**NBi Dispenser**

THE COMBINATION OF MODULARITY AND HIGH PERFORMANCE

NBi Dispenser is an outdoor robust and modular charger, designed for durability, reliability and ease of maintenance. Thanks to its flexible architecture NBi Dispenser series allows the installation in any location. The charging solution consists of a power cabinet with low voltage input, which combines with industrial posts. With output power of up to 150 kW in DC (180 kW in US), NBi Dispenser allows the simultaneous charging of three vehicles thanks to the advanced functionality, Smart Power Balance. NBi 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 with space reduced that require maximum return on investment.
FLEXIBLE ARCHITECTURE

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

The NBi Dispenser series is a DC charging solution with low voltage input consisting of a power cabinet which supplies energy to industrial charging posts. 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
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 Industrial
Three charging posts NBDI100 of 100 kW
NBi 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 for the central power station and the posts. The colour can be modified or logos and advertising can be added.

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

Consult with Power Electronics for other options and colours.
**Power Electronics**

**NBI Dispenser**

### DC Output (Default)
- **Power Cabinet Maximum Output Power [kW]**
  - NBD050: 50
  - NBD100: 100
  - NBD150: 150
- **Post Maximum Power @ 800 Vdc [kW]**
  - NBD050: 50
  - NBD100: 50 / 100
  - NBD150: 50 / 100 / 150
- **Voltage Range [V]**
  - 50 - 500 / 150 - 1000
- **Available Connectors**
  - CCS-2, 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

### AC Input for DC Output
- **Power [kW]**
  - 53
  - 106
  - 159
- **Voltage [V]**
  - 400 ± 10 % (3ph + N + PE)
- **Power Factor**
  - > 0.99
- **Efficiency**
  - 94 % (Preliminary)

### General
- **Interface**
  - Post Status LED indicator
  - Button to Stop Charging
  - Emergency Stop (Optional)
  - RFID Card Reader (Optional)
- **Protections**
  - Isolation Monitor
  - RCD Type A
  - MCB
  - Surge Arrester (Optional): Type 2 / Type 1+2
- **Others**
  - MID Meter (Optional)
  - Vehicle Detection (Optional)
  - Datalogger (Optional)
- **Cable Length [m]**
  - 4
- **Degree of Protection**
  - IP54 | IK10
- **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)
- **Post Colour (Enclosure / Foot)**
  - White (RAL 9016 - Microtexture Painting) / Grey (RAL 7016 - Microtexture Painting)
- **Customization**
  - Enclosure
- **Communications**
  - Ethernet
  - OCPP 1.6
  - WiFi (Optional)
  - WiFi + 3G / 4G Connectivity (Optional)
- **Post Dimensions with Pedestal (W x D x H) [mm]**
  - 600 x 300 x 800 (1445 with Pedestal)

### Standard Configurations

<table>
<thead>
<tr>
<th>Reference</th>
<th>Smart Power Balance</th>
<th>Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBD050</td>
<td>-</td>
<td>NBD1050</td>
</tr>
<tr>
<td>NBD100</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>NBD100S</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>NBD150</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>NBD150S</td>
<td>√</td>
<td>-</td>
</tr>
</tbody>
</table>

[1] Maximum power @ 800 Vdc.
[2] Type 1 under request.
[3] Optional cable length 7 m.
### DC OUTPUT (default)

<table>
<thead>
<tr>
<th></th>
<th>NBD060</th>
<th>NBD120</th>
<th>NBD180</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cabinet maximum output power [kW]</td>
<td>60</td>
<td>120</td>
<td>180</td>
</tr>
<tr>
<td>Post maximum power @ 800 Vdc [kW]</td>
<td>60</td>
<td>60 / 120[1]</td>
<td>60 / 120[1] / 180[1]</td>
</tr>
<tr>
<td>Voltage range [V]</td>
<td>50 - 500 / 150 - 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available connectors</td>
<td>CCS-1, CHAdeMO, GB/T</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### AC OUTPUT (option)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power [kW]</td>
<td>6.7 / 7.7</td>
<td></td>
</tr>
<tr>
<td>Current [A]</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Voltage [V]</td>
<td>208 / 240 ± 10 % (L1, L2, PE)</td>
<td></td>
</tr>
<tr>
<td>Available connectors</td>
<td>AC Type 1</td>
<td></td>
</tr>
</tbody>
</table>

### AC INPUT FOR DC OUTPUT

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power [kW]</td>
<td>64</td>
<td>128</td>
</tr>
<tr>
<td>Voltage [V]</td>
<td>480 ± 10 % (3ph + N + PE)</td>
<td></td>
</tr>
<tr>
<td>Power factor</td>
<td>&gt; 0.99</td>
<td></td>
</tr>
<tr>
<td>Frequency [Hz]</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>94 % (preliminary)</td>
<td></td>
</tr>
</tbody>
</table>

### GENERAL

**Interface**
- Post status LED indicator
- Button to stop charging
- Emergency stop (optional)
- RFID card reader (optional)

**Protections**
- Isolation monitor
- RCD Type A
- MCB
- Surge arrester (optional): Type 2 / Type 1+2

**Others**
- Revenue meter (optional)
- Vehicle detection (optional)
- Datalogger (optional)

**Cable length [ft][2]**
- 13.12

**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)

**Post colour (enclosure / foot)**
- White (RAL 9016 - microtexture painting) / Grey (RAL 7016 - microtexture painting)

**Customization**
- Enclosure

**Communications**
- Ethernet
- OCPP 1.6
- Wifi (optional)
- Wifi + 3G / 4G connectivity (optional)

**Post dimensions (W x D x H) [ft]**
- 2.0 x 1.0 x 2.6 (3.8 with pedestal)

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**STANDARD CONFIGURATIONS**

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>SMART POWER BALANCE</th>
<th>POSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBD060</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>NBD120</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>NBD120S</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>NBD180</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>NBD180S</td>
<td>√</td>
<td>-</td>
</tr>
</tbody>
</table>

[1] Maximum power @ 800 Vdc.