



NB 50 / NB 60

SIMULTANEOUS DC + AC CHARGING

USER-FRIENDLY INTERFACE

SMART FLEET MANAGEMENT

BUS PLUS READY

BACK-OFFICE INTEGRATION OCPP 1.6

THE COMBINATION OF AESTHETICS AND ADVANCED FUNCTIONALITIES

NB 50 / NB 60 is an outdoor, robust and attractive charger, designed for durability, reliability and ease of maintenance. With output power up to 50 kW in DC (60 kW in US and 43 kW in AC (7.7 kW in US)), NB 50 / NB 60 allows the simultaneous charging of two vehicles in DC and AC. NB 50 / NB 60 can be set to charge at 400 or 800 Vdc depending on battery characteristics of the electric vehicle. Its smart design offers a simple, fast and safe charging experience, which makes it being the best solution for sites that require the combination of design, high power and innovation.

SIMULTANEOUS DC + AC CHARGING

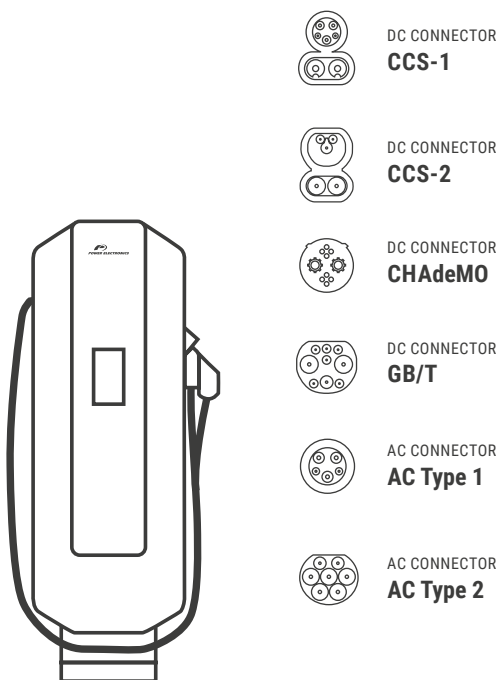
NB 50 / NB 60 has been designed to obtain the maximum income with a stand-alone charger.

Connector types

Each charger can install up to three connectors per post, allowing the simultaneous charging of two vehicles 1 in DC and 1 in AC. The charger is compatible with the most extended connectors for DC charging (CCS, CHAdeMO and GB/T) and AC.

High DC voltage retrofit

NB 50 / NB 60 allows an easy retrofit to charge at different voltage levels depending on the electric vehicle battery configuration. The maximum charging voltage can be 500 Vdc or 1000 Vdc.



USER-FRIENDLY INTERFACE

Intuitive experience

With a user-friendly interface, the 10" display allows an optimal user experience and the visualization of statistics of the charging processes. Power Electronics posts integrate a status indicator so that the drivers can easily identify its availability. It provides drivers a fast, safe and simple interaction.



Payment and authentication system

Every charging post is compatible with the most extended payment and authentication systems, 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.



Smartphone

Power Electronics' NB Charger smartphone application allows monitoring and the scheduling charging sessions, consult statistics and historical, update the software version, define users' roles and manage the charging energy.

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%

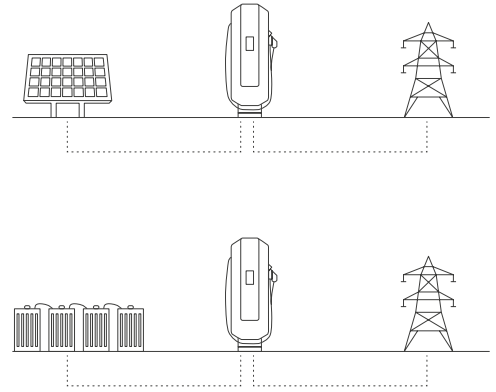
Vehicle 3
Normal preference 20%

Vehicle 4
Low preference 10%



BUS PLUS READY

NB 50 / NB 60 can connect to a DC power supply to provide electric vehicle charging power. The power source could be the photovoltaic energy, a battery system or the utility grid.



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 and advertisement.

AC charging

It is possible to include an AC Type 1 or 2 charging connector, which allows a charging power up to 43 kW or 7.7 kW in US.

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 charging post.



EXAMPLES OF POST CUSTOMIZATIONS

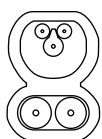


NB 50

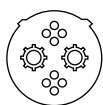
IEC

DC OUTPUT (default)	Power [kW]	50
	Voltage range [V]	50 - 500 / 150 - 1000
	Current [A]	125
	Available connectors	CCS-2 ^[1] , GB/T, CHAdeMO
AC OUTPUT (option)	Power [kW]	22 / 43
	Voltage range [V]	400 ± 10 %
	Current [A]	32 / 63
	Available connectors	AC Type 2 ^[1]
AC INPUT FOR DC OUTPUT	Power [kW]	53
	Voltage [V]	400 ± 10 %
	Current [A]	76
	Power factor	> 0.99
	Frequency [Hz]	50 / 60
	Efficiency	94 % (preliminary)
GENERAL	Interface	10" touchscreen
		Emergency stop (optional)
		Status LED indicator
		Credit / debit card reader compatibility (optional)
		RFID card reader (optional)
	Protections	Isolation monitor
		RCD Type A ^[2]
		MCB
		Surge arrester (optional): Type 2 / Type 1+2
	Others	Smart Fleet Management
		MID meter (optional) ^[3]
		Vehicle detection (optional)
		Datalogger (optional)
	Cable length [m] ^[4]	3
	Enclosure colour	White (RAL 9016 - microtexture painting) / Black glass
	Customization	Enclosure / Foot / Glass / Logo / Display
	Degree of protection	IP54 IK10 ^[5]
	Operating temperature	From -25°C to 50°C (optionally, from -30°C to 50°C)
	Relative humidity	4% - 95%
	Maximum altitude (above sea level)	2000 m; > 2000 m power derating (max. 3000 m)
	Communications	Ethernet
OCPP 1.6		
Wifi (optional)		
Wifi + 3G / 4G connectivity (optional)		
	Ethernet switch (optional)	
Dimensions (W x D x H) [mm]	600 x 700 x 1800	
Regulation	IEC 61851-1, IEC 61851-23, IEC 61851-24, IEC 61000-6-2, IEC 61000-6-3	

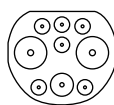
AVAILABLE DC CONNECTORS



CCS-2

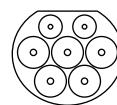


CHAdeMO



GB/T

AVAILABLE AC CONNECTORS



AC Type 2

[1] Type 1 under request.
 [2] RCD Type A + reset optional. RCD Type A + RCM for AC charge if it is included.

[3] Available for DC and AC charge.
 [4] Optional cable length of 5 m.

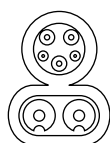
[5] IK08 for display and ventilation grilles.

NB 60

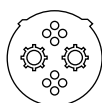
US

DC OUTPUT (default)	Power [kW]	60
	Voltage range [V]	50 - 500 / 150 - 1000
	Current [A]	150
	Available connectors	CCS-1, CHAdeMO, GB/T
AC OUTPUT (option)	Power [kW]	6.7 - 7.7
	Voltage range [V]	208 / 240 ± 10 %
	Current [A]	32
	Available connectors	Type 1
AC INPUT FOR DC OUTPUT	Power [kW]	64
	Voltage [V]	480 ± 10 %
	Current [A]	76
	Power factor	> 0.99
	Frequency [Hz]	60
	Efficiency	94 % (preliminary)
GENERAL	Interface	10" touchscreen
		Emergency stop (optional)
		Status LED indicator
		Credit / debit card reader compatibility (optional)
		RFID card reader (optional)
	Protections	Isolation monitor
		RCD Type A ^[1]
		MCB
		Surge arrester (optional): Type 2 / Type 1+2
	Others	Smart Fleet Management
		Revenue meter (optional) ^[2]
		Vehicle detection (optional)
		Datalogger (optional)
	Cable length [ft] ^[3]	9.8
	Enclosure colour	White (RAL 9016 - microtexture painting) / Black glass
	Customization	Enclosure / Foot / Glass / Logo / Display
	Degree of protection	NEMA 3R
	Operating temperature	From -25°C to 50°C (optionally, from -30°C to 50°C)
	Relative humidity	4% - 95%
	Maximum altitude (above sea level)	2000 m; > 2000 m power derating (max. 3000 m)
	Communications	Ethernet
		OCPP 1.6
Wifi (optional)		
Wifi + 3G / 4G connectivity (optional)		
Ethernet switch (optional)		
Dimensions (W x D x H) [ft]	2 x 2.3 x 5.9	
Regulation	UL 2202, UL 2594, NEC 625, FCC Part 15 Class A	

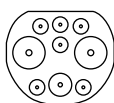
AVAILABLE DC CONNECTORS



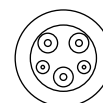
CCS-1



CHAdeMO



GB/T



AC Type 1

AVAILABLE AC CONNECTORS

[1] CCID for AC charge if it is included.
 [2] Available for DC and AC charge.

[3] Optional cable length of 18 ft.