

AZZURRO - RETROFIT STORAGE INVERTER

3000SP



The **ZCS Azzurro retrofit storage** inverter is the ideal solution for optimising energy independence in residential applications. With a nominal power of 3kW and a storage capacity of up to 30kWh, it is suitable for any type of need on new constructions. Moreover, Azzurro's AC connection makes it compatible with any type of technology (solar, wind, etc.) and with any type of inverter, thus making it the ideal solution for updating and optimising existing installations.



SIMPLE AND RELIABLE



- Energy exchange directly in AC, without the need for external control or interface systems
- LCD graphic display for local monitoring
- Remote monitoring system through APP for viewing consumption, PV production, energy stored and exchanged with the grid

SIMPLE INSTALLATION



- Compatible with all existing inverters already connected to the grid
- Does not require changes or upgrades to the existing electrical system thanks to the use of an open-core current sensor

FLEXIBLE DISCHARGE SOLUTION



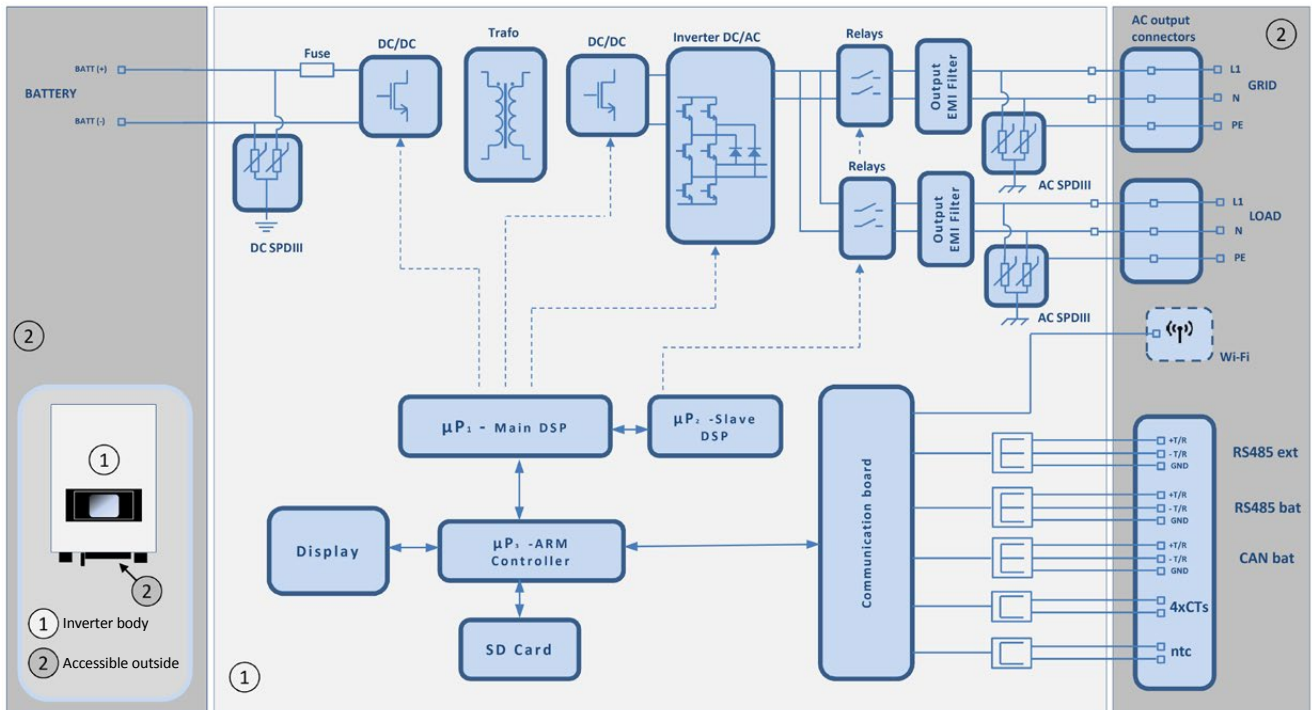
- Flexible charging/discharging management in accordance with local standards
- Maximisation of self-consumption above 80%
- Suitable for installing on both single-phase and three-phase systems
- Unit compatible with both lithium batteries and other 48V technologies

FUNCTIONALITY IN THE EVENT OF GRID DISCONNECTION

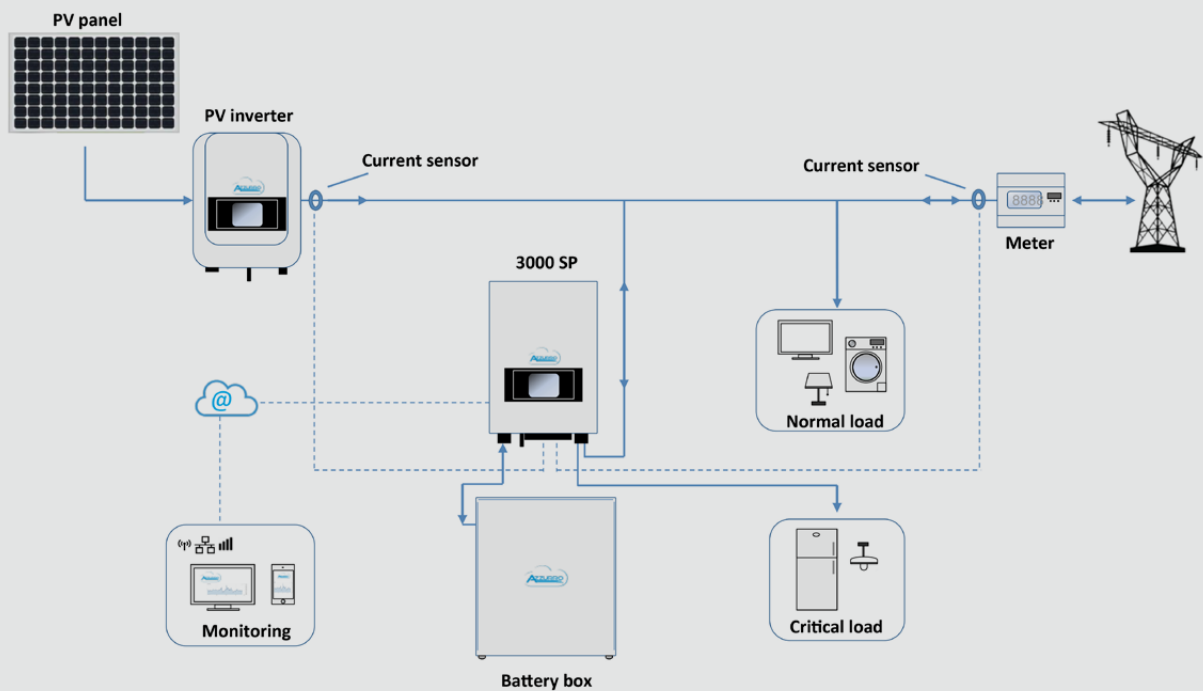


- Stand-Alone support mode guarantees continuity of operation in the event of a power failure through the Emergency Power Supply (EPS) function

FLOW CHART



STORAGE DIAGRAM



TECHNICAL DATA - 3000SP

Battery Connection technical data

Type of compatible battery	Lithium Ion / Lead Gel / Salt Water, etc.
Nominal voltage	48V
Permissible voltage range	42V-58V
Recommended battery capacity	50Ah-200Ah
Maximum charging/discharging power	3000W
Permissible temperature range *	-10°C-50°C
Maximum charging current	65A (programmable)
Maximum discharging current	65A (programmable)
Charging curve (Lithium)	Managed by battery BMS
Charging curve (other type of battery)	3 adaptive stages with maintenance
Depth of Discharge (DoD)	Lithium ion: 10%-90% (programmable); Lead Gel: 10%-50% (programmable)

AC input (grid side)

Nominal power	3000W
Maximum power	3000VA
Maximum current	13A
Type of connection/nominal voltage	Single-phase L/N/PE 220,230,240V
AC voltage range	180V-270V (according to the local grid standards)
Nominal frequency	50Hz/60Hz
AC frequency range	44Hz-55Hz / 54Hz-66Hz (according to the local grid standards)
Total harmonic distortion	< 3%
Power factor	1 default (programmable +/- 0.8)

EPS (Emergency Power Supply) output

Power supplied in EPS**	3000VA
EPS output voltage and frequency	230V 50Hz/60Hz
Output current in EPS	13A
Total harmonic distortion	< 3%
Switch time	< 3s default (programmable from 1 a 999s)

Efficiency

Maximum charging efficiency	94.1%
Maximum discharging efficiency	94.3%
Consumption in stand-by	< 5W

Protections

Safety protections	Anti-islanding, RCMU, Ground Fault Monitoring
Surge protection	Yes
Protection rating	I
Battery soft-start	Yes

Standard

EMC	EN 61000-6-1/2/3/4,
Safety standard	IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC 62109-1/2
Grid connection standard	CEI 0-21, RD1699, AS4777, VDE 0126-1-1, G83/2, EN50438, VDE-AR-N4105, UTEC15/712-1

Communication

Communication interface	Wi-Fi, RS485 (proprietary protocol), SD card, CAN 2.0 (for battery connection)
Additional inputs and connections	Input for DC current sensor connection + 3 inputs for AC current sensor connections
Data storage on SD	25 years

General data

Permissible ambient temperature range	-25°C...+60°C (power limitation above 45°C)
Topology	high frequency isolation
Environmental protection rating	IP65
Permissible relative humidity range	0%.....95% without condensation
Maximum operating altitude	2000m
Noise	< 25dB @ 1mt
Weight	16Kg
Cooling	Natural ventilation
Dimensions (H*L*D)	532mm*360mm*173mm
Display	LCD
Warranty	5 - 10 years

* Standard value for lithium batteries; maximum operating range between +10°C/+40°C

** The power supplied in EPS mode depends on the type and capacity of the batteries



AS4777 G83/2 G59/3

CE, CEI 0-21, CQC, IEC, VDE-AR-N4105/VDE-0126, EMC, C10/11, EN50438, RD1669