Nidec Conversion

DirectPowerPS™ MULTI

MODULAR BATTERY INTEGRATED CHARGER

Harness the power of advanced battery storage—up to 2.2 MWh—to deliver ultrafast charging for six vehicles at once. Built to guarantee uninterrupted service even under challenging grid conditions, this solution combines reliability with cutting-edge performance. Engineered and manufactured in Europe, it meets the highest standards of quality and safety, ensuring a robust and sustainable charging experience for the next generation of eMobility.

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

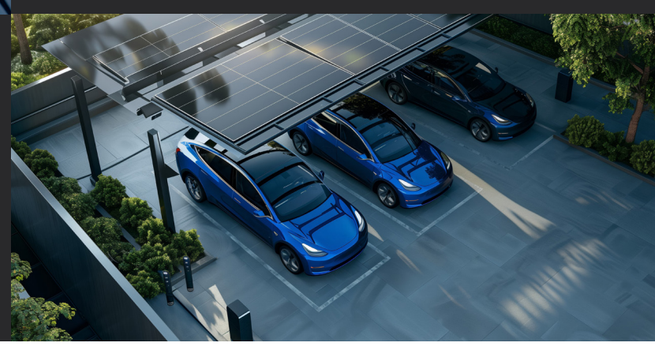
Ideal for fuel stations transitioning to sustainable operations, the DirectPowerPS Multi provides an ultrafast charging solution that utilizes your existing low voltage grid connection, allowing for seamless integration without the need for extensive renovations.

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.



MULTI-FUNCTIONAL: ULTRAFAST CHARGING WITH NO LIMITS

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

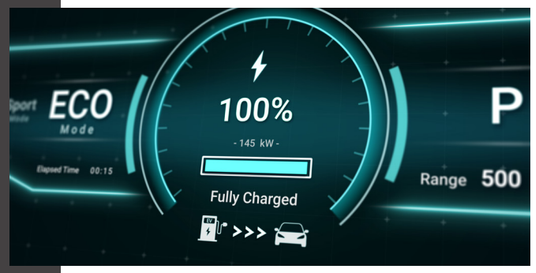
Each power unit connects to the low voltage grid with a capacity of 100 kW or less, eliminating the need for expensive and time-consuming medium voltage upgrades while ensuring an ultra-fast charging experience.

2 100% FLEXIBILITY - MODULAR DESIGN

- Configure the dispenser according to your business requirements
- 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

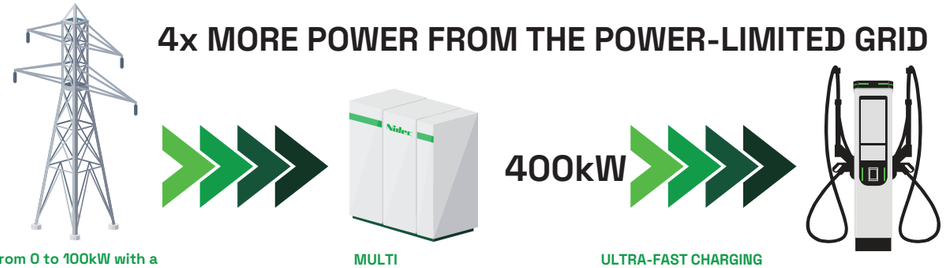
Utilize excess grid and PV power to charge the battery, enhancing vehicle charging performance. This ensures efficient energy use and delivers an exceptional rapid charging experience in all situations.



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



From 0 to 100kW with a 400V grid connection

LOW POWER
Input from power-limited grid

MULTI

Battery integrated charger

ULTRA-FAST CHARGING

Output for fast-charging of electric vehicles

5 UP TO 400kW CHARGING

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

6 FROM 2 TO 6 DC CHARGING POINTS

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.

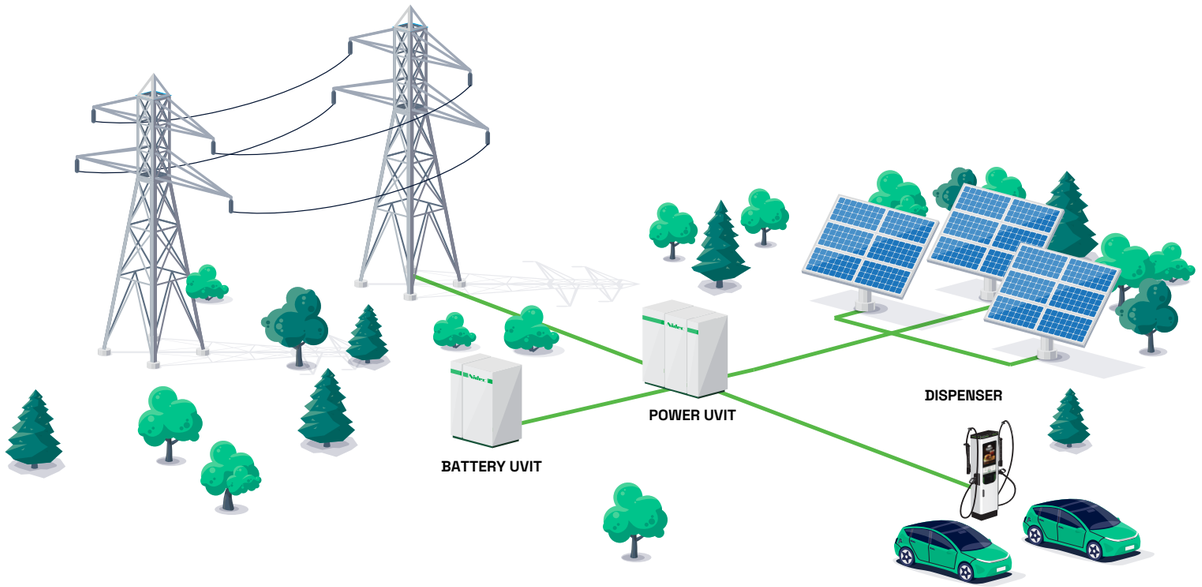
7 UP TO 3% MORE EFFICIENCY AND LESS COST

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.

8 TURNKEY PROJECTS BY NIDEC

Nidec offers turnkey solutions, including BYS charger management, intallation 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 SUPPORT

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 via Power Management System in order to optimize the energy flow and minimize self consumption of entire site from the grid

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.

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.

DISPENSERS' FEATURES

1. CCS2
2. Length of cables: 5,7,10 meters
3. Integrated Cable management
4. Advertising screen (18,5")
5. Intuitive 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

MULTI-CONFIGURATION: CONFIGURE THE MULTI TO SUIT YOUR PREFERENCES

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

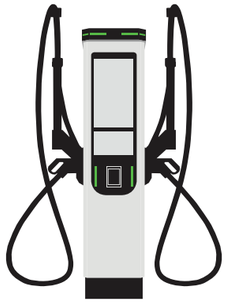
- **MODULAR DESIGN**
- **FROM 0 TO 300KW FROM THE GRID**
- **FROM 2 TO 6 DC CHARGING POINTS**
- **FROM 186KWH TO 2.2MWH OF BATTERY BUFFER**

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

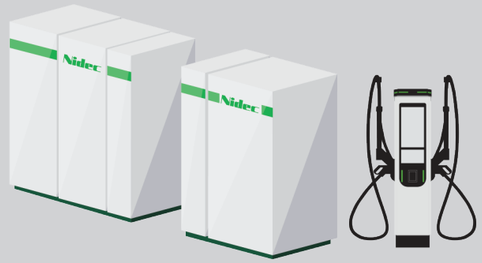
Configuration: 1 Power unit + 1 Battery Unit + 1 Dispenser:

Input: up to 100kW from the grid

Output: 300kW

Connectors: 2

Battery Capacity: 186kWh or 279kWh or 372kWh



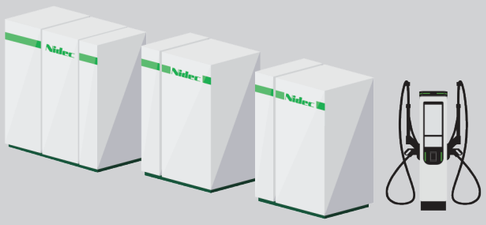
Configuration: 1 Power unit + 2 Battery Units + 1 Dispenser:

Input: up to 100kW from the grid

Output: 300kW

Connectors: 2

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



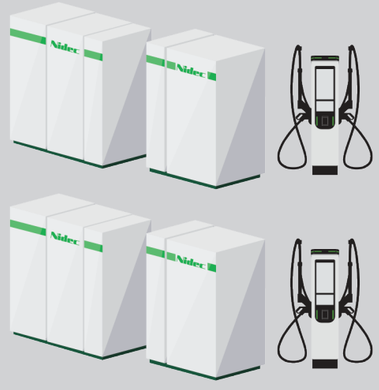
Configuration: 2 Power units + 2 Battery Units + 2 Dispensers:

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)



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)

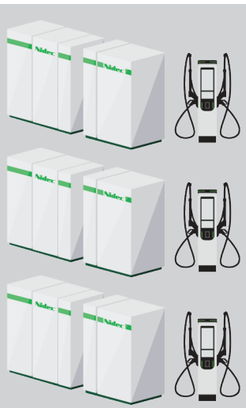
Configuration: 3 Power units + 3 Battery Units + 3 Dispensers:

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)

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

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.

DATA SHEET

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)	2350 X 1600 x 800 mm
	Weight	Up to 1670 Kg
	Material	Corrosion-protected steel
	Customization	Customizable with end user's colours and logos (optional)
WORKING AND INSTALLATION CONDITIONS	Operating temperature	-20°C +45°C (over 40°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
	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, 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 or2x 279kWh or 2x372kWh per each power unit
MECHANICAL	Product dimensions (HxWxD)	2450 x 1420 x 1420 mm
	Weight	From 2302kg and up to 3654kg
	Material	Corrosion-protected steel
	Customization	Customizable with end user's colours and logos (optional)
WORKING AND INSTALLATION CONDITIONS	Operating temperature	Charging: 0~55°C; Discharging: -20°C~+55°C
	Installation type	Outdoor
	Installation type	Floor mounted
	Protection class	IP54
	Protection against Mechanical impact	IK10
	Humidity	From 5% to 95% without condensing
	Maximum operating altitude	2000 m
STANDARDS	Declaration of conformity	CE, UKCA

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
	Number of outputs	2 DC
	Cable length	5m, 7.5m & 10m
	Output power	Up to 400kW
	Output voltage	150 V to 1000 V
	Output current	CCS2 up to 500A or 600A with additional cooling unit
	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	12.1" touchscreen and status LED lights
	Authentication method	Free Vending Mode, RFID, App, Payment terminal with Pin pad (optional), Plug and Charge Ready, AutoCharge
	Protocol	OCPP 1.6J, OCPP 2.0.1
	Connection/service	Nidec By Your Side (BYS) for remote connection
	Advertising screen	18,5" screen
MECHANICAL	Product dimensions (HxWxD)	Base: 1900 x 400 x 300 mm Total: 1900 x 410 x 310 mm
	Weight	160 kg
	Material	Corrosion-protected steel
	Customization	Customizable with end user's colours and logos (optional)
WORKING AND INSTALLATION CONDITIONS	Operating temperature	-25°C +50°C (-30°C as option)
	Installation type	Indoor and 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
	Energy metering	MID / LNE / Eichrecht compliant / PTB compliancy DC outlets
	Communication & Charger Standards	IEC 61851-1, IEC 61851-22, IEC 61851-23, IEC 61851-24, DIN 70121, ISO 15118 ,VDV 261
	RFID Standards	ISO14443A/B, ISO18092
	RED Directives	EN 301 489, EN 300 328, EN 301 511, EN 301 908, EN 18031

Nidec

All for dreams

DirectPower - Multi - REV-006

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