

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

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)

| | | | | | | |
|------------------------|------------------------------|----|-----|-----|-----|-----|
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| 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 (°C) | -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.