PSC SOLAR (UK)
Africa's Solar Electricity Power

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MPS microgrid series

MPS microgrid hybrid inverter

Key strengths

- Internal integration PV interfaces, battery interfaces, load interfaces and grid interfaces
- Support single-phase and three-phase load power supply at the same time.
- Easy expansion, support PV flexible configuration.
- DC-coupled solution with 2% higher system efficiency.
- Control power AC and DC redundant power supply, the system is more secure and reliable.

Applications

» Off-grid mine » Off-grid island » Nomadic farm » Villages without electricity

MPS0030/MPS0050

MPS0100/MPS0150

MPS0250

MPS0500

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AC(on-grid)

Model	MPS0030	MPS0050	MPS0100	MPS0150	MPS0250	MPS0500
Max output power (kVA)	33	55	110	165	275	550
Rate output power (kW)	30	50	100	150	250	500
Rated voltage(V)	400					
Voltage range (V)	320~460					
Rated current (A)	43	72	144	216	361	722
Rated frequency (Hz)	50/60					
Frequency range (Hz)	45~55/55~65					
THDi	<3%					
Power factor	1lagging-1leading (Settable)					
AC connection	3W+N+PE					
Transformer ratio	100/400	200/400	270/400	270/400	270/400	315/400

AC(off-grid)

Max output power (kVA)	33	55	110	165	275	550
Rated power (kW)	30	50	100	150	250	500
Rated voltage (V)	400					
Rated current (A)	43	72	144	216	361	722
THDu	⩽1% linear; or⩽5% nonlinear					
Rated frequency (Hz)	50/60					
Overload capacity	110% long-term, 120% 1min					

PV input

Max.PV input voltage (V)	1,000					
Max.PV power (kW)	36/72	60/120	120/180/240	120/180/240	300/360	600/660/720
MPPT module quantity	1/2	1/2	2/3/4	2/3/4	5/6	10/11/12
MPPT voltage range (V)	250-850					
MPPT voltage range@full load (V)	450-850					

Battery

Battery voltage range (V)	250~850	320~850	420~850	420~850	420~850	500~850
Max. charging power (kW)	36/72	60/120	120/180/240	120/180/240	300/360	600/660/720

General data

Dimension W*D*H (mm)	800*800*1,900	800*800*1,900	1,200*800*2,050	1,200*800*2,050	(600*720*2,050)*1+ 1,200*800*2,050	(600*720*2,050)*2+ 1,600*1050*2,050
Net weight (kg)	576/607	720/750	1,120/1,150/1,180	1,250/1,280/1,310	1,980/2,010	3,265/3,295/3,325
Operation temperature (℃)	-30 ~ 55					
Relative humidity	0 ~95% non-condensing					
Ingress protection	IP20					
Noise emission (dB)	<70					
Operating altitude	<5000m(>3,000 Derating)					
Cooling	Air Cooling					

Display and communication

Display	LCD touch-screen
BMS communication	RS485, CAN
EMS communication	RS485, TCP/IP
Certificates	EN62109-1/-2, EN62477-1, EN61000-6-2, EN61000-6-4, South Africa NRS097-2-1:2017, Pakistan & India IEC61727, IEC62116, IEC 61683

MPS PV and battery configuration principles:

> Boost mode configuration principle - open voltage at low temperature at the limit of PV installation * number of PV panels in series ⩽ the lowest voltage of the battery;
> Buck mode configuration principle - the maximum power operating voltage at the extreme high temperature of PV installation⩾ the highest voltage of the battery;
> The PV and battery configurations of MPS must comply with the above configuration principles.