Nidec Conversion

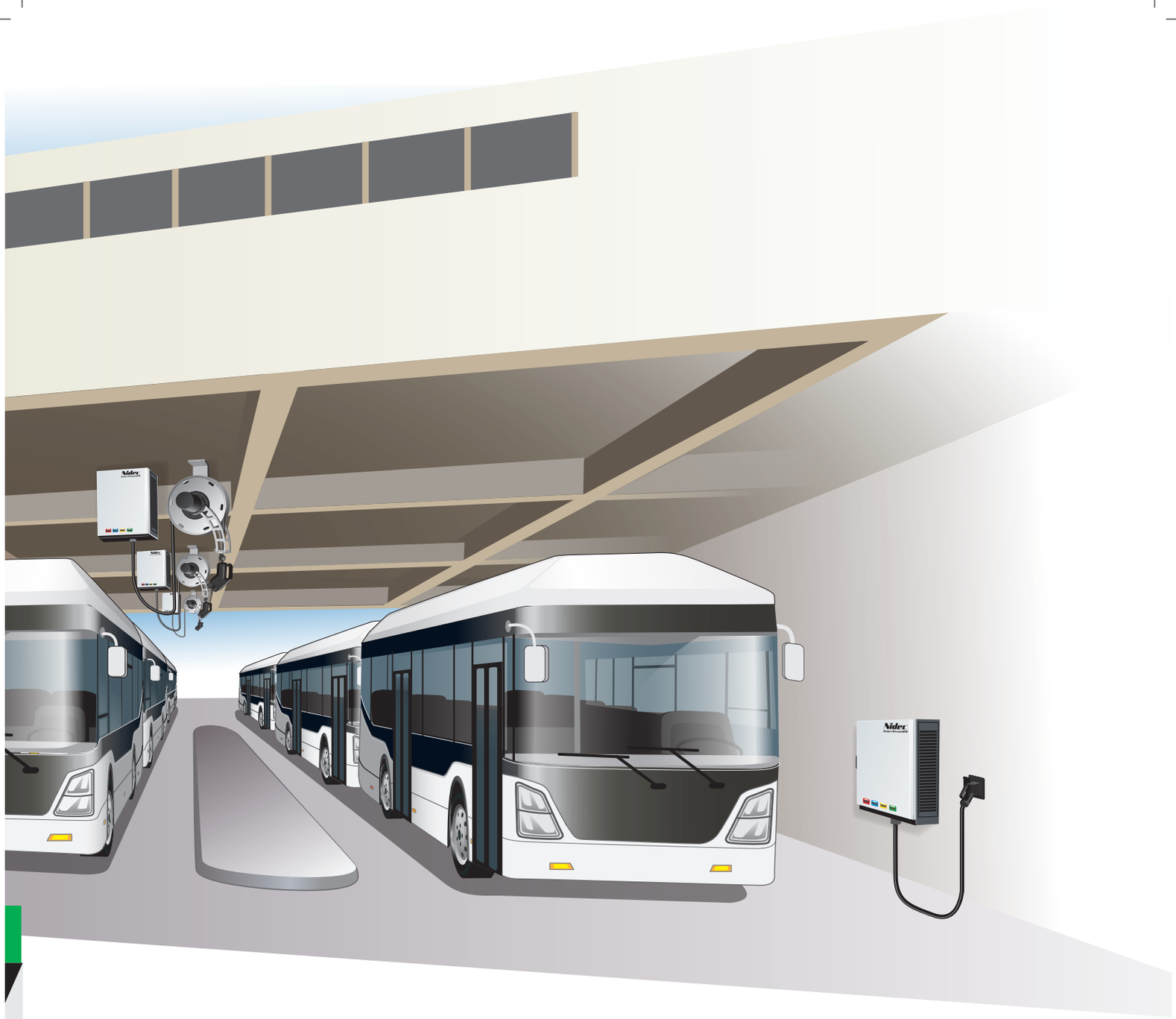
DirectPowerPS™

PowerCharge Hub

FLEXIBLE, ADAPTABLE AND COST-EFFICIENT

Empower your fleet with **PowerCharge Hub** – a compact and versatile charging solution for all types of electric vehicles, from cars to buses and trucks.

PowerCharge Hub is a cutting-edge EV charging system designed to meet the dynamic needs of businesses with expanding infrastructure. By decoupling the power unit from the PowerCharge Hubs, Nidec's innovative distributed architecture delivers a flexible, high-performance charging solution that is both cost-effective and adaptable. Tailored for fleet operations and depot environments, **PowerCharge Hub** maximizes energy efficiency while allowing for seamless scalability as your business evolves. Its modular design ensures a future-proof solution that can easily accommodate increasing demand, all while keeping operational costs to a minimum.



ADAPTABLE SOLUTIONS

DEPOT CHARGING TRANSFORMED:
24/7 GUARANTEED RELIABILITY

Smart Overnight Charging for Electric Buses and Trucks.

Optimize your depot with efficient charging solutions - cable reels, control units, and energy management. Save space, reduce costs, and ensure reliable charging for electric buses and trucks. With overnight smart charging, your fleet will make a fresh start every morning, ready to run the business.

DAILY ELECTRIC DELIVERY FLEETS:
CHARGE AND GO

Revolutionize your logistics operations with Nidec's dedicated charging hub solution.

Equipped with cable reels, smart PowerCharge Hub, and seamless power management integration, our solution minimizes downtime and eliminates cable clutter. Ensure your electric delivery vans are always charged and ready to hit the road. Keep your fleet running smoothly and swiftly, day after day!

HIGHWAY CHARGING REDEFINED:
PARK, REST, AND RECHARGE EFFORTLESSLY

Upgrade your highway service station with advanced EV charging solutions featuring smart control units.

Offer drivers a seamless "park and charge" experience, integrated payment systems, and reliable power management. Attract more customers and keep them coming back with fast, convenient, and hassle-free charging.

GROUND SUPPORT REVOLUTIONIZED:
CHARGE SMARTLY WITH EFFICIENT REELS SYSTEMS

Transform your airport ground support operations with innovative charging solutions for electric vehicles, including baggage tugs and pushback tractors.

Nidec's extended flexible cable systems at aircraft gates and maintenance areas ensure vehicles are always ready for action. With advanced control units featuring RFID authentication, operators can easily connect and track energy usage, minimizing manual handling of heavy cables. Enhance efficiency, reduce downtime, and keep your fleet operational with our smart charging application.

CONSTRUCTION & MUNICIPAL FLEETS:
RUGGED & SMART CHARGING SOLUTIONS

From heavy-duty construction sites to city maintenance fleets, Nidec's robust charging systems deliver reliable power where you need it most.

Featuring weatherproof cable reels, smart load management, and automated operation, our solutions enable safe electrification of equipment while optimizing energy use - helping construction teams and municipalities reduce emissions, cut costs, and meet sustainability targets.

MARITIME CHARGING:
AN OVERHAUL APPROACH TO CHARGING SOLUTIONS

Nidec's PowerCharge Hub offers efficient and versatile power solutions for boats, ferries, and ships, enabling seamless charging operations.

Designed for marine environments, it supports both vessel and electric vehicle charging at ports. With enhanced safety features and an intuitive interface, this durable unit promotes sustainable energy practices while optimizing port efficiency.

DESIGN ENGINEERED FOR EV FLEETS

1- Reduce Costs & Boost Efficiency

Nidec's innovative power management system allows customers to reduce their initial investment compared to traditional charging hubs. The system efficiently handles high demand from large fleets with substantial battery capacities, ensuring high efficiency and lower installation costs for operators and installers.

Additionally, our system features Intelligent Load Management, which optimizes power distribution among chargers. This not only minimizes operational costs and peak demand charges but also promotes efficient energy use.

2- Smart Scaling for Highly Demanding Charging Hubs

Easily expand your charging infrastructure

- Up to 2 Power units to increase to overall power availability
- Up to 12 charging points even with just 1 Conversion Unit
- Start with how many charging points you desire and then expand in the future
- Add power modules in 40kW increments for precise scalability

3- 1.28MW Total Power

Combine two 640kW conversion units for a total output of 1.28MW, ideal for high traffic areas and large Fleets. This scalable solution allows for capacity expansion to meet growing demand. Build a flexible, powerful charging network to maximize performance and future-proof infrastructure.

4- 200kW or 300kW Continuous Charging

Experience rapid charging with Nidec's Fleet control unit, designed to deliver 200kW and 300kW per connector. It is suitable for a wide range of vehicle types, from light-duty to heavy-duty commercial vehicles, making it an excellent choice for high-demand charging stations.

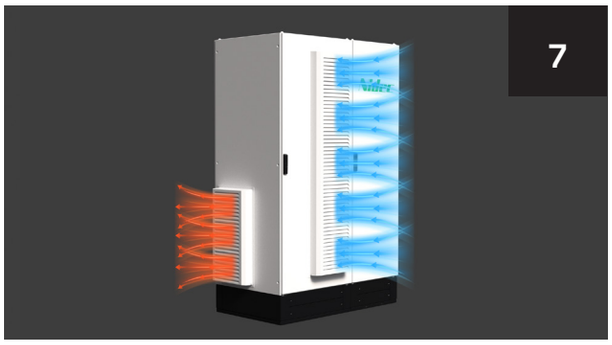
Nidec's control unit offers various installation options to meet your specific needs, ensuring flexibility and convenience in deployment. Whether you require a compact solution for urban environments or a robust setup for commercial fleets, we have the right configuration for you.

5- Multiple Variants of PowerCharge Hub & External User Interface Panel

Choose from our range of compact PowerCharge Hubs to suit various installation and operational needs. Each option is designed with unique benefits, catering to different environments and business models. Externally connected Touch Screen Panel available with Function to control and monitor the Charge sessions

6- Compact Charging Solutions

Maximize your space without compromising performance with Nidec's ultra-compact power unit, measuring just 800x800mm and delivering up to 640kW—ideal for limited spaces. The 450x450mm dispenser offers the highest output current. Designed for rapid installation, both units reduce on-site operation time by up to 50%. The simple maintenance procedure ensures easy management, minimizing downtime and enhanced operational efficiency.



7- Innovative Cooling System

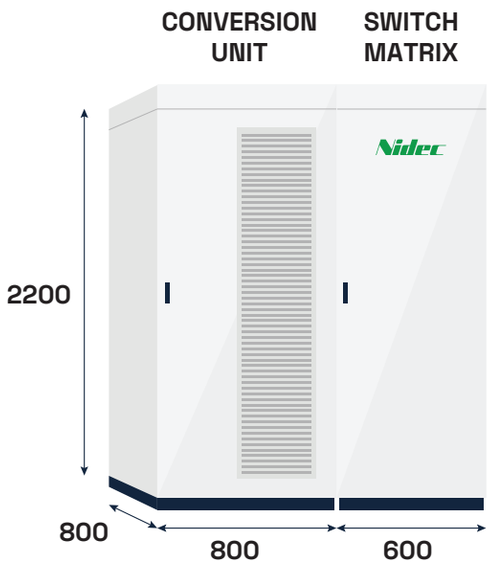
Achieve peak performance with our advanced cooling system, designed for maximum efficiency. It operates quietly while maintaining optimal power output, even in extreme temperatures, ensuring reliable performance without compromise.

8- 97% conversion efficiency to increase your profitability

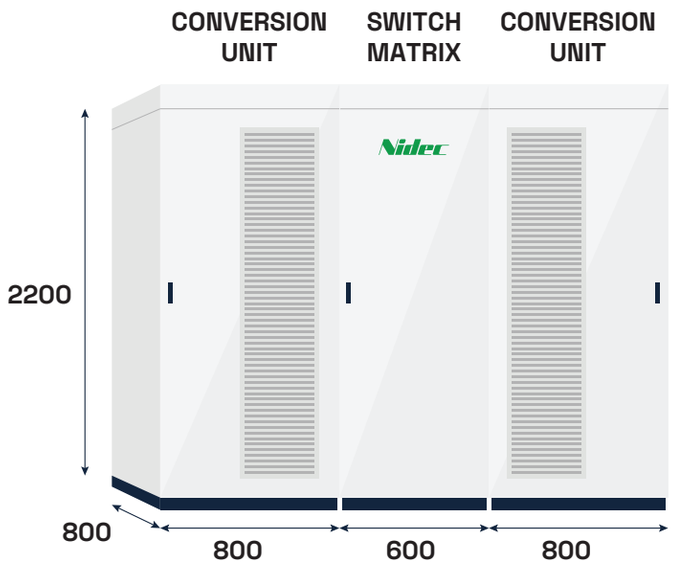
Harness cutting-edge technology with our power module, equipped with advanced SiC semiconductors for exceptional efficiency. This high-performance design delivers a peak efficiency of 97%, ensuring optimal energy utilization for your charging solutions.

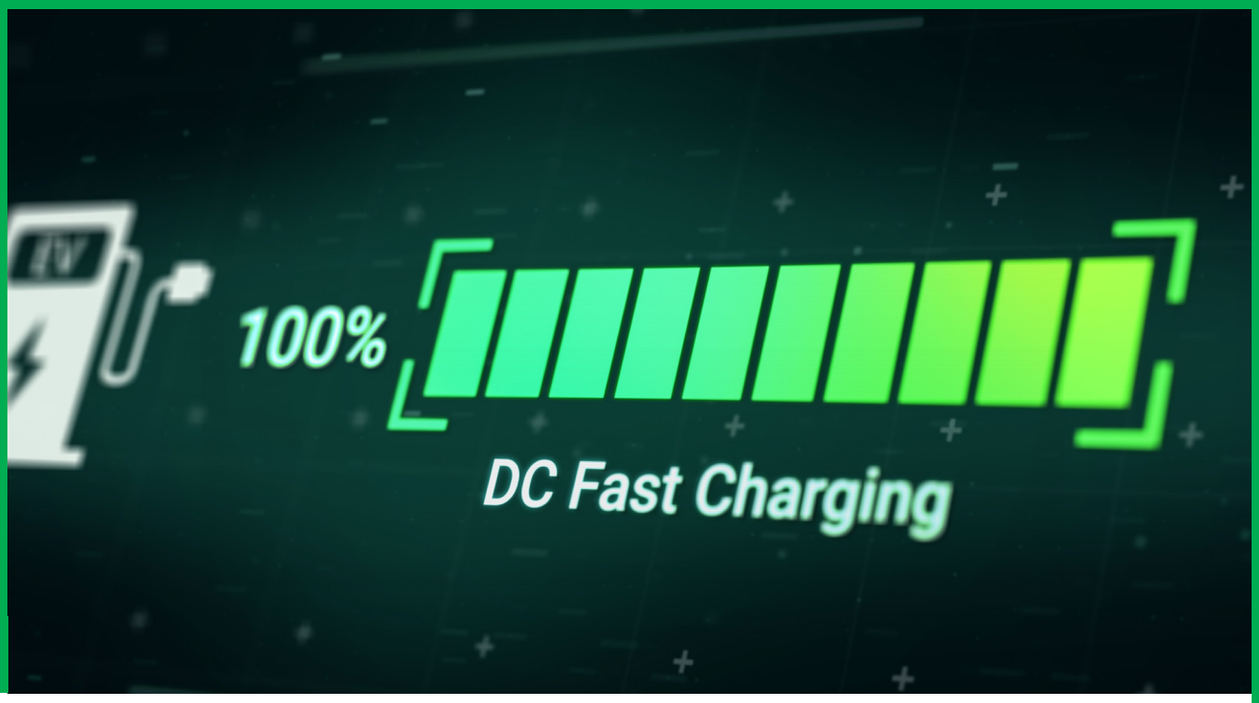
INOVATIVE COMPONENT & CONFIGURATIONS

POWER UNIT
UP TO 480kW OR 640kW



POWER UNIT
UP TO 1,28MW





CONVERTER UNIT:
The Converter unit is the core of the DirectPowerPS DC Split. Each converter unit comes in two configurations to delivers up to 480kW or 640kW of power, with scalable modules in 40kW increments. Designed for high efficiency and flexibility, these units can be also combined to reach a total output of 1.28MW.

Available configurations include:

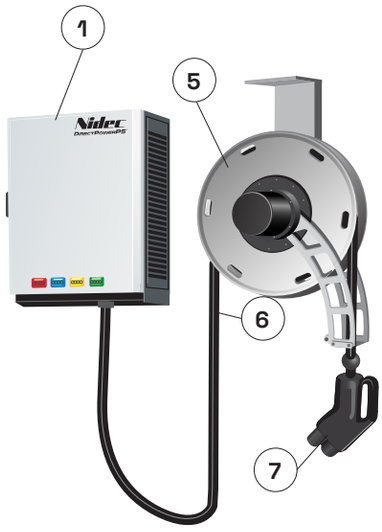
- Up to 480kW: Ideal for smaller charging sites and cost-effective solutions.
- Up to 640kW: Perfect for larger charging sites, providing maximum scalability.
- Parallel Configuration: Combine two converter units to reach up to 1.28MW.

SWITCH MATRIX:
With the capability to support up to 12 charging points and scale in increments of 40kW or 80kW by adding power groups, the DC Split Power Unit offers unprecedented scalability. This ensures you can expand your charging infrastructure as demand grows, without overinvesting in unused capacity.

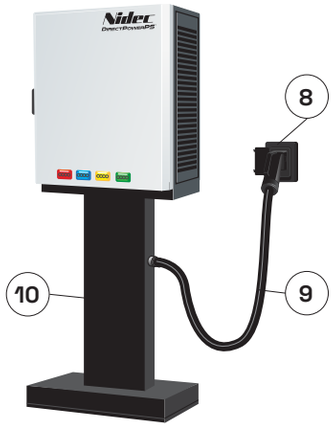
Each connector can deliver up to 480kW and 600A continuously, meeting the most demanding charging requirements. This high-power delivery ensures fast, efficient charging for all connected vehicles.

The PowerCharge Hub serves as the essential interface between the Power Unit and the electric vehicle, facilitating direct power deliver. Designed with user convenience in mind, these dispensers enable straightforward maintenance and upgrades, ensuring an improved charging experience.

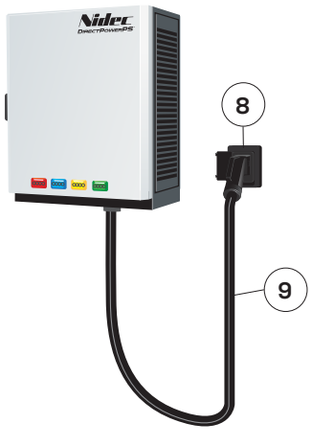
MOTORIZED CABLE REEL UNIT



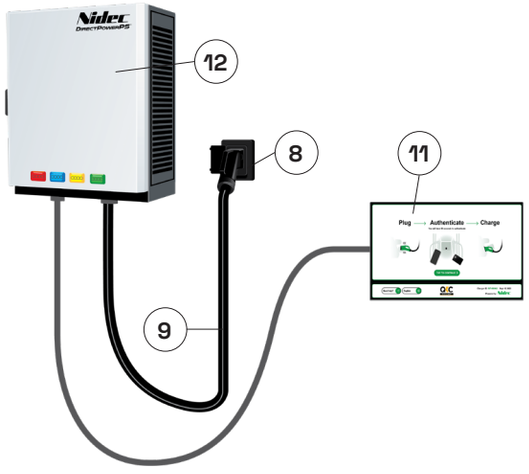
SPRING ACTIVATED CABLE REEL UNIT



CONTROL UNIT WITH PEDESTAL



WALL MOUNTED CONTROL UNIT



CONTROL UNIT WITH ACCESS PANEL

- Extended Switch or manual control for cable feed/wind back.
- Temperature monitoring and control
- Well-designed accessories for convenient mounting at any location
- Charging delivered simply without HMI & display options
- High delivered efficiency of Charging
- Robust pedestal stand for depot charging
- Effortless Wall Mounting with Compact Design
- Plug and Charge and AutoCharge function
- Safe & Reliable
- Externally connected 12.1" User Interface Display Panel
- Eliminate cable clutters and heavy cable handling options
- Schedule and control your charging sessions remotely
- Remote RFID and Payment terminal integrated
- DIN 70121 and ISO15118
- VDV261

DISPENSERS' FEATURES

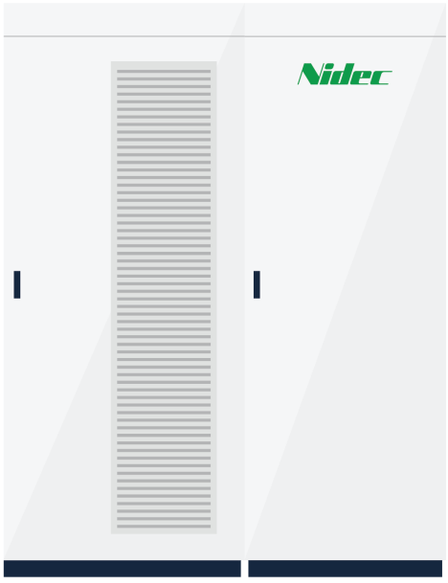
1. Control Unit
2. Motorized Cable Unit
3. 5m, 7m & 9.5m 250A Cable
4. 250A CCS2 Connector
5. Spring activated Cable Unit
6. 5m, 7m & 10m 375A Cable
7. 400A CCS2 Connector
8. 250A/375A CCS2 Connector
9. 5m & 7m 250A/375A Cable
10. Pedestal Stand
11. Control & Access Panel
12. Indication LEDs

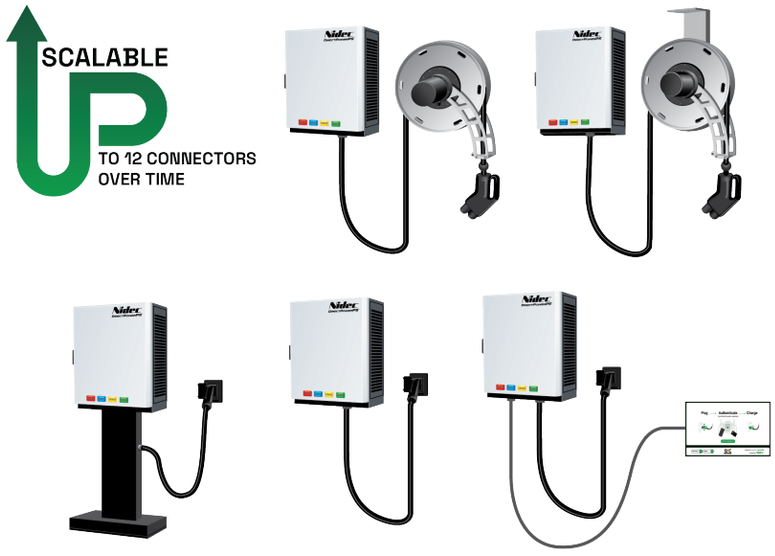
FLEXIBLE CONFIGURATIONS THAT GROW WITH YOUR CHARGING SITE

Experience unmatched flexibility, efficiency, and cost savings with the **PowerCharge Hub** Designed to meet the evolving demands of today's electric vehicle market, it provides scalable power solutions that grow with your needs. Future-proof your infrastructure and elevate your charging capabilities— **PowerCharge Hub** is the ideal partner for powering the future of mobility.

CONFIGURATION:
1 Converter unit + 1 switch matrix + up to 12 Dispensers/Connectors

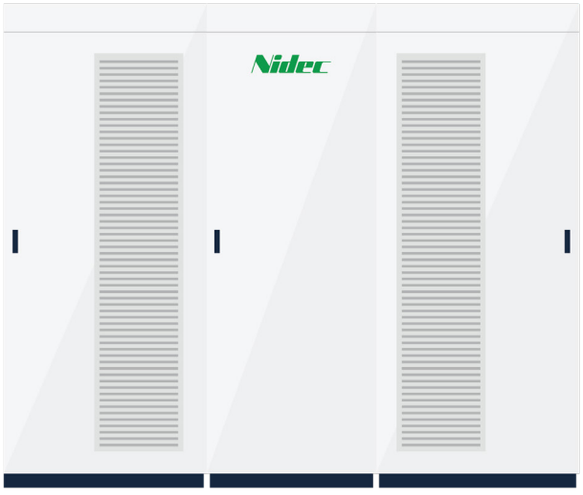
Converter unit: up to 480 or 640kW
DC Output: up to 480kW for every EV connector
Connectors: up to 12





CONFIGURATION:
2 Converter unit + 1 switch matrix + up to 12 Dispensers/Connectors

Converter unit: up to 1280kW
DC Output: up to 480kW for every EV connector
Connectors: up to 12



DATA SHEET

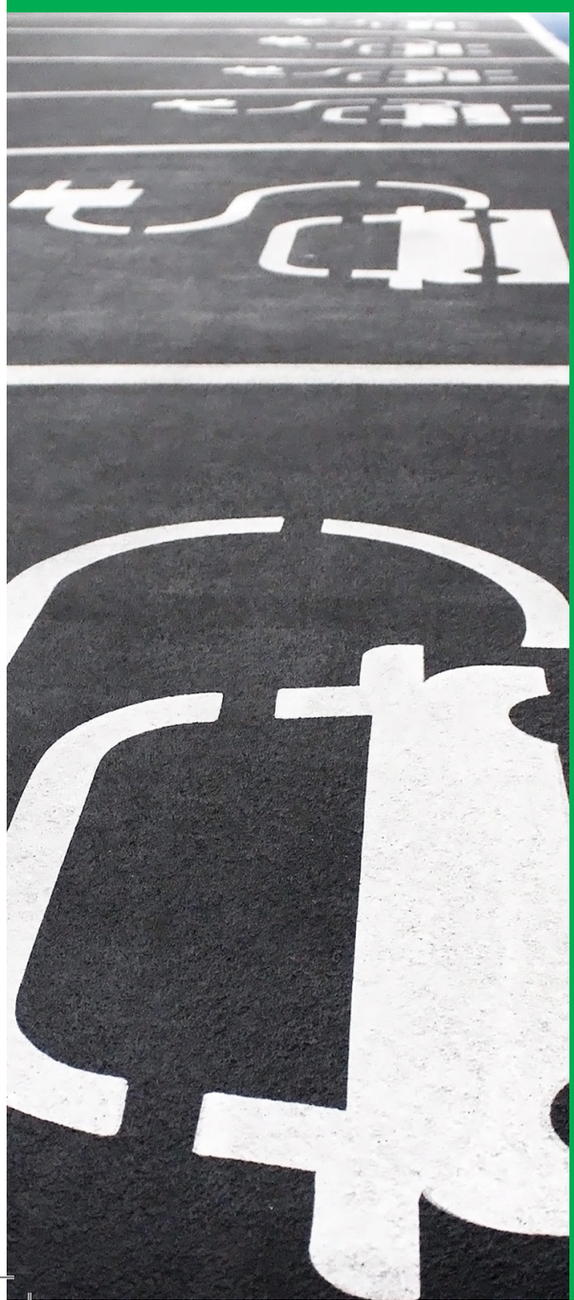
POWER UNIT		480kW	640kW	1280kW
AC INPUT	Earthing systems	TT, TN		
	Input voltage	400Vac (±10%), 50/60 Hz (±5%)		
	Input current	Up to 750A	Up to 1000A	Up to 2x1000A
	Power Consumption	Up to 515kVA	Up to 688kVA	Up to 1376kVA
	Protections	Overcurrent, overvoltage Type II, integrated surge protection, overtemperature		
DC OUTPUT	Output power	Up to 480kW	Up to 640kW	Up to 1280kW
	Number of outputs	Up to 12 output connectors		
INTERFACE	Connection	Ethernet, Modbus TCP, 3G/4G (optional)		
	Emergency stop button	Optional		
MECHANICAL	Product dimensions (HxWxD)	Converter unit 2200 x 800 x 800 mm Switch Matrix 2200 x 600 x 800 mm		Total 2200x2200x800mm
	Weight	Up to 990 kg		Up to 1700kW
	Material	Corrosion-protected steel		
	Customization	Customizable with end user's colours and logos (optional)		
	Noise level	≤ 65 dB(A) at distance of 1 m at full power		
WORKING AND INSTALLATION CONDITIONS	Operating temperature	-20°C +50°C (over 50°C with derating)		
	Installation type	Outdoor		
	Installation type	Floor mounted		
	Protection class	IP55		
	Protection against Mechanical impact	IK10		
	Humidity	From 5% to 95% without condensing		
	Maximum operating altitude	2000 m		
STANDARDS	Declaration of conformity	CE, UKCA		
	Other standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24		

DISPENSER		PowerCharge Hub
AC INPUT	Earthing systems	TT, TN
	Input voltage	400Vac (±10%), 50/60 Hz (±5%)
	Protections	Overvoltage Type III, integrated surge protection
DC INPUT	Input voltage	Up to 1000V
	Input current	Up to 500A
OUTPUT	Charge mode	Mode 4
	Number of outputs	1 DC
	Cable length	5m, 7m (up to 9,5 meters on request)
	Output power	Up to 200kW & 300kW
	Output voltage	150 V to 1000 V
	Output current	CCS up to 250A or 375A
	Dynamic power sharing	The available power is shared between the DC connectors during charging
INTERFACE	Connection	Ethernet, Modbus TCP, 3G/4G (optional)
	User interface display	External Remote
	Authentication method	Free Vending Mode, RFID, App, Payment terminal with Pin pad (optional)
	Protocol	OCPP 1.6J, OCPP 2.0.1 ready
	Connection/service	Nidec By Your Side (BYS) for remote connection
	Cable Feed Interface	Electrical & Mechanical
MECHANICAL	Product dimensions (HxWxD)	450 X 450 X 250mm
	Weight	100 kg
	Material	Corrosion-protected steel
	Customization	Customizable with end user's colours and logos (optional)
	Noise level	≤ 45 dB(A) at distance of 1 m at full power
WORKING AND INSTALLATION CONDITIONS	Operating temperature	-20°C +50°C (-30°C +50°C as option)
	Installation type	Indoor and Outdoor
	Installation type	Floor mounted
	Protection class	IP56
	Protection against Mechanical impact	IK10
	Humidity	From 5% to 95% without condensing
	Maximum operating altitude	2000 m
STANDARDS	Declaration of conformity	CE, UKCA
	Energy metering	MID / LNE
	Other standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24, DIN 70121, ISO 15118, VDV261

Nidec

All for dreams

DIRECTPOWERPS POWERCHARGE HUB - 04/28/2025 REV-001



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