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.
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.

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

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

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 NDBC100 posts of 100 kW
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.

**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.

**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.
EXAMPLES OF CUSTOMIZATIONS

Consult with Power Electronics for other options and colours.
## POWER ELECTRONICS

### NB DISPENSER

#### DC OUTPUT (default)
- **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[^1], CHAdeMO, GB/T

#### AC OUTPUT (option)
- **Power [kW]**: 22 / 43
- **Current [A]**: 32 / 63
- **Voltage [V]**: 400 ± 10 % (3ph + N + PE)
- **Available connectors**: AC Type 2[^2]

#### AC INPUT FOR DC OUTPUT
- **Power [kW]**: 53, 106, 159
- **Voltage [V]**: 400 ± 10 % (3ph + N + PE)
- **Power factor**: > 0.99
- **Frequency [Hz]**: 50
- **Efficiency**: 94 % (preliminary)

#### GENERAL
- **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[^2]
- **Surge arrester (optional): Type 2 / Type 1+2**
- **Others**: MID meter (optional)
- **Vehicle detection (optional)**
- **Datalogger (optional)**
- **Cable length [m]**[^3]: 3
- **Degree of protection**: IP54 | IK10[^4]
- **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

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>SMART POWER BALANCE</th>
<th>POSTS</th>
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<tbody>
<tr>
<td>NBD050</td>
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<td>NBD050</td>
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<td>NBD100</td>
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<tr>
<td>NBD150S</td>
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[^1]: Type 1 under request.
[^2]: RCD type A + RCM for AC charge, if it is included.
[^3]: Optional cable length 5 m.
[^4]: IK08 for display and ventilation grilles.
[^5]: Cooled connector.
### DC OUTPUT (default)
- **Power cabinet maximum output power [kW]**: 60 / 120 / 180
- **Post maximum power [kW]**: 60 / 60 / 120 / 180
- **Voltage range [V]**: 50 - 500 / 150 - 1000
- **Available connectors**: CCS-1, CHAdeMO, GB/T

### AC OUTPUT (option)
- **Power [kW]**: 6.7 / 7.7
- **Current [A]**: 32
- **Voltage [V]**: 208 / 240 ± 10 % (L1, L2, PE)
- **Available connectors**: AC Type 1

### AC INPUT FOR DC OUTPUT
- **Power [kW]**: 64 / 128 / 191
- **Voltage [V]**: 480 ± 10 % (3ph + N + PE)
- **Power factor**: > 0.99
- **Frequency [Hz]**: 60
- **Efficiency**: 94 % (preliminary)

### GENERAL
- **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 \(^1\), MCB
- **Surge arrester (optional)**: Type 2 / Type 1+2
- **Others**: Revenue meter (optional), Vehicle detection (optional), Datalogger (optional)
- **Cable length [ft]**: 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

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\(^1\) CCID for AC charge, if it is included.  
\(\text{[2]}\) Optional cable length 18 ft.  
\(\text{[3]}\) Cooled connector.