



# NB Dispenser

FLEXIBLE ARCHITECTURE

USER-FRIENDLY INTERFACE

SMART POWER BALANCE

BUS PLUS READY

BACK-OFFICE INTEGRATION OCPP 1.6

## THE COMBINATION OF MODULARITY AND HIGH PERFORMANCE

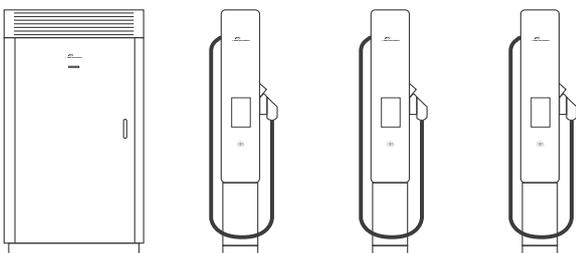
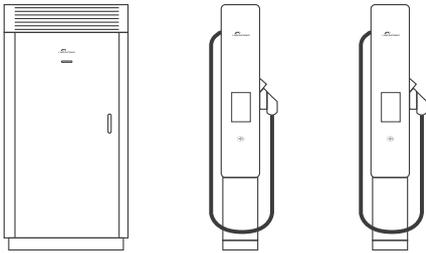
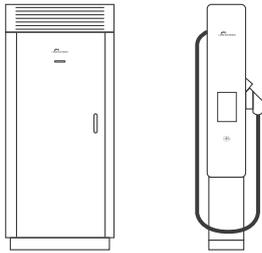
NB Dispenser is an outdoor robust and modular charger, designed for durability, reliability and ease of maintenance. Thanks to its flexible architecture NB Dispenser series allows the installation in any location. The charging solution consists of a power cabinet with low voltage input, which combines with commercial posts. With output power up to 150 kW in DC (180 kW in US), NB Dispenser allows the simultaneous charging of three vehicles thanks to the advanced functionality, Smart Power Balance. NB Dispenser can be configured to charge either at 400 or 800 Vdc depending on the characteristics of the electric vehicle battery. 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.

# FLEXIBLE ARCHITECTURE

**NB Dispenser is the charging solution for locations where space is at a premium.**

The NB Dispenser series is a DC charging solution with low voltage input consisting of a power cabinet which supplies energy to commercial charging posts. The posts offer a user interface simple and attractive, meeting current safety standards.

The available power cabinet configurations are from 50 kW to 150 kW (from 60 kW up to 180 kW in US) and are combined with DC post of 50, 100 and 150 kW (60, 120 and 180 kW in US).



# 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

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.

# SMART POWER BALANCE

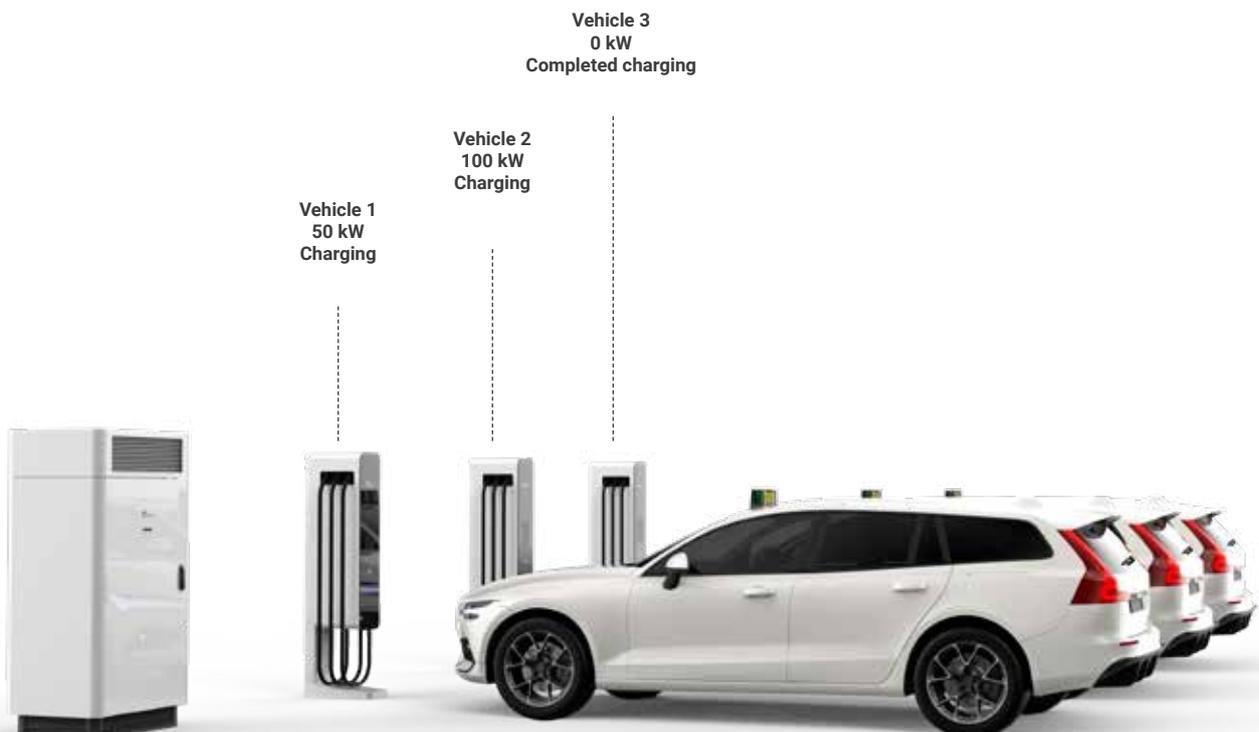
**Power Electronics has developed the most advanced functionality for power balancing in vehicle fleet management. Designed to minimize the initial investment and the operation costs.**

**Smart Power Balance** 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.

## CONFIGURATION EXAMPLE

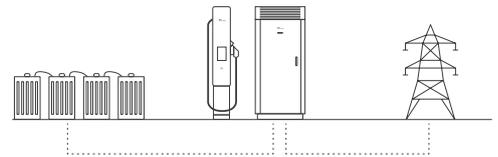
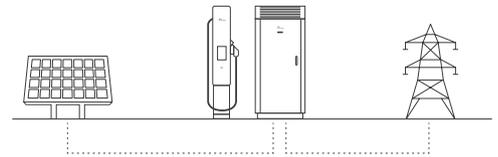
NBD150S

Three NBDC100 posts of 100 kW



# BUS PLUS READY

NB Dispenser 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 CUSTOMIZATIONS

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## NB DISPENSER

IEC

REFERENCE	NBD050	NBD100 NBD100S	NBD150 NBD150S	
<b>DC OUTPUT (default)</b>	Power cabinet maximum output power [kW]	50	100	150
	Post maximum power [kW]	50	50 / 100	50 / 100 / 150
	Voltage range [V]	50 - 500 / 150 - 1000		
	Available connectors	CCS-2 <sup>[1]</sup> , CHAdeMO, GB/T		
<b>AC OUTPUT (option)</b>	Power [kW]	22 / 43		
	Current [A]	32 / 63		
	Voltage [V]	400 ± 10 % (3ph + N + PE)		
	Available connectors	AC Type 2 <sup>[1]</sup>		
<b>AC INPUT FOR DC OUTPUT</b>	Power [kW]	53	106	159
	Voltage [V]	400 ± 10 % (3ph + N + PE)		
	Power factor	> 0.99		
	Frequency [Hz]	50		
	Efficiency	94 % (preliminary)		
<b>GENERAL</b>	Interface	10" touchscreen		
		Post status LED indicator		
		Emergency stop (optional)		
		Credit / debit card reader compatibility (optional)		
		RFID card reader (optional)		
		Protections	Isolation monitor	
	RCD Type A <sup>[2]</sup>			
	Fuses			
	Surge arrester (optional): Type 2 / Type 1+2			
	Others	MID meter (optional)		
		Vehicle detection (optional)		
		Datalogger (optional)		
	Cable length [m] <sup>[3]</sup>	3		
	Degree of protection	IP54   IK10 <sup>[4]</sup>		
	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)		
	Enclosure power cabinet colour	Grey (RAL 7035 - microtexture painting)		
	Enclosure post colour	White (RAL 9016 - microtexture painting) / Black glass		
	Customization	Enclosure / Foot / Glass / Logo / Display		
Communications	Ethernet			
	OCPP 1.6			
	Wifi (optional)			
	Wifi + 3G / 4G connectivity (optional)			
Post dimensions with pedestal (W x D x H) [mm]	300 x 500 x 1800			

## STANDARD CONFIGURATIONS

REFERENCE	SMART POWER BALANCE	POSTS			
		NBDC050	NBDC100	NBDC150	NBDC150C <sup>[5]</sup>
NBD050	-	1	-	-	-
NBD100	-	2	1	-	-
NBD100S	√	-	2	-	-
NBD150	-	3	-	1	1
NBD150S	√	-	3	3	3

[1] Type 1 under request.

[2] RCD type A + RCM + MCB for AC charge, if it is included.

[3] Optional cable length 5 m.

[4] IK08 for display and ventilation grilles.

[5] Cooled connector.

## NB DISPENSER

US

REFERENCE	NBD060	NBD120 NBD120S	NBD180 NBD180S
<b>DC OUTPUT (default)</b>	Power cabinet maximum output power [kW]	60	120
	Post maximum power [kW]	60	60 / 120
	Voltage range [V]	50 - 500 / 150 - 1000	
	Available connectors	CCS-1, CHAdEMO, GB/T	
<b>AC OUTPUT (option)</b>	Power [kW]	6.7 / 7.7	
	Current [A]	32	
	Voltage [V]	208 / 240 ± 10 % (L1, L2, PE)	
	Available connectors	AC Type 1	
<b>AC INPUT FOR DC OUTPUT</b>	Power [kW]	64	128
	Voltage [V]	480 ± 10 % (3ph + N + PE)	
	Power factor	> 0.99	
	Frequency [Hz]	60	
	Efficiency	94 % (preliminary)	
<b>GENERAL</b>	Interface	10" touchscreen	
		Post status LED indicator	
		Emergency stop (optional)	
		Credit / debit card reader compatibility (optional)	
		RFID card reader (optional)	
		Isolation monitor	
	Protections	RCD Type A <sup>[1]</sup>	
		Fuses	
		Surge arrester (optional): Type 2 / Type 1+2	
		Revenue meter (optional)	
	Others	Vehicle detection (optional)	
		Datalogger (optional)	
		Cable length [ft] <sup>[2]</sup>	
	Cable length [ft] <sup>[2]</sup>	9.84	
	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)	
	Enclosure power cabinet colour	Grey (RAL 7035 - microtexture painting)	
	Enclosure post colour	White (RAL 9016 - microtexture painting) / Black glass	
	Customization	Enclosure / Foot / Glass / Logo / Display	
Communications	Ethernet		
	OCPP 1.6		
	Wifi (optional)		
	Wifi + 3G / 4G connectivity (optional)		
Post dimensions (W x D x H) [ft]	1.0 x 1.6 x 5.9		

## STANDARD CONFIGURATIONS

REFERENCE	SMART POWER BALANCE	POSTS				
		NBDC060	NBDC120	NBDC120C <sup>[3]</sup>	NBDC180	NBDC180C <sup>[3]</sup>
NBD060	-	1	-	-	-	-
NBD120	-	2	1	1	-	-
NBD120S	√	-	2	2	-	-
NBD180	-	3	-	-	1	1
NBD180S	√	-	3	3	3	3

[1] CCID + MCB for AC charge, if it is included.  
[2] Optional cable length 18 ft.

[3] Cooled connector.