

Nidec

Conversion

DIRECTPOWERPS™ **MULTI**





MULTI-SCENARIO: HIGH POWER CHARGING WHEREVER YOU NEED IT THE MOST

PURE OPERATORS

Expand your business regardless of grid availability. DirectPowerPS Multi is the scalable solution perfect for small and medium-sized charging hubs, providing operators with a reliable, rapid, cost-effective, and ultrafast charging experience.



SERVICE STATIONS

Ideal for fuel stations transitioning to sustainable operations, the DirectPowerPS Multi provides an ultrafast charging solution that utilizes your existing low voltage grid connection, allowing for seamless integration without the need for extensive renovations.



FLEETS

Tailored for fleet operators aiming to lower energy costs related to high peak demand and capitalize on additional revenue through stationary battery use, the DirectPowerPS Multi presents a reliable and versatile solution.



RENEWABLE ENERGY INTEGRATORS

An excellent choice for renewable energy integrators seeking an efficient method to incorporate charging stations with their existing PV assets, the DirectPowerPS Multi guarantees a seamless integration of clean energy and charging services.



MODULAR BATTERY INTEGRATED CHARGER

Harness the power of battery storage up to 2.2 MWh to provide ultrafast charging for six vehicles simultaneously, ensuring uninterrupted service even in challenging grid conditions.

MULTI-FUNCTIONAL: ULTRAFAST CHARGING WITH NO LIMITS

1

NO EXTRA GRID COSTS WITH LOW VOLTAGE CONNECTION FAST DEPLOYMENT OF YOU ULTRA FAST CHARGER

Each power unit connects to the low voltage grid with a capacity of 100 kW or less, eliminating the need for expensive and time-consuming medium voltage upgrades while ensuring an ultra-fast charging experience.



2

100% FLEXIBILITY - MODULAR DESIGN

- Select between 2 types of dispensers: DC Compact Dispenser or DC Tower Dispenser
- Choose the battery capacity that most suits your location
- Integrate with a photovoltaic system (optional)



3

BATTERY BUFFER FROM 186 KWH TO 2.2 MWH

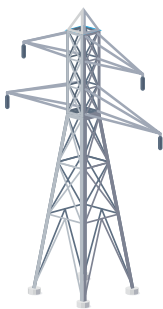
Utilize excess grid and PV power to charge the battery, enhancing vehicle charging performance. This ensures efficient energy use and delivers an exceptional rapid charging experience in all situations.



4

FROM 0 TO 300KW FROM THE GRID

Connect up to 3 power units to the grid, with each unit capable of drawing 100 kW. The integrated DC architecture of the Multi aggregates their power, delivering up to 300 kW for frequent vehicle charging sessions.



4x MORE POWER FROM THE POWER-LIMITED GRID



400kW



From 0 to 100kW with a 400V grid connection

MULTI

Battery integrated charger

ULTRA-FAST CHARGING

Output for fast-charging of electric vehicles

LOW POWER
Input from power-limited grid

UP TO 400kW CHARGING

5

Each charging point delivers up to 400 kW, enabling you to add 100 km of range in just 5 minutes.



FROM 2 TO 6 DC CHARGING POINTS

6

Effortlessly charge up to 6 vehicles simultaneously, perfect for small to medium charging hubs. Our versatile solutions meet your unique requirements, providing efficient and reliable power for your fleet or customers.



UP TO 3% MORE EFFICIENCY AND LESS COST

7

The integration of chargers, batteries and PV on the same DC architecture increases the overall efficiency of the system. This results in a significant cost reduction compared to a standalone battery interfaced directly to the grid, leading to higher margins for the asset owner.



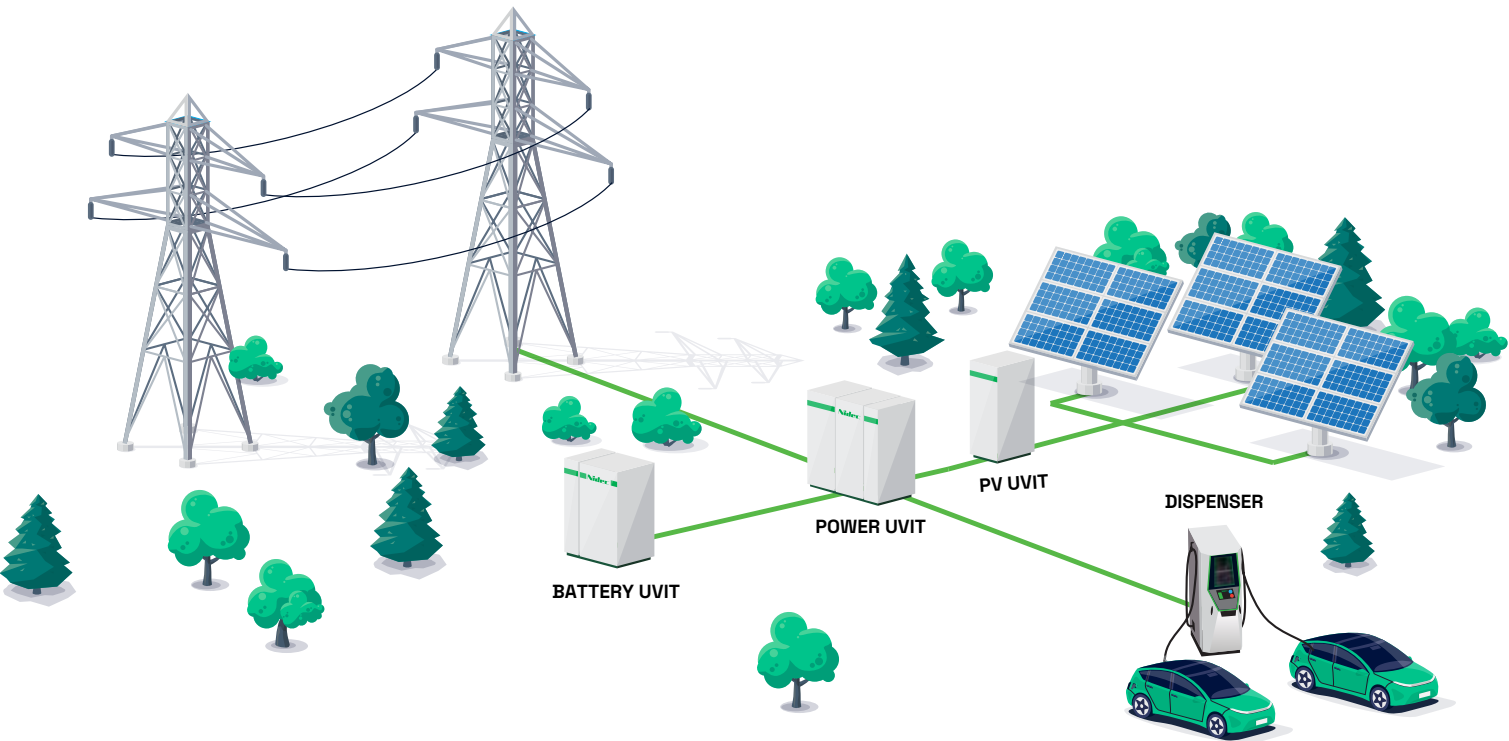
TURNKEY PROJECTS BY NIDEC

8

Nidec offers turnkey solutions, including BYS charger management, installation support, and testing. We ensure a smooth transition from concept to final handover.



MULTI-COMPONENT: PERFECT FIT FOR EVERY CHARGING CHALLENGE



1 POWER UNIT

The power unit is the core of the charging system, handling all power conversion from the AC grid to the dispensers and the battery units. Its advanced liquid cooling system enables the best possible cooling which increases the reliability and the lifetime of the systems for the lowest possible Total Cost of Ownership (TCO).

- Up to 3 power units in parallel
- Each power unit can connect to grid up to 100kW
- Liquid cooled
- Battery to Grid ready



2 BATTERY UNIT

The battery unit acts as an energy reservoir, storing power during low-demand periods and distributing it during peak charging times. This feature ensures efficient energy management and reduces reliance on the grid, leading to cost savings.

- Three types of battery unit: 186kWh, 279kWh or 372kWh
- Up to 2 battery units for each power unit
- Which leads to 4 type of battery capacity available for each power unit
 - 1 battery cabinet of 186kWh
 - 1 battery cabinet of 279kWh
 - 1 battery cabinet of 372kWh
 - 2 batteries cabinets of 279kWh for a total of 558kWh
 - 2 batteries cabinets of 372kWh for a total of 744kWh



3 PV UNIT

The PV Unit allows for the integration of solar energy, enabling the charger to draw power from photovoltaic panels. This connection not only reduces grid consumption but also supports sustainable energy use and can provide additional income through excess power generation.

- Integrated on the DC architecture to charge seamlessly the battery and the vehicles
- Peak Power: 100kWp



4 DISPENSER

The dispenser serves as the interface between the Power Unit and the EV, delivering power directly to the vehicle. Designed for user convenience, it can be easily maintained or upgraded to enhance the charging experience.



DISPENSERS' FEATURES

- 1 CCS2 or CHAdeMO
- 2 Length of cables: 5,7,10 meters
- 3 Integrated Cable management
- 4 Advertising screen (32" or 18,5")
- 5 Intuitive 15"/12" touch user interface
- 6 LED status of the charging session
- 7 Payment terminal
- 8 With or Without Certified meter
- 9 2 Modems: OCPP + Nidec BYS

DC TOWER DISPENSER

With its standout design, the DC Tower Dispenser not only charges vehicles but also serves as a marketing platform, featuring an advertising screen that boosts visibility and generates additional revenue.

DC COMPACT DISPENSER

The DC Compact Dispenser is designed for convenience, boasting a compact form factor that allows for effortless installation in space-constrained areas.

MULTI-CONFIGURATION: CONFIGURE THE MULTI TO SUIT YOUR PREFERENCES

THE DIRECTPOWER PS MULTI SYSTEM offers a range of configurations to suit various charging needs

- MODULAR DESIGN
- FROM 0 TO 300KW FROM THE GRID
- FROM 2 TO 6 DC CHARGING POINTS
- FROM 186KWH TO 2.2MWH OF BATTERY BUFFER

INTEGRATED DC ARCHITECTURE

The integration of DC architecture allows each configuration to efficiently build upon the previous one, adding power units, dispensers, and battery capacity. This results in a robust, flexible, and efficient charging solution. All components are connected on the DC line, enabling seamless sharing of power and energy from the grid and batteries.



POWER UNIT



BATTERY UNIT



DISPENSER

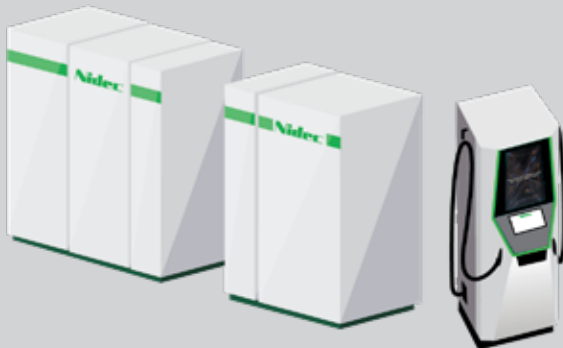
Configuration: 1 Power unit + 1 Battery Unit + 1 Dispenser:

Input: up to 100kW from the grid

Output: 300kW

Connectors: 2

Battery Capacity: 186kWh or 279kWh or 372kWh



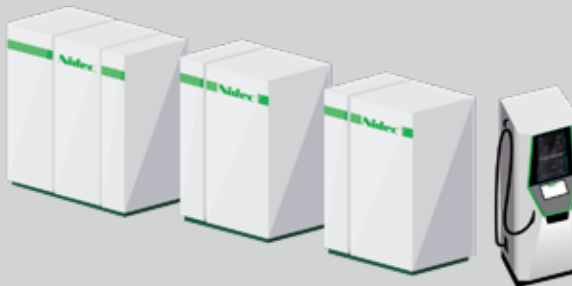
Configuration: 1 Power unit + 2 Battery Units + 1 Dispenser:

Input: up to 100kW from the grid

Output: 300kW

Connectors: 2

Battery Capacity: 2x279kWh (558kWh) or 2x372 (744kWh)



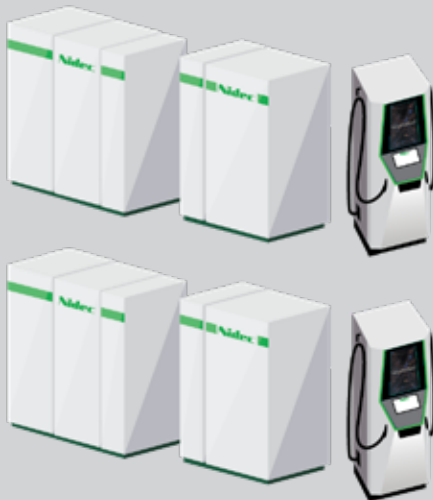
Configuration: 2 Power units + 2 Battery Units + 2 Dispensers:

Input: up to 200kW from the grid

Output: 700kW (400kW on the single dispenser/connector is available)

Connectors: 4

Battery Capacity: 2x186kWh (372kWh) or 2x279kWh (558kWh) or 2x372 (744kWh)



BEYOND THE MULTI: NIDEC SMART E-MOBILITY SOLUTIONS FOR ANY GREATER NEED

Configuration: 2 Power units + 4 Battery Units + 2 Dispensers:

Input: up to 200kW from the grid

Output: 700kW (400kW on the single dispenser/connector is available)

Connectors: 4

Battery Capacity: 4x279kWh (1116kWh) 4x372 (1488kWh)



Configuration: 3 Power units + 3 Battery Units + 3 Dispensers:

Input: up to 300kW from the grid

Output: 1050kW (2x400kW on the single dispenser/connector is available)

Connectors: 6

Battery Capacity: 3x186kWh (558kWh) or 3x279kWh (837kWh) or 3x372kWh (1116kWh)



Configuration: 3 Power units + 6 Battery Units + 3 Dispensers:

Input: up to 300kW from the grid

Output: 1050kW (2x400kW on the single dispenser/connector is available)

Connectors: 6

Battery Capacity: 6x279kWh (1674kWh) or 6x372kWh (2232kWh)



The Nidec Edge

Choosing Nidec Smart e-Mobility Solutions is more than just selecting a product; it's a partnership with a leader in energy solutions. Each offering embodies Nidec's commitment to innovative design, operational efficiency, and a profound understanding of customer needs. Our solutions deliver future-proof, intelligent, and strategic assets that power today's vehicles while paving the way for innovations.

Nidec Smart e-Mobility Solutions

Nidec Smart e-Mobility Solutions showcase our commitment to energy innovation with customized systems that exceed standard capabilities. Designed for various battery capacities and charger types, these solutions meet unique project needs.

Advanced Integration Capabilities

Our ACDC and DCDC converters enable seamless connections for assets over 1MW, facilitating substantial energy integration for ambitious projects.

Renewable Energy and Power Management

Central to our solutions is the Nidec power management system, optimizing battery usage and renewable energy for efficient power delivery and sustainability.

Modular and Mobile Design

Our modular solutions are housed in 20 or 40-foot containers for easy deployment and flexibility, allowing for rapid installations that can be expanded or relocated.

Customization and Compatibility

Nidec Smart e-Mobility Solutions integrate seamlessly with existing infrastructures, enhancing your energy network with tailored, efficient solutions.

POWER UNIT		
AC INPUT	Earthing systems	TT, TN
	Input voltage	400Vac (±10%), 50/60 Hz (±5%)
	Input current	Up to 170A
	Input power	Up to 100kW
	Protections	Overcurrent, overvoltage Type II, integrated surge protection, overtemperature
DC OUTPUT	Output power	Up to 400kW
	Emergency stop button	Up to 2 outputs
INTERFACE	Connection	Ethernet, Modbus TCP, 3G/4G (optional)
	Emergency stop button	Optional
MECHANICAL	Product dimensions (HxWxD)	2280 x 1620 x 800 mm
	Weight	Up to 1200 kg
	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	IP54
	Protection against Mechanical impact	IK10
	Humidity	From 5% to 95% without condensing
STANDARDS	Maximum operating altitude	2000 m
	Declaration of conformity	CE, UKCA
STANDARDS	Other standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24, CEI 0-21
BATTERY UNIT		
AC INPUT	Earthing systems	TT, TN
	Input voltage	400Vac (±10%), 50/60 Hz (±5%)
	Protections	Over Current, Over Voltage, Over Temperature, Under Voltage Protection, Fire suppression system
DC OUTPUT	Output power	Up to 250kW
ENERGY	Battery Capacity	186kWh or 279kWh or 372kWh per each power unit 2x186kWh or 2x 279kWh or 2x372kWh per each power unit
MECHANICAL	Product dimensions (HxWxD)	2458×1303×1300 mm
	Weight	From 2302kg and up to 3654kg
	Material	Corrosion-protected steel
	Customization	Customizable with end user's colours and logos (optional)
	Noise level	≤ 70 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	IP54
	Protection against Mechanical impact	IK10
	Humidity	From 5% to 95% without condensing
STANDARDS	Maximum operating altitude	2000 m
	Declaration of conformity	CE, UKCA
STANDARDS	Energy metering	MID / LNE / Eichrecht compliant / PTB compliancy DC outlets
	Other standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24, DIN 70121, ISO 15118

DISPENSER		DC TOWER DISPENSER	DC COMPACT DISPENSER
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 for DC connectors and Mode 3 for AC connector	
	Number of outputs	2 DC + 1 optional AC	2 DC or 1 DC and 1 AC
	Cable length	5m (up to 10 meters on request)	
	Output power	Up to 400kW	
	Output voltage	150 V to 1000 V	
	Output current	CCS up to 500A or 600A with additional cooling unit Type 2 up to 32A (optional)	
INTERFACE	Dynamic power sharing	The available power is shared between the DC connectors during charging	
	Connection	Ethernet, Modbus TCP, 3G/4G (optional)	
	User interface display	15.6" touchscreen and status LED lights	12.1" touchscreen and status LED lights
	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	
MECHANICAL	Advertising screen	32" screen	18,5" screen
	Product dimensions (HxWxD)	Base: 2236 x 800 x 409 mm Total: 2236 x 846 x 594 mm	Base: 1900 x 400 x 300 mm Total: 1900 x 410 x 310 mm
	Weight	435 kg	100 kg
	Material	Corrosion-protected steel	
	Customization	Customizable with end user's colours and logos (optional)	
WORKING AND INSTALLATION CONDITIONS	Noise level	≤ 45 dB(A) at distance of 1 m at full power	
	Operating temperature	-20°C +50°C (-30°C +50°C as option)	
	Installation type	Indoor and Outdoor	
	Installation type	Floor mounted	
	Protection class	IP55	
	Protection against Mechanical impact	IK10	
STANDARDS	Humidity	From 5% to 95% without condensing	
	Maximum operating altitude	2000 m	
STANDARDS	Declaration of conformity	CE, UKCA	
	Energy metering	MID / LNE / Eichrecht compliant / PTB compliancy DC outlets	
	Other standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24, DIN 70121, ISO 15118	



www.nidec-conversion.com



Info.evci@nidec-asi.com