

SPLV 12-20

Energy Storage System



Safe and Secure

LFP (lithium iron phosphate, LiFePO_4) offers the highest safety.



Efficient Management

SoC estimation remains accurate and consistent under typical use.

CT Zero export to grid.

Inverter and Grid hybrid Power supply capable of withstanding continuous impact loads.

27A PV input, compatible with all residential modules and flexible arrays.

200% EPS peak output in 5s.

Up to 6 inverters in parallel or build three phase system.

UPS-Level Switching time down to 10ms.

Support diesel generator input.

Supports use without battery. PV and grid can supply power to load together.

Easy & intuitive LCD.

Remote diagnostics & OTA update.

Model	SPLV 12-20
Permitted parallel number	1-6
AC mode	
Rated input voltage	230Vac $\pm 5\%$
Input voltage range	(170Vac-280Vac) $\pm 2\%$ (90Vac-280Vac) $\pm 2\%$
Frequency	50Hz / 60Hz (Auto detection)
Frequency range	47 ± 0.3 Hz ~ 55 ± 0.3 Hz (50Hz); 57 ± 0.3 Hz ~ 65 ± 0.3 Hz (60Hz)
Overload / short circuit protection	Circuit breaker
Efficiency	>95%
Conversion time (bypass and inverter)	10ms (typical)
AC reverse protection	Yes
Maximum bypass overload current	60A
Inverter Mode	
Output voltage waveform	Pure sine wave
Rated output power	12000VA
Rated output power	12000W
Power factor	1
Rated output voltage	230Vac
Output voltage error	$\pm 5\%$
Output frequency range	50Hz ± 0.3 Hz / 60Hz ± 0.3 Hz
Maximum Efficiency	>93%
Overload Protection	
(102% < load < 125%) $\pm 10\%$	Report error, turn off output after 5 minutes
(125% < load < 150%) $\pm 10\%$	Report error, turn off output after 10 seconds
load > 150% $\pm 10\%$	Report error, turn off output after 5 seconds

Inverter Mode	
Peak power	24000VA
Load motor capability	8HP
Output short circuit protection	Circuit breaker
Bypass circuit breaker specification	63A
Power saving mode self-consumption	Load ≤50W
PV Charging	
MPPT way	2
Maximum PV open circuit voltage	500Vdc
PV operating voltage range	120–500Vdc
MPPT voltage range	90–450Vdc
Battery voltage range	40–60Vdc
Maximum PV input power	6000W + 6000W
Maximum PV input current	22A + 22A
PV charge current (can be set)	0–150A
Charging short circuit protection	Blown fuse
Wiring protection	Reverse polarity protection
Hybrid Charging (AC Charger + PV Charger)	
Max charger current (can be set)	0–150A



Certified Specifications	
Certification	CE (IEC62109-1,2)
EMC certification level	EN61000, C2
Operating temperature range	-10°C to 55°C, >45°C drop runs
Storage temperature range	-25°C to 55°C
Humidity range	5 % to 95 % (Conformal coating protection)
Noise	≤60dB
Heat dissipation	Forced air cooling, variable speed of fan
Communication interface	USB / RS485 / (WiFi / GPRS) / Dry node control
Size (L × W × D)	540 × 350 × 120 mm
Weight	19.5 kg

Battery	
Nominal voltage (Vdc)	51.2
Rated capacity (Ah)	400
Energy (Wh)	20480
Battery impedance (mΩ)	≤50
Charging cut-off voltage (V)	56.16
Discharge cut-off voltage (V)	44.8
Recommend charge current	0.5C 200A
Scalable	Up to 15 units
Max charge current (A)	400
Max continue discharge current	400A, -20°C~60°C, ≤65±20%RH

Operating temperature range (°C)	-20~60
Environment	Outdoor / Indoor
Installation	Wall mounted / Floor stand
Cell technology	Lithium-iron phosphate (LiFePO4)
Life cycle	6000 times @80% DOD
Cooling	Natural convection
Protection rating	IP65
Certificates	IEC62619, UN38.3, MSDS, CE
Dimension (W/D/H mm)	800 × 590 × 142 (applicable only for a single battery)
Battery net weight (Approx.) (kg)	96.5x2 = 193



Web: www.ignacore.com

Email: info@ignacore.com

10 Anson Road, #10-11 International Plaza, 079903 Singapore

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