Storage
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nGM PCS

Where technology drives
energy independence.

norvento
TECHnPower

Main capabilities

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Modular, scalable and galvanically isolated

Fully parallelizable design is available in 50, 100, and 200 kVA modules. Multiple units can operate as a single system with fully coordinated capabilities. Maximum protection for batteries via galvanic isolation DC and AC circuits.

Resilience in demanding environments

Enables seamless integration of synchronous generation, renewables and systems with extremely high THDi. It effectively manages non-linear loads ensures stability across challenging grid conditions, from extremely weak rural grids and islands to strong industrial systems, even in highly distorted networks with power supply quality issues.

Certified Grid-Following (GFL)

European grid-code compliant, including FRT, UVRT, OVRT capabilities, complemented by active frequency and voltage support during both normal operation and fault events. It features advanced harmonic and unbalance compensation to enhance power quality, optimized for SCR > 5 grids. The system includes certified auxiliary services for flexibility markets and a comprehensive suite of simulation models for streamlined grid integration.

Smart monitoring and management

Complete local and remote supervision via web interface with real-time data visualization, advanced configuration for system behavior, event management and historical logging for performance diagnostics.

Grid-Forming capabilities (GFM)

Industry-leading GFM functionality providing configurable virtual inertia, droop P/f & Q/V control, and Zenith/Nadir management. It ensures exceptional wave quality and coordinated black start for parallel systems. Includes solid short-circuit handling without disconnection up to 2xIn.

Simulation models

RMS and EMT models for DIgSILENT PowerFactory, GFL-certified and GFM-capable versions. EMT Multi-instance models for Matlab/Simulink using FMI standard. EMT Model for PSCAD.

UPS capability

Line interactive topology according with UNE 62040-3:2021. Together with Norvento Static Switch (under development) achieves class 1.

Integrated microGrid control

Built-in Power Management System (PMS) integrating SOC management, peak shaving, energy arbitrage, maximization of renewable production and programmable power schedules, while ensuring power continuity via immediate coupling to diesel gensets and on-the-fly transitions between GFW and GFM modes without zero crossing.

Electrical diagram

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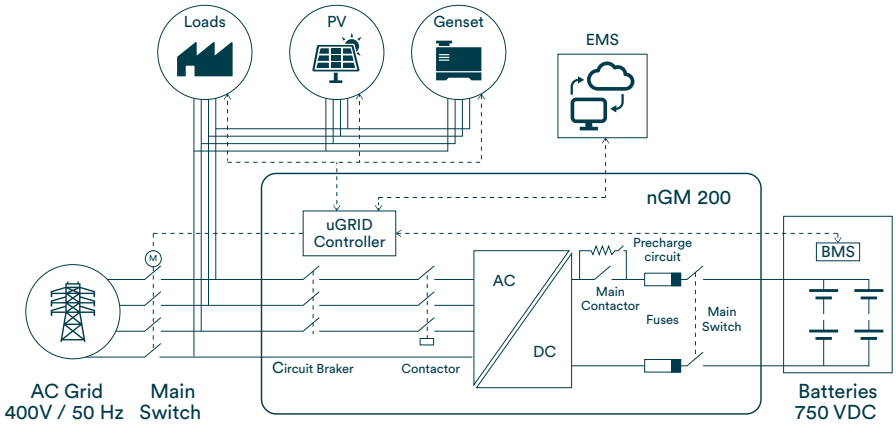

Specifications / Technical Data

–		nGM 50	nGM 100	nGM 200
DC SIDE				
Power [kW]		50	100	200
Voltage Range [V]		540 - 830	540 - 830	580 - 830
Bipolar Fuse Protected	Yes			
Precharging Circuit	Yes			
Max. Current [A]		86	172	345
AC SIDE				
Power [KVA]		50	100	200
Rated Voltage [V]	400			
AC Grid Connection	3ph + neutral			
Galvanic isolation	Yes, transformer integrated inside			
Rated Frequency [Hz]	50 / 60			
Voltage Range	±10 %			
	±20 % with derating			
Frequency Range	±10 %			
Nom. Current [A]		72	144	288
Max. Current [A]		80	160	319
Configurable Overload Capability	Up to 2xIn (Consult complete datasheet for details)			
Communications				
Modbus Ethernet	Control capabilities and access to full microgrid status information			
Monitoring	Local and remote data monitoring of the full microgrid. Data visualization every 1 s. Data logged every 5 minutes. Alarm management.			
Webserver	User friendly interface. Screens: real time visualization, graphic visualization, data dowload, events, configuration.			
microGrid control				
General	Microgrid control, SOC and calibration management.			
Off-grid	Blackstart. Renewables maximization. Load imbalance control. Regulation of voltage and frequency. Immediate coupling to genets. Virtual inertia.			
On-grid	Peak shaving. Energy arbitrage. Programmed power schedule. Grid support capabilities. Reactive power compensation.			
Transitions	Grid synchronization without zero-crossing. Transition to off-grid in case of grid failure. Transition on demand.			
microGrid device library - *customizable on request*				
BMS	Pylontech PowerCube H2, Pylontech PowerCube M1, Narada 51.2NESP, Cegasa eBick 180, Cegasa eBick 280, Poweroad Flex215.			
Photovoltaic	Huawei SUN2000, SMA.			
Genset Controllers	Deep Sea Electronics 8620, Woodward easyGen 3200, ComAp InteliGen4 200.			
Grid Analyzers	Phoenix EEM-MB, Phoenix EEM-MA, Circutor CVM-E3-MINI- WiEth, Lacecal ITR.			
Wind	Norvento nED100.			
Standards and Directives				
CE Marking	Yes			
Safety and EMC:		Designed in accordance	Certified	Certified
IEC 62477-1:2022 + CORR:2024, IEC 61000		Designed in accordance	Certified	Certified
Zero Injection UNE 217001 with Norvento nAnalyzer		Designed in accordance	Certified	Certified
CISPR 11 + AMD1 + AMD2:2019		Designed in accordance	Certified	Certified
NTS (SEPE, SENP)		Designed in accordance	Certified	Certified
IEC 50549-2:2019		Designed in accordance	Certified	Certified
UNE 217002: 2020		Designed in accordance	Certified	Certified
UPS: UNE 62040-3_2021 with Norvento Static Switch		Designed in accordance	Certified (PLANNED)	Certified (PLANNED)

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The information in this catalogue is only for informational purposes, it may differ from the final specifications of the equipment.

Product manufactured in Spain.

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