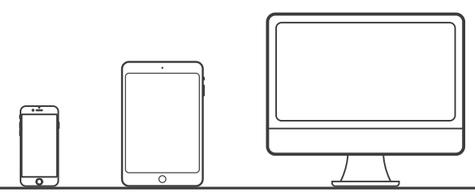
Payment Platform
Credit/Debit card
RFID card
Mobile apps
Cyber security

Grid
Power curtailment
Low harmonics content
High power factor
Demand analysis



Compatible with any Back-office
OCPP is the internationally established open protocol for the communication between EV charging stations and any back-office system around the world. Power Electronics offers an easy integration to any back-office systems using standard-based APIs.

Monitoring Tools
Optionally, Power Electronics can provide advanced PC and mobile (Android & iOS) monitoring tools, offering our clients a useful and intuitive platform for managing in real time all charging stations. These tools offer charging statistics, status and usage statistics among others.



SMART SUPPORT AND MAINTENANCE

FOR RUNNING SUCCESSFULLY YOUR CHARGING BUSINESS

Based in our more than 30 years experience providing the best-in-class 24/7 after sales services, Power Electronics offers 3 years standard warranty including monitoring services, boosting your EV charging station availability.

All Nube Station are internet connected to enable a smart 24/7 global service for an easy integration to any back-office.

THE MOST RELIABLE CHARGING SERVICE REQUIRES THE MOST ADVANCED SERVICES

Global Assistance
Remote 24/7 global assistance and troubleshooting.

Smart Maintenance
Power Electronics' smart maintenance solution will allow you to monitor and remotely manage all charging stations in real time.

Proactive Maintenance & Upgrading
Power Electronics offers a proactive maintenance and upgrading service for ensuring the highest EV charging availability and improving the OPEX of your business.

Modular Power System
With its modular and total access design, it simplifies maintenance tasks and improves the equipment availability. In the event of a power stage failure, the remaining ones can continue operating without interrupting the vehicle charging process.

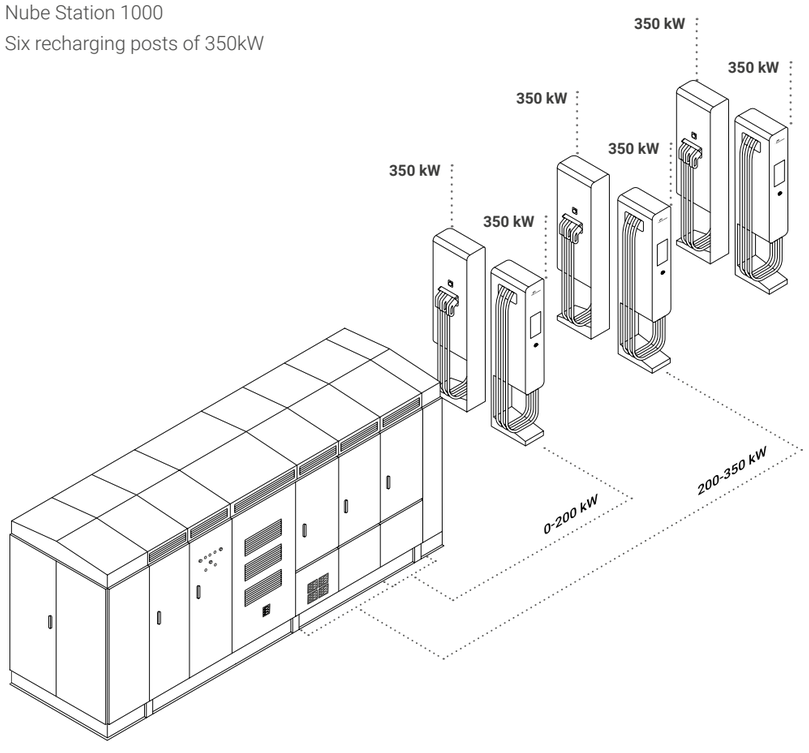
SMART POWER BALANCE

SMART POWER BALANCE TECHNOLOGY

Nube Charging Station allows the optimization of the use of the recharging posts and the dynamic balancing of power depending on the vehicle to be charged.

CONFIGURATION EXAMPLE

Nube Station 1000
Six recharging posts of 350kW

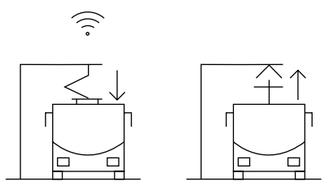


Power Balance
Nube Charging Station includes an advanced DC Smart Power Balance technology that allows charging at different power levels for matching all EV drivers needs (time/cost).

CHARGING STATIONS AND HEAVY VEHICLE SOLUTIONS

Power Electronics has a wide range of high power chargers up to 1000 V, designed to serve both long-range and normal electric vehicles, and offers high power post and automatic pantograph based charging solutions.

Suitable with any application that requires an efficient solution, maximum flexibility and availability for high rotation electric vehicles fleets. Power Electronis charging stations are compatible with current and future electric cars, trucks and buses, offering a wide voltage and power range and its advanced power balance.



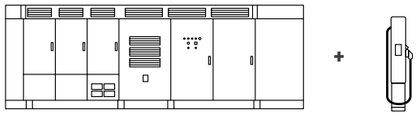
Automatic Pantograph Charging Based Solutions
Idoneous for any application requires a fast, safe and automatic charging solution, with the maximum flexibility and availability for electric buses charging. All buses have a couple of minutes to rest at the end of their routes and charge.

Power Electronics charging stations offer a modular and redundant technology for simplifying future retrofits and maximizing the operation of the infrastructure.

Being compatible with multiple pantograph manufacturers, “bottom-up” and “top-down”, Power Electronics offers the most reliable, simple and safe automatic charging solution.

The Most Advanced Communication
Wireless communication with the EV according to ISO/IEC 15118 (OPPCharge compatible) and IEC 61851-23 (CCS) to speed up charging processes and avoid wasting valuable bus operating time.

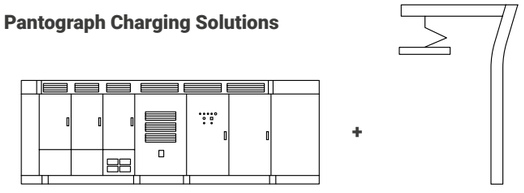
Charging Post Based Solutions



Key features and benefits

- Easy to upgrade.
- Flexible turn-key solution.
- Safe, easy and reliable use.
- Reduced CAPEX and OPEX costs solution.
- Modular and redundant smart design.
- Smart Power Balance to optimize the available power.
- Advanced communications (OCPP 1.6) and customized.
- Remote control and monitoring.

Pantograph Charging Solutions



Key features and benefits

- Fully automatic charging solution.
- Continuous duty cycle.
- Typical charging duration 6 min/bus.
- Easy integration into existing bus lines.
- Easy to upgrade.
- Safe, easy and reliable use.
- Reduced CAPEX and OPEX costs solution.
- Modular and redundant smart design.

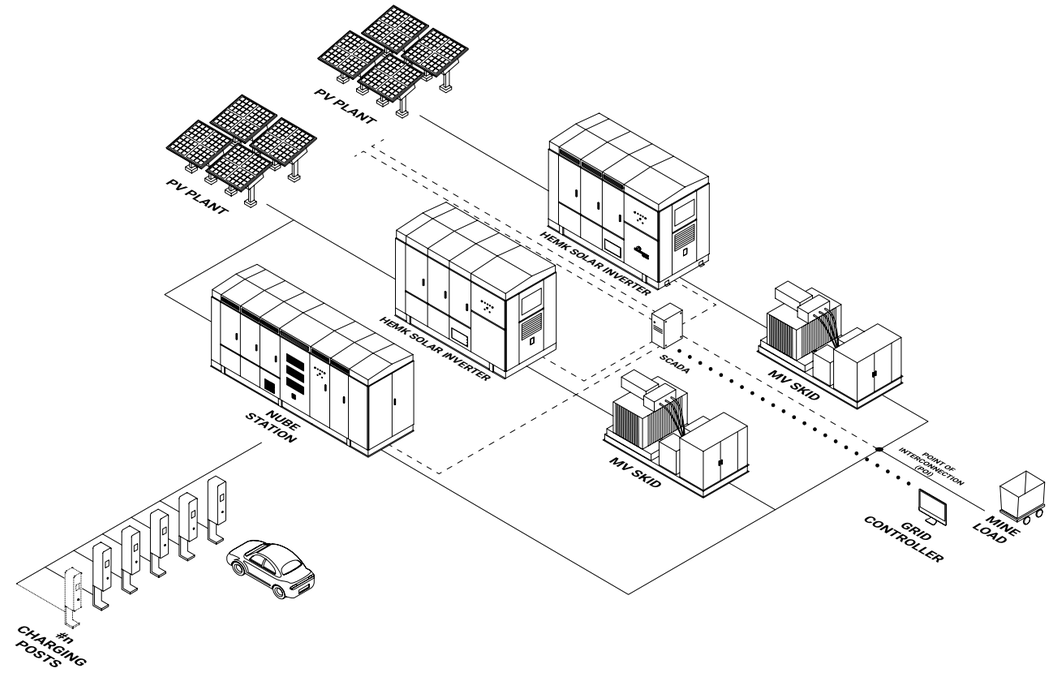
HYBRID CHARGING SOLUTIONS

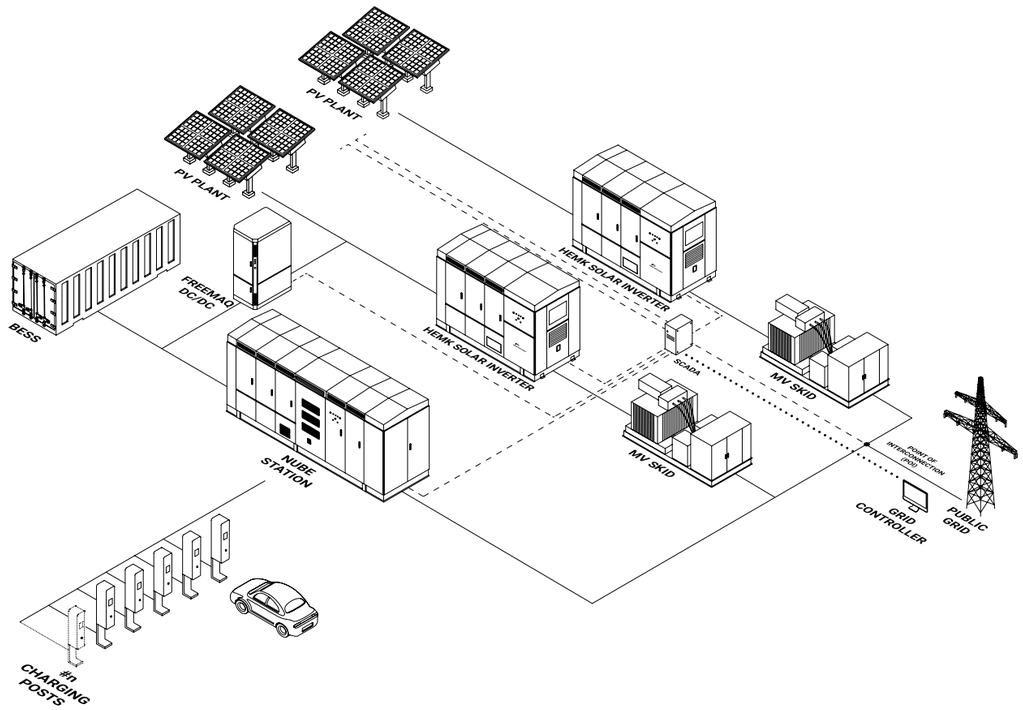
Our wide experience in the renewable energy sector, designing and manufacturing solar inverters, allows us to offer a global solution.

NUBE STATION IS ABLE TO TAKE ADVANTAGE OF AN ENDLESS ENERGY SOURCE, THE SUN

With Power Electronics hybrid solution, Nube Station can be connected to a photovoltaic field and/or to the utility grid.

Nube Station is compatible with energy storage systems. Adding the Freemaq DC/DC converter allows maximizing the revenues of the charging business.





SMART AND CUSTOMIZABLE DESIGN

EXACTLY THE WAY YOU WANT

Customizable External Enclosures
Power Electronics offers customizable external enclosures for the central power station and the posts. Customize your Nube Station with branded labels that feature clients logos, texts, advertisements…

Vehicle Detection
Optionally, it is possible to include the vehicle detection function, which allows starting the charging process when the car is close to the recharging post.

Display Advertising
Power Electronics 10" touch screen display is prepared to display advertising, either static images, video or flash content.

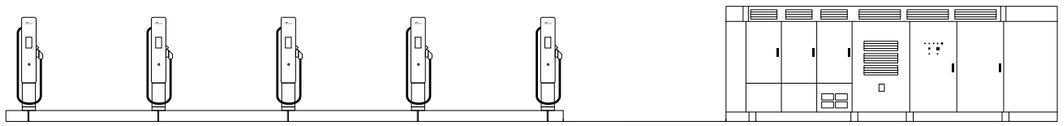
Anti-impact Post Barriers
Designed to protect the recharging posts collision damage caused by any vehicle.

EXAMPLES OF POST CUSTOMIZATIONS

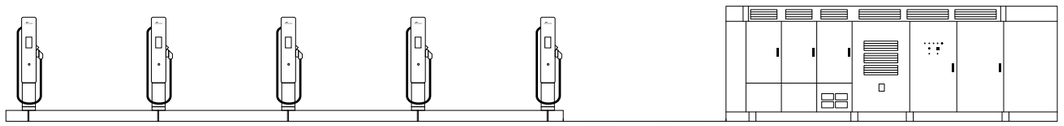
EXAMPLES OF POWER STATION CUSTOMIZATIONS

Consult with Power Electronics for other options and colours.

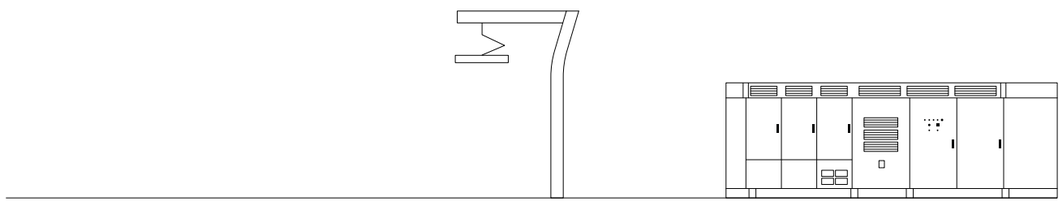
NUBE STATION



NUBE STATION PLUS



NUBE STATION PLUS + PANTOGRAPH

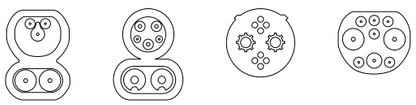


NUBE STATION

		US	IEC
OUTPUT (DC)	Station power [kW]	250 / 500	
	Recharging post power [kW]	50 / 100 / 150	
	Voltage range [V]	50 - 500	
	Recharging post maximum current [A]	125 / 250 / 375	
	Available connectors	CCS Type 1, CHAdeMO, GB/T	CCS Type 2, CHAdeMO, GB/T
AC OUTPUT (option)	Power [kW]	6,7 - 7,7	22,2
	Voltage range [V]	208 - 240 ± 10 %	400 ± 10 %
	Current [A]	32	
	Available connectors	Type 1	Type 2
INPUT (AC)	Power [kVA]	400 / 630	
	Voltage [kV] [1]	15 / 20 / 25	
	Power factor	> 0,99	
	Frequency [Hz]	50 / 60	
	Efficiency	> 95%	
GENERAL	Interface	10" touchscreen	
		Emergency stop (optional in posts)	
		Post status LED indicator	
		Vehicle detection (optional)	
		Credit/Debit card reader (optional)	
		RFID card reader (optional)	
		Doors with padlock (optional)	
		Connector locker (optional)	
	Protections	Isolation monitor	
		Over-voltages / under-voltages	
		Over-currents / short-circuits	
		Over-temperature	
	Auxiliary services power [kW]	10 / 20 / 35 / 50	
	Wire length [ft/m] [2]	12	3
	Degree of protection	NEMA 3R	IP54 | IK10 [3]
	Working temperature	From -25ºC to 50ºC (optionally, from -30ºC to 50ºC)	
	Relative humidity	From 4% to 95%	
	Maximum altitude (above sea level)	2000m	
	Customization	Enclosure / Post display	
	Communications	OCPP 1.6, Ethernet, GPRS 4G, Wifi (optional)	
	Charging post dimensions [mm]	300 x 500 x 1.800	
	Charging post dimensions [ft]	1 x 1.6 x 5.9	
	Other options in the skid	Anti-impact post barriers	
		Roof	
	Other options in the station	MV switchgear motorization (remote operation)	

EXAMPLES OF CONFIGURATIONS

POST TYPE	STATION		CONNECTOR
	250	500	
	NUMBER OF POSTS	NUMBER OF POSTS	
50 kW	5	10	CCS Type 1/2, CHAdeMO, GB/T
100 kW	2 / 3	5	CCS Type 1/2[4], GB/T
150 kW	2	3	CCS Type 1/2[4]



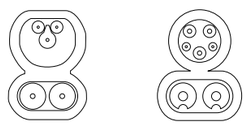
[1] Consult with Power Electronics.
[2] 5m / 18ft wire length optional
[3] IK08 for display and ventilation grilles.
[4] Cooled connector

NUBE STATION PLUS

		US	IEC
OUTPUT (DC)	Station power [kW]	1000 / 1500 / 2000	
	Recharging post power [kW]	200 / 350 / 500	
	Voltage range [V]	150 - 1000	
	Recharging post maximum current [A]	375 / 500 / 500	
	Available connectors	CCS Type 1 (cooled)	CCS Type 2 (cooled)
AC OUTPUT (option)	Power [kW]	6,7 - 7,7	22,2
	Voltage range [V]	208 - 240 ± 10 %	400 ± 10 %
	Current [A]	32	
	Available connectors	Type 1	Type 2
INPUT (AC)	Power [kVA]	1250 / 2000 / 2500	
	Voltage [kV] [1]	15 / 20 / 25	
	Power factor	> 0,99	
	Frequency [Hz]	50 / 60	
	Efficiency	> 95%	
GENERAL	Interface	10" touchscreen	
		Emergency-stop (optional in posts)	
		Post status LED indicator	
		Vehicle detection (optional)	
		Credit/Debit card reader (optional)	
		RFID card reader (optional)	
		Doors with padlock (opcional)	
		Connector locker (optional)	
	Protections	Isolation monitor	
		Over-voltages / under-voltages	
		Over-currents / short-circuits	
		Over-temperature	
	Auxiliary services power [kW]	10 / 20 / 35 / 50	
	Wire length [ft/m] [2]	12	3
	Degree of protection	NEMA 3R	IP54 | IK10 [3]
	Working temperature	From -25ºC to 50ºC (optionally, from -30ºC to 50ºC)	
	Relative humidity	From 4% to 95%	
	Maximum altitude (above sea level)	2000m	
	Customization	Enclosure / Post display	
	Communications	OCPP 1.6, Ethernet, GPRS 4G, Wifi (optional)	
	Charging post dimensions [mm]	300 x 500 x 1.800	
	Charging post dimensions [ft]	1 x 1.6 x 5.9	
	Other options in the skid	Anti-impact post barriers	
		Roof	
	Other options in the station	MV switchgear motorization (remote operation)	

EXAMPLES OF CONFIGURATIONS

POST TYPE	STATION			CONNECTOR
	1000	1500	2000	
	NUMBER OF POSTS	NUMBER OF POSTS	NUMBER OF POSTS	
200 kW	5	7	10	CCS Type 1/2[3]
350 kW	3	4	6	CCS Type 1/2[3]
500 kW	2	3	4	CCS Type 1/2[3]



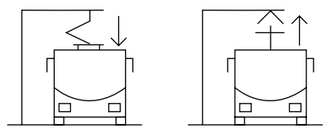
[1] Consult with Power Electronics.
[2] 5m / 18ft wire length optional
[3] IK08 for display and ventilation grilles.
[4] Cooled connector.

NUBE STATION PLUS + PANTOGRAPH

		US	IEC
OUTPUT (DC)	Station power [kW]	1000 / 1500 / 2000	
	Output charging power [kW]	200 / 350 / 500 / 700	
	Voltage range [V]	150 - 1000	
	Output charging current [A]	375 / 500 / 500 / 700	
	Charging interface [1]	Pantograph – automatic fast charging	
AC OUTPUT (option)	Power [kW]	6,7 - 7,7	22,2
	Voltage range [V]	208 - 240 ± 10 %	400 ± 10 %
	Current [A]	32	
	Available connectors	Type 1/2	
INPUT (AC)	Power [kVA]	1250 / 2000 / 2500	
	Voltage [kV] [2]	15 / 20 / 25	
	Power factor	> 0,99	
	Frequency [Hz]	50 / 60	
	Efficiency	> 95%	
GENERAL	Interface	Emergency-stop	
		Doors with padlock (opcional)	
	Protections	Isolation monitor	
		Over-voltages / under-voltages	
		Over-currents / short-circuits	
		Over-temperature	
	Auxiliary services power [kW]	10 / 20 / 35 / 50	
	Degree of protection	NEMA 3R	IP54
	Working temperature	From -25ºC to 50ºC (optionally, from -30ºC to 50ºC)	
	Relative humidity	From 4% to 95%	
	Maximum altitude (above sea level)	2000m	
	Customization	Enclosure	
	Communications	OCPP 1.6, Ethernet, GPRS 4G, Wifi (optional) Compliant with IEC 61851-1, 61851-23, 61851-24, ISO 15118, DIN 70121	
	Other options in the station	MV switchgear motorization (remote operation)	

EXAMPLES OF CONFIGURATIONS

PANTOGRAPH TYPE	STATION		
	1000	1500	2000
	NUMBER OF PANTOGRAPH	NUMBER OF PANTOGRAPH	NUMBER OF PANTOGRAPH
200 kW	5	7	10
350 kW	3	4	6
500 kW	2	3	4
700 kW	1	2	3



[1] Compatible with multiple pantograph manufacturers.
[2] Consult with Power Electronics.

Nube 50

SIMULTANEOUS DC + AC CHARGING

FAST DC AND AC CHARGING

MULTI-STANDARD CONNECTORS

SMART FLEET MANAGEMENT

HIGH EFFICIENCY

FRIENDLY USER EXPERIENCE

MULTIPLE PAYMENT OPTIONS

EASY BACK-OFFICE INTEGRATION

24/7 RELIABLE SERVICE

OUTDOOR DURABILITY

DC HYBRID CHARGING SOLUTIONS

Urban & Light Fleet Solutions
Home & Car Park Solutions

THE FUTURE OF SMART E-MOBILITY

THE COMBINATION OF AESTHETICS AND ADVANCED FUNCTIONALITIES

<30 MIN

Nube 50

Design
Nube 50 is an outdoor, robust and attractive fast charger designed keeping in mind durability, reliability and maintainability.

Connector Types
Operating up to 50 kW in DC and up to 22 kW (7,7 kW in US) in AC fast charging, Nube 50 is compatible with the most extended DC connector types CCS Type 1/2, CHAdeMO and GB/T, and AC Type 1/2 connector.

User-friendly Interface
With a user-friendly interface, its daylight readable touch screen display with graphic visualization of charging progress, will provide EV owners a quick, safe and easy EV charging experience today and in the future.

Easy Interaction
With its smart advanced connectivity and a management system based on IoT, Nube 50 offers an easy user interaction with multiple payment options and a reliable solution thanks to its successful remote management solution.

Standard-based APIs
For running successfully your charging business, Power Electronics offers an easy integration to any back-offce systems using standard-based APIs, payment services and energy management solutions, based on OCPP communication protocol.

Smart Design
Every charging post integrates optionally 4G connectivity and is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer: smartphone, RFID, credit/debit card (NFC). To comply with the most demanding requirements regarding billing, Nube 50 offers MID certified meters.

Smart Fleet Management
Dynamic power balancing for vehicle fleet management designed to minimize the initial investment and operation costs.

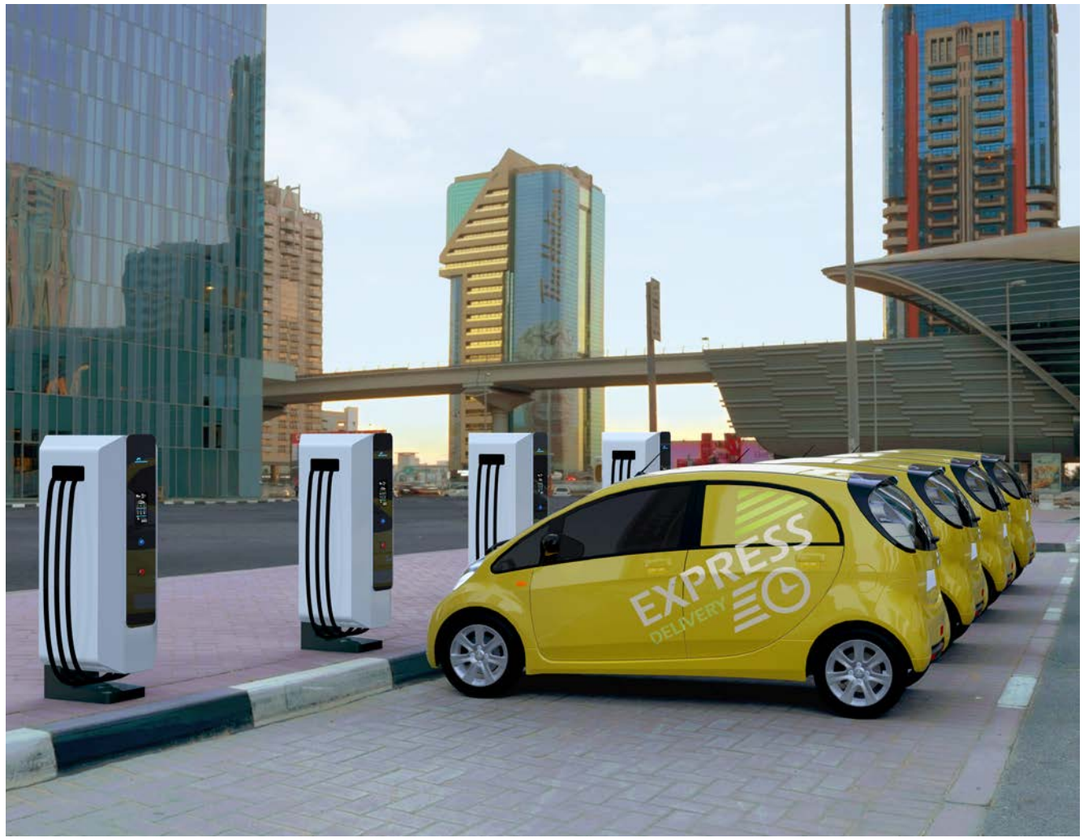
DC Hybrid Charging Solutions
Nube 50 is able to take advantage of an endless energy source, the sun. With Power Electronics hybrid solution, Nube 50 can be connected to a photovoltaic field and / or to the utility grid.

Charging times may vary depending on the charging conditions.

EASY TO USE
JUST TAP

User-friendly Interface
With a user-friendly interface, its daylight readable 10” touch screen display with graphic visualization of charging progress, will provide EV drivers a quick, safe and easy interaction.

Status Indicator
Power Electronics posts integrate a status indicator, for EV drivers not losing time and going to an available post.



Payment and Authentication System
Every post is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer.

RFID
Drivers can launch a charging session by tapping the RFID card.

Credit / Debit Card
Power Electronics offers a compatibility with contact-less (NFC) solutions, letting drivers initiate the charging process by simply tapping their credit/debit card.

Pin Code
With its intuitive interface, it guides EV drivers through all the steps to follow during a charging session, using the most secure payment and authentication methods.

Smartphone
Compatible with the most extended Apps in the market. These Apps for EV drivers are able to start a charging session, reserve a post at any time, or simply manage their historical charging sessions.

FULL 360º SERVICE

Power Electronics offers an innovative charging solution adapted to every client's needs. With its advanced connectivity, allows having Nube 50 the main services to operate, use and manage EV networks now and in the future.

- Compatible with any back-office (OCPP 1.6 and customized).
- O&M platform based on IoT (Internet of Things).
- Compatible with any payment management platform.
- PC and mobile monitoring tools (Android & iOS).
- MID certified meters.

Fundamental services to operate succesfully every Nube 50

O&M

Fault diagnosis

Remote troubleshooting

Charging point status

Software updating

Charging station management APIs

Customer Back-office

Client authentification

Payment platform

Charging point reserve

Charging station location

Payment Platform

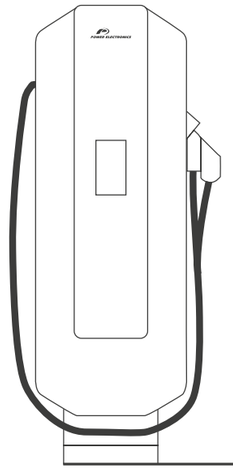
Credit/Debit card

RFID card

Mobile apps

Cyber security

OCPP

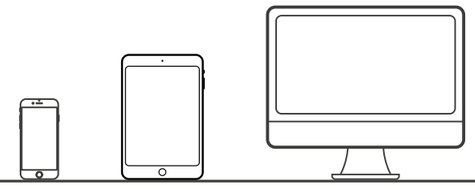


Compatible with any Back-office

OCPP is the internationally established open protocol for the communication between EV chargers and any back office system around the world. Power Electronics offers an easy integration to any back-office systems using standard-based APIs.

Monitoring Tools

Optionally, Power Electronics can provide advanced PC and mobile (Android & iOS) monitoring tools, offering our clients a useful and intuitive platform for managing in real time all chargers. These tools offer charging statistics, status and usage statistics among others.



SMART AND CUSTOMIZABLE DESIGN

EXACTLY THE WAY YOU WANT

Customizable External Enclosures
Power Electronics offers customizable external enclosures. Customize your charging post with branded labels that feature clients logos, texts, advertisements…

Vehicle Detection
Optionally, it is possible to include the vehicle detection function, which allows starting the charging process when the car is close to the recharging post.

Display Advertising
Power Electronics 10" touch screen display is prepared to display advertising, either static images, video or flash content.

AC Charging
It is possible to include an AC Type 1 and Type 2 charging connector, which allows a charging power up to 22 kW or 7.7 kW in US.

EXAMPLES OF POST CUSTOMIZATIONS

Consult with Power Electronics for other options and colours.

SMART FLEET MANAGEMENT

Power Electronics has developed the most advanced functionality for power balancing in vehicle fleet management. Designed to minimize the initial investment and the operation costs.

Smart Fleet Management functionality is able to balance the power based on the number of charging posts in use. Therefore, the total power required to supply the total energy gets substantially reduced, representing a cost reduction in the electrical facility infrastructure and a cost saving due to a minor power contracted. Besides, the hardware and the back-office communication is optimized.

Total Power Available 100%

Vehicle 1
Normal preference 20%

Vehicle 2
High preference 50%

Vehicle 3
Normal preference 20%

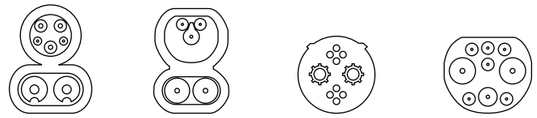
Vehicle 4
Low preference 10%

TECHNICAL CHARACTERISTICS

NUBE 50

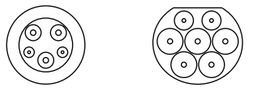
		US	IEC
DC OUTPUT (default)	Power [kW]	50	
	Voltage range [V]	50 - 500	
	Current [A]	125	
	Available connectors	CCS Type 1, CHAdeMO, GB/T	CCS Type 2, CHAdeMO, GB/T
AC OUTPUT (option)	Power [kW]	6,7 - 7,7	22,2
	Voltage range [V]	208 - 240 ± 10 %	400 ± 10 %
	Current [A]	32	
	Available connectors	Type 1	Type 2
AC INPUT FOR DC OUTPUT	Power [kVA]	52	
	Voltage [V]	480 (3ph + PE) ± 10 %	400 (3ph + N + PE) ± 10 %
	Current [A]	63 / 75	
	Power factor	> 0,99	
	Frequency [Hz]	50 / 60	
	Efficiency	> 96%	
GENERAL	Interface	10" touchscreen	
		Emergency-stop (optional)	
		Post status LED indicator	
		Vehicle detection(optional)	
		Credit/Debit card reader (optional)	
		RFID card reader (optional)	
		Connector locker (optional)	
	Protections	Isolation monitor	
		Over-voltages / Under-voltages	
		Over-currents / Short-circuits	
		Over-temperature	
	Wire length [ft/m][1]	12	3
	Enclosure color	White (RAL 9016) / Glass colour black	
	Customization	Enclosure [3] / display	
	Degree of protection	NEMA 3R	IP54 | IK10 [2]
	Working temperature	From -25ºC to 50ºC (optionally, from -30ºC to 50ºC)	
	Relative humidity	From 4% to 95%	
	Maximum altitude (above sea level)	2000m	
	Communications	OCPP 1.6, Ethernet, GPRS 4G (optional), Wifi (optional)	
	Dimensions [mm]	600 x 700 x 1.800	
	Dimensions [ft]	2 x 2.3 x 5.9	
	Regulations	UL 2202, UL 2594 NEC 625, FCC Part 15 Class A	IEC 61851-1, IEC 61851-23, IEC 61851-24 IEC 61000-6-2, IEC 61000-6-3

AVAILABLE CONNECTORS DC



CCS-1 **CCS-2** **CHAdeMO** **GB/T**

AVAILABLE CONNECTORS AC



AC Type 1 **AC Type 2**

[1] 5m / 18ft wire length optional.

[2] IK08 for display and ventilation grilles.

[3] Optionally, enclosure grey (RAL 7016).

Nube City

MULTIPLE CONNECTION OPTIONS

SMART CITIES FUNCTIONALITIES

ELECTRICAL PROTECTIONS INTEGRATION

MID CERTIFIED METERS

FRIENDLY USER EXPERIENCE

MULTIPLE PAYMENT OPTIONS

EASY BACK-OFFICE INTEGRATION

SMART FLEET MANAGEMENT

24/7 RELIABLE SERVICE

OUTDOOR DURABILITY

Urban & Light Fleet Solutions
Home & Car Park Solutions

THE BEST SOLUTION FOR SMART CITIES

THE COMBINATION OF MAXIMUM URBAN INTEGRATION WITH THE SIMPLICITY OF USE

Design
Nube City is a robust and attractive outdoor AC charging system, making it ideal for “smart” cities. It has been designed with durability, reliability and ease of maintenance in mind.

Connector Types
Operating up to 2 x 22 kW (2 x 7.7 kW in US), Nube City is compatible with AC connectors Type 1 and 2. Available with outlet socket or hard-wired version.

Intuitive Smartphone App
For the best EV user experience the smartphone app allows monitoring, starting and stopping charging processes and user authentication via app.

Easy Interaction
With its smart advanced connectivity and a management system based on IoT, Nube City offers an easy user interaction with multiple options and a reliable solution.

Smart Design
Nube City offers advanced communication options such as Wifi or 4G connectivity and is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer: smartphone, RFID, credit/debit card (NFC). To comply with the most demanding requirements regarding billing, Nube City offers MID certified meters.

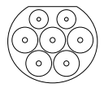
Smart Fleet Management
Our Smart Fleet Management system can balance power to match the number of charging points currently in use. This allows a substantial reduction in the total energy required, which in turn reduces costs in terms of both electrical infrastructure and contractual power capacity.

MULTIPLE CONNECTION OPTIONS

Nube City has been designed to offer the most flexible solution to be installed in smart cities. Compatible with Type 1 and 2 AC connectors with both outlet socket and hard-wired option.

Its advanced design to suit all costumers' needs offers:
- Outlet socket (in IEC models).
- Hard-wired cable, straight and spiral.
- Schuko connector (in IEC models).

AC Type 1



AC Type 2

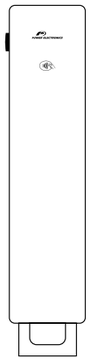
Schuko

READY FOR AN EASY INSTALLATION IN ANY PLACE

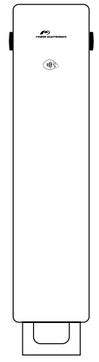
Car parks
Workplaces
Apartment complexes
Shopping centers
Hotels

OUTLET SOCKET VERSION

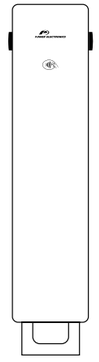
Type 2



2 x Type 2

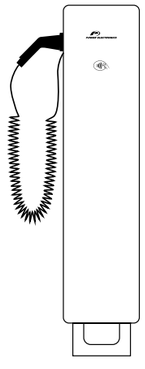


Type 2 + Schuko

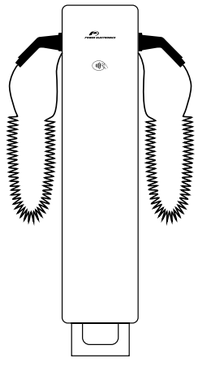


HARD-WIRED VERSION

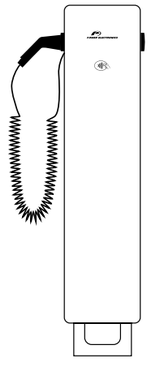
Type 1 or Type 2



2 x Type 1 or 2 x Type 2



Type 2 + Schuko



EASY TO USE
JUST TAP

Intuitive Smartphone App
Nube City smartphone app has been designed to drive the mobility of tomorrow, easy and simple. It allows monitoring, starting and stopping the charging processes and user authentication via app.

User-friendly Interface
With a user-friendly interface, its optional daylight readable display with graphic visualization of charging progress, will provide EV drivers a quick, safe and easy interaction.

Presence Recognition
In smart cities the most advanced functionalities are necessary. The revolutioning Nube City buit-in user authentication works simply by proximity.

Status Indicator
Power Electronics posts integrate a status indicator, so drivers can easily identify which posts are available.

Payment and Authentication System
Every recharging post is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer:

Bluetooth — Presence recognition by bluetooth.

RFID — Drivers can launch a charging session by tapping their RFID card.

Smartphone — Compatible with the most extended Apps in the market. These Apps for EV drivers are able to start a charging session, reserve a post at any time, or simply manage their historical charging sessions.

Credit / Debit Card — Compatibility with contact-less (NFC) solutions, letting drivers initiate the charging process by simply tapping their credit/debit card.

FULL 360º SERVICE

Power Electronics offers an innovative charging solution adapted to every client's needs. With its advanced connectivity, allows having Nube City the main services to operate, use and manage EV networks now and in the future.

- Compatible with any back-office (OCPP 1.6 and customized).
- O&M platform based on IoT (Internet of Things).
- Compatible with any payment management platform.
- PC and mobile monitoring tools (Android & iOS).
- MID certified meters.

Fundamental services to operate succesfully every Nube City

O&M

Fault diagnosis

Remote troubleshooting

Charging point status

Software updating

Charging station management APIs

Customer Back-office

Client authentification

Payment platform

Charging point reserve

Charging station location

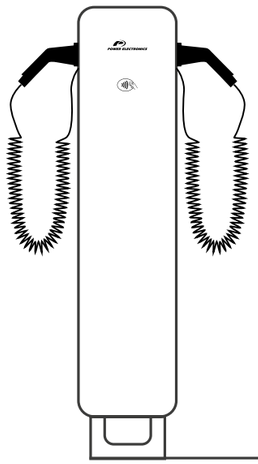
Payment Platform

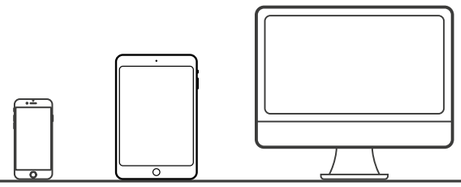
RFID card

Mobile apps

Credit/Debit card

OCPP





Compatible with any Back-office

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Monitoring Tools

Optionally, Power Electronics can provide advanced PC and mobile (Android & iOS) monitoring tools, offering our clients a useful and intuitive platform for managing in real time all chargers. These tools offer charging statistics, status and usage statistics among others.

SMART FLEET MANAGEMENT

Power Electronics has developed the most advanced functionality for power balancing in vehicle fleet management. Designed to minimize the initial investment and operation costs.

Smart fleet management functionality is able to balance the power based on the number of charging posts in use. Therefore, the total power required to supply the total energy gets substantially reduced, representing a cost reduction in the electrical facility infrastructure and a cost saving due to a minor power contracted. Besides, the hardware and the back-office communication is optimized.

SMART AND CUSTOMIZABLE DESIGN

EXACTLY THE WAY YOU WANT

Customizable External Enclosures
Power Electronics offers customizable external enclosures. Customize your charging post with branded labels that feature clients logos, texts, advertisements…

Display
Power Electronics display allows to configure/monitor the charging process.

EXAMPLES OF POST CUSTOMIZATIONS

Consult with Power Electronics for other options and colours.

IEC

GENERAL SPECIFICATIONS

	BASIC			ADVANCED			PROFESSIONAL		
Model Reference	HCB4S	HCB2P	HCB4P	HCA4S	HCA2P	HCA4P	HCP4S	HCP2P	HCP4P
Protections		-			RCD Type A			RCD Type A	
Energy measurement		-			Circuit breaker			Circuit breaker	
		-			-			MID meter	
Communications		-			Ethernet + Wifi			Ethernet + Wifi + one 3G/4G card + OCPP 1.6	
Authentification		Bluetooth			Bluetooth			Bluetooth	
Connectors	1 x AC Type 2								
Cable length [m]	3								
External enclosure	IP54 / IK10 (IK08)[1]								
	Colour white (RAL 9016) / Glass colour black								
	Corrosion protection C3								
Operating temperature	-25°C to 50°C								
Operating humidity	From 4% to 95%								
Interface	Customer smartphone App - Status LED indicator - Timetable programming								
Dimensions [mm]	320 x 250 x 1400 (preliminary)								
Regulations	IEC 61851-1, IEC 61000-6-2, IEC 61000-6-3								

STANDARD PRODUCT REFERENCES

		AC INPUT/OUTPUT		CONNECTION MODE	
	MODEL	**1ph + N + PE 230Vac Max. 32 A (adjustable) 7,36 kW**	**3ph + N + PE 400Vac Max. 32 A (adjustable) 22,2 kW**	**Cable + Plug**	**Socket**
BASIC	HCB4S	-	✓	-	✓
	HCB2P	✓	-	✓	-
	HCB4P	-	✓	✓	-
ADVANCED	HCA4S	-	✓	-	✓
	HCA2P	✓	-	✓	-
	HCA4P	-	✓	✓	-
PROFESSIONAL	HCP4S	-	✓	-	✓
	HCP2P	✓	-	✓	-
	HCP4P	-	✓	✓	-

OPTIONAL PRODUCT REFERENCES

	BASIC	ADVANCED	PROFESSIONAL	OPTIONAL REF.
2 x AC Type 2	✓	✓	✓	A2
1 x AC Type 2 + Schuko	✓	✓	✓	A3
Cable 4 meters (spiral)	✓	✓	✓	B2
Cable 5 meters (straight)	✓	✓	✓	B3
Internal energy measurement	✓	-	-	C1
MID meter	-	✓	-	C2
Surge arrester Type 2	-	✓	✓	D1
RCD Type A	✓	-	-	E1
RCD Type A + RCM	✓	✓	✓	E2
RCD Type A with reset	✓	✓	✓	E3
Second 3G/4G card	-	-	✓	G2
RFID	-	✓	✓	H1
Credit/debit card reader compatibility (NFC)	-	-	✓	H2
Corrosion protection C5-M	-	-	✓	J2
Enclosure colour grey (RAL 7016)	✓	✓	✓	K2
Stainless steel enclosure	-	✓	✓	K3
I/O interface	-	✓	✓	L1
Datalogger	-	-	✓	M1
4.3" display	-	✓	✓	O1
Extended temperature range (-30°C to 50°C)	-	-	✓	P1

US

GENERAL SPECIFICATIONS

	BASIC	ADVANCED	PROFESSIONAL
Model Reference	UCB2P	UCA2P	UCP2P
Protections	-	RCD Type A	RCD Type A
Energy measurement	-	Circuit breaker	Circuit breaker
	-	-	Revenue meter
Communications	-	Ethernet + Wifi	Ethernet + Wifi + one 3G/4G card + OCPP 1.6
Authentification	Bluetooth	Bluetooth	Bluetooth
AC input	208 V or 240 V AC single-phase: L1, L2, and earth		
Maximum output current per connector	32 A (adjustable)		
Maximum output power per connector	6,7 kW or 7,7 kW		
Connectors	1 x AC Type 1		
Cable length [ft]	12		
External enclosure	NEMA 3R		
	Colour white (RAL 9016) / Glass colour black		
	Corrosion protection C3		
Operating temperature	-25°C to 50°C		
Operating humidity	From 4% to 95%		
Interface	Customer smartphone App - Status LED indicator - Timetable programming		
Dimensions [ft]	1.05 x 0.82 x 4.6 (preliminary)		
Regulations	UL 2594, FCC Part 15 Class B, NEC 625		

OPTIONAL PRODUCT REFERENCES

	BASIC	ADVANCED	PROFESSIONAL	OPTIONAL REF.
2 x AC Type 1	✓	✓	✓	A2
Cable 13.1 ft (spiral)	✓	✓	✓	B2
Cable 18 ft (straight)	✓	✓	✓	B3
Internal energy measurement	✓	-	-	C1
Revenue meter	-	✓	-	C2
Surge arrester Type 2	-	✓	✓	D1
RCD Type A	✓	-	-	E1
RCD Type A + RCM	✓	✓	✓	E2
RCD Type A with reset	✓	✓	✓	E3
Second 3G/4G card	-	-	✓	G2
RFID	-	✓	✓	H1
Credit/debit card reader compatibility (NFC)	-	-	✓	H2
Corrosion protection C5-M	-	-	✓	J2
Enclosure colour grey (RAL 7016)	✓	✓	✓	K2
Stainless steel enclosure	-	✓	✓	K3
I/O interface	-	✓	✓	L1
Datalogger	-	-	✓	M1
4.3" display	-	✓	✓	O1
Extended temperature range (-30°C to 50°C)	-	-	✓	P1

CONFIGURATION TABLE

MODEL REFERENCE										OPTIONAL PRODUCT REFERENCES	
Model		**Enclosure**		**Versions**		**Input Voltage**		**Connection mode**			
H	IEC	C	City	B	Basic	2	230 Vac	S	Socket	A2	2 x AC connectors
							208/240 Vac			...	
U	US			A	Advanced	4	400 Vac	P	Cable + Plug	P1	Extended temperature range
				P	Professional						

[1] IK08 for display and ventilation grilles.

Nube Wall

MULTIPLE CONNECTION OPTIONS

INTUITIVE SMARTPHONE APP

PRESENCE RECOGNITION

EASY BACK-OFFICE INTEGRATION

SMART FLEET MANAGEMENT

DYNAMIC POWER CONTROL

24/7 RELIABLE SERVICE

INDOOR/OUTDOOR DURABILITY

Urban & Light Fleet Solutions
Home & Car Park Solutions

THE BEST SOLUTION FOR HOME AND CAR PARK

THE COMBINATION OF SIMPLICITY OF USE AND THE MOST ADVANCED FUNCTIONALITIES

Design
Nube Wall is a robust and attractive outdoor AC charger, making it ideal for "smart" car parks and homes. It has been designed with durability, reliability and ease of use in mind.

Connector Types
Operating up to 2 x 22 kW (2 x 7.7 kW in US) is compatible with AC Type 1 and 2 connector. Available with outlet socket or hard-wired version.

Intuitive Smartphone App
For the best EV user experience the smartphone app allows monitoring, starting and stopping charging processes and user authentication.

Easy Interaction
With its smart advanced connectivity and a management system based on IoT, Nube Wall offers an easy user interaction with multiple options and a reliable solution.

Smart Design
Nube Wall offers advanced communication options such as Wifi or 4G connectivity and is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer: smartphone, RFID, credit /debit card (NFC).

Power Electronics has developed the most advanced functionality for power balancing for two electric cars charging at the same time. Designed to minimize the initial investment, the user does not need to upgrade the current installation.

Dual Power Sharing functionality is able to balance the power based on the EV needs. When there is just one car charging, Nube Wall can supply maximum power; whereas there are two, the power is dynamically balanced. Therefore, the total power required is lower, representing a cost reduction in the electrical facility infrastructure and a cost saving, due to a minor power contracted.

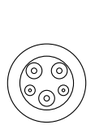
Smart Fleet Management
Our Smart Fleet Management system can balance power to match the number of charging points currently in use. This allows a substantial reduction in the total energy required, which in turn reduces costs in terms of both electrical infrastructure and contractual power capacity.

Dynamic Power Control
This optional device ensures dynamic adaptation of the power being used to charge the vehicle in accordance with the energy being consumed by other electrical appliances in the home, without having to increase contractual power capacity.

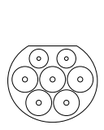
MULTIPLE CONNECTION OPTIONS

Nube Wall offers the most flexible solution to be installed at home and at any car park.
Compatible with Type 1 and 2 AC connectors with both outlet socket and hard-wired option.

Its advanced design to suit all costumers needs offers:
- Hard-wired cable option, straight and spiral.
- Outlet socket option (in IEC models).
- Schuko connector (in IEC models).
- Plug-in version in US models (input cable NEMA 6-50 plug).



AC Type 1

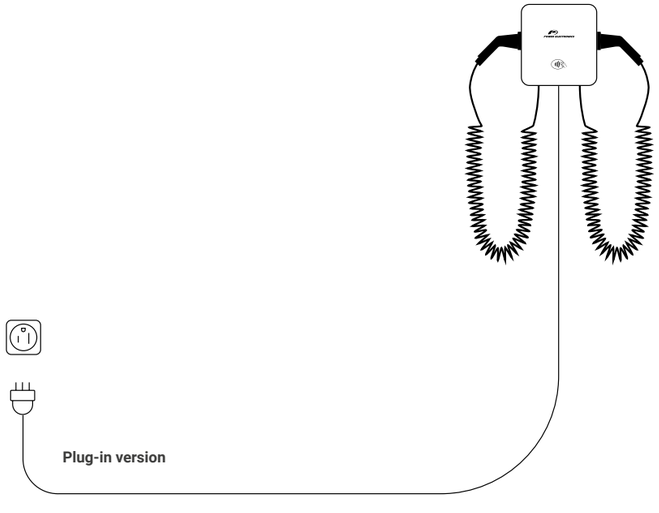


AC Type 2

Schuko

READY FOR AN EASY INSTALLATION IN ANY PLACE

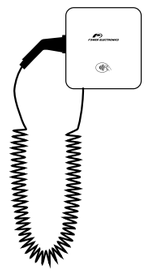
Residential
Apartment Complexes
Hotels
Shopping Centers
Workplaces



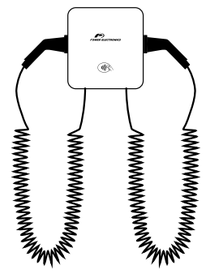
Plug-in version

HARD-WIRED VERSION

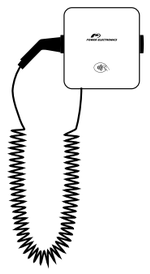
Type 1 or Type 2



2 x Type 1 or 2 x Type 2



Type 2 + Schuko



OUTLET SOCKET VERSION

Type 2

2 x Type 2

Type 2 + Schuko

EASY TO USE
PLUG AND CHARGE

Intuitive Smartphone App
Nube Wall smartphone app has been designed to drive the mobility of tomorrow, easy and simple. It allows monitoring, starting and stopping the charging processes and user authentication via app.

User-friendly Interface
With a user-friendly interface, Nube Wall will provide EV drivers a quick, safe and easy interaction.

Presence Recognition
Nube Wall chargers are equipped with a Bluetooth-based system of authentication that allows the charging process to be activated merely by the proximity of the device.

Status Indicator
Power Electronics integrate a status indicator, so drivers can easily identify which are available.

Payment and Authentication System
Every charger is compatible with any payment and authentication system, offering the most useful solutions in the market for an easy interaction with the customer.

Bluetooth — Presence recognition by bluetooth.

RFID — Drivers can launch a charging session by tapping their RFID card.

Smartphone — EV drivers are able to start a charging session, reserve a post at any time, or simply manage their historical charging sessions.

Credit / Debit Card — Compatibility with contact-less (NFC) solutions, letting drivers initiate the charging process by simply tapping their credit/debit card.

FULL 360º SERVICE

Power Electronics offers an innovative charging solution adapted to every client's needs. With its advanced connectivity, allows having Nube Wall the main services to operate, use and manage EV networks now and in the future.

- Compatible with any back-office (OCPP 1.6 and customized).
- O&M platform based on IoT (Internet of Things).
- Compatible with any payment management platform.
- PC and mobile monitoring tools (Android & iOS).

Fundamental services to operate succesfully every Nube Wall

O&M

Fault diagnosis

Remote troubleshooting

Charging point status

Software updating

Charging station management APIs

Customer Back-office

Client authentification

Payment platform

Charging point reserve

Charging station location

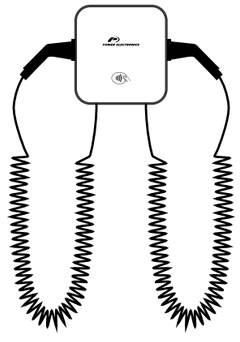
Payment Platform

RFID card

Mobile apps

Credit/Debit card

OCPP

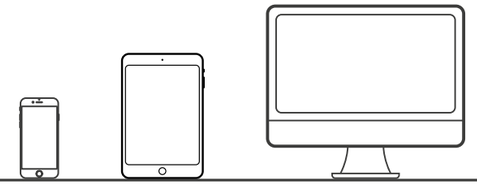


Compatible with any Back-office

OCPP is the internationally established open protocol for the communication between EV chargers and any back office system around the world. Power Electronics offers an easy integration to any back-office systems using standard-based APIs.

Monitoring Tools

Optionally, Power Electronics can provide advanced PC and mobile (Android & iOS) monitoring tools, offering our clients a useful and intuitive platform for managing in real time all chargers. These tools offer charging statistics, status and usage statistics among others.



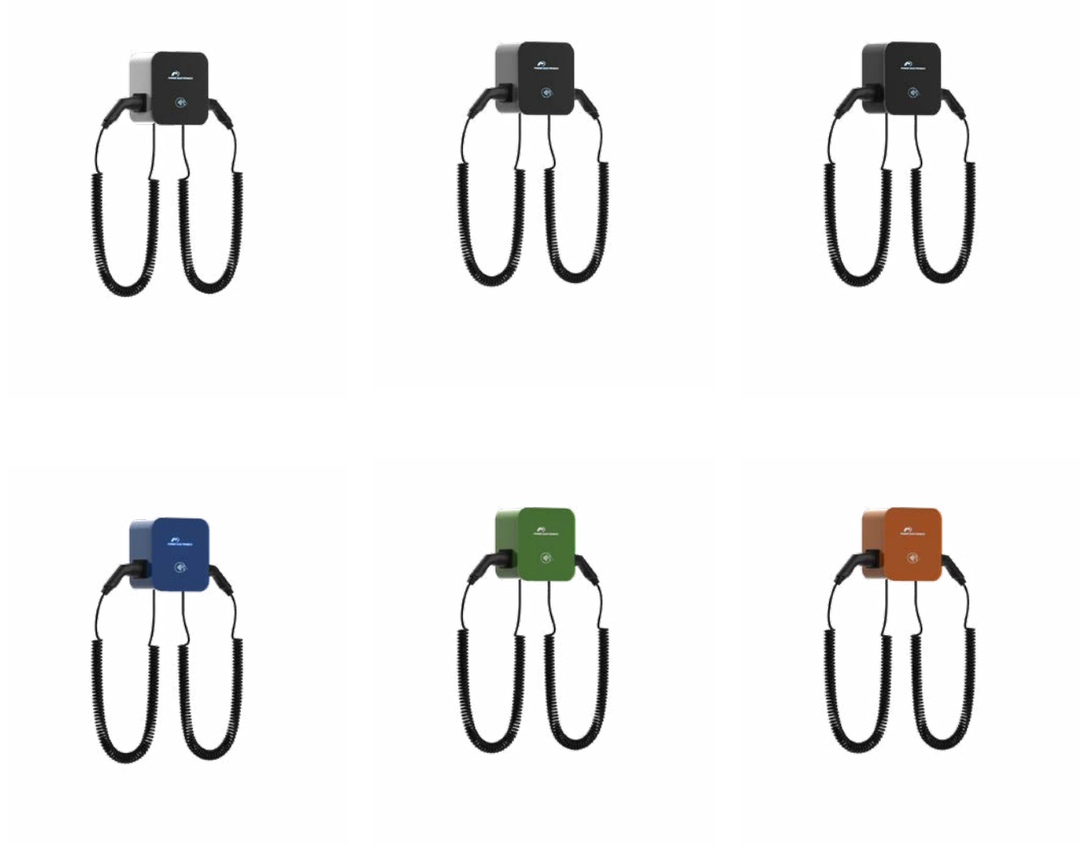
SMART AND CUSTOMIZABLE DESIGN

EXACTLY THE WAY YOU WANT

Customizable External Enclosures

Power Electronics offers customizable external enclosures. Customize your charger with branded labels that feature clients logos, texts, advertisements...

EXAMPLES OF POST CUSTOMIZATIONS



Consult with Power Electronics for other options and colours.

IEC

GENERAL SPECIFICATIONS

	BASIC			ADVANCED			PROFESSIONAL		
Model Reference	HWB2P	HWB4P	HWB4S	HWA2P	HWA4P	HWA4S	HWP2P	HWP4P	HWP4S
Energy measurement	-			Internal energy measurement			Internal energy measurement		
	-			-			MID meter		
Communications	-			Ethernet + Wifi			Ethernet + Wifi + 3G/4G card + OCPP 1.6		
Authentification	Bluetooth			Bluetooth			Bluetooth		
Connectors	1 x AC Type 2								
Cable length [m]	3								
External enclosure	IP54 / IK10 (IK08) [1]								
	Colour white (RAL 9016) / Glass colour black								
	Corrosion protection C3								
Operating temperature	-25ºC to 50ºC								
Operating humidity	From 4% to 95%								
Interface	Customer smartphone App - Status LED indicator - Timetable programming								
Dimensions [mm]	300x300x180 (preliminary)								
Regulations	IEC 61851-1, IEC 61000-6-2, IEC 61000-6-3								

STANDARD PRODUCT REFERENCES

		AC INPUT/OUTPUT		CONNECTION MODE	
	MODEL	**1ph + N + PE 230Vac Max. 32 A (adjustable) 7,36 kW**	**3ph + N + PE 400Vac Max. 32 A (adjustable) 22,2 kW**	**Cable + Plug**	**Socket**
BASIC	HWB2P	✓	-	✓	-
	HWB4P	-	✓	✓	-
	HWB4S	-	✓	-	✓
ADVANCED	HWA2P	✓	-	✓	-
	HWA4P	-	✓	✓	-
	HWA4S	-	✓	-	✓
PROFESSIONAL	HWP2P	✓	-	✓	-
	HWP4P	-	✓	✓	-
	HWP4S	-	✓	-	✓

OPTIONAL PRODUCT REFERENCES

	BASIC	ADVANCED	PROFESSIONAL	OPTIONAL REFERENCE
2 x AC Type 2	✓	✓	✓	A2
1 x AC Type 2 + Schuko	✓	✓	✓	A3
Cable 4 meters (spiral)	✓	✓	✓	B2
Cable 5 meters (straight)	✓	✓	✓	B3
Internal energy measurement	✓	-	-	C1
MID meter	-	✓	-	C2
Second 3G/4G card	-	-	✓	G2
RFID	-	✓	✓	H1
Credit/debit card reader compatibility (NFC)	-	-	✓	H2
Corrosion protection C5-M	-	-	✓	J2
Enclosure colour grey (RAL 7016)	✓	✓	✓	K2
Stainless steel enclosure	-	✓	✓	K3
I/O interface	-	✓	✓	L1
Datalogger	-	-	✓	M1
Cable holder	✓	✓	✓	N1
Dynamic Power Control	✓	✓	✓	Q1

[1] IK08 for display and ventilation grilles.

US

GENERAL SPECIFICATIONS

	BASIC	ADVANCED	PROFESSIONAL
Model Reference	UWB2P	UWA2P	UWP2P
Energy measurement	-	Internal energy measurement	Internal energy measurement
	-	-	Revenue meter
Communications	-	Ethernet + Wifi	Ethernet + Wifi + 3G/4G card + OCPP 1.6
Authentification	Bluetooth	Bluetooth	Bluetooth
AC input	208V or 240V AC single-phase: L1, L2, and earth		
Maximum output current per connector	32 A (adjustable)		
Maximum output power per connector	6,7 kW or 7,7 kW		
Connectors	1 x AC Type 1		
Cable length [ft]	12		
External enclosure	NEMA 3R		
	Colour white (RAL 9016) / Glass colour black		
	Corrosion protection C3		
Operating temperature	-25ºC to 50ºC		
Operating humidity	From 4% to 95%		
Interface	Customer smartphone App - Status LED indicator - Timetable programming		
Dimensions [ft]	0.98x0.98x0.6 (preliminary)		
Regulations	UL 2594, FCC Part 15 Class B, NEC 625		

OPTIONAL PRODUCT REFERENCES

	BASIC	ADVANCED	PROFESSIONAL	OPTIONAL REF.
2 x AC Type 1	✓	✓	✓	A2
Cable 13.1 ft (spiral)	✓	✓	✓	B2
Cable 18 ft (straight)	✓	✓	✓	B3
Internal energy measurement	✓	-	-	C1
Revenue meter	-	✓	-	C2
Second 3G/4G card	-	-	✓	G2
RFID	-	✓	✓	H1
Credit/debit card reader compatibility (NFC)	-	-	✓	H2
Corrosion protection C5-M	-	-	✓	J2
Enclosure colour grey (RAL 7016)	✓	✓	✓	K2
Stainless steel enclosure	-	✓	✓	K3
I/O interface	-	✓	✓	L1
Datalogger	-	-	✓	M1
Cable holder	✓	✓	✓	N1
Dynamic Power Control	✓	✓	✓	Q1
Plug-in version Nema 6-50	✓	✓	✓	R1

CONFIGURATION TABLE

MODEL REFERENCE										OPTIONAL PRODUCT REFERENCES	
Model		**Enclosure**		**Versions**		**Input Voltage**		**Connection mode**			
H	IEC	W	Wall	B	Basic	2	230 Vac	S	Socket	A2	2 x AC connectors
							208/240 Vac			...	
U	US			A	Advanced	4	400 Vac	P	Cable + Plug	Q1	Dynamic Power Control
				P	Professional						

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