

MPS microgrid series

# MPS microgrid hybrid inverter



## KEY STRENGTHS

- Integrated PV/MPPT module/transformer/STS and maintenance bypass.
- Support 100% unbalance.
- Support parallel connection of multiple machines.
- Easy expansion, support PV flexible configuration.
- Support DG load rate control to improve fuel economy.
- Support flexible configuration of control strategies.

## APPLICATIONS



Off-grid mine



Off-grid island



Nomadic farm



Villages without electricity



MPS0030/MPS0050



MPS0100/MPS0150



MPS0250



MPS0500

| Model                   | MPS0030                     | MPS0050 | MPS0100 | MPS0150 | MPS0250 | MPS0500 |
|-------------------------|-----------------------------|---------|---------|---------|---------|---------|
| <b>AC(on-grid)</b>      |                             |         |         |         |         |         |
| Max. output power (kW)  | 33                          | 55      | 110     | 165     | 275     | 550     |
| Rated 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            | 1leading-1lagging(settable) |         |         |         |         |         |
| Grid type               | 3W+N+PE                     |         |         |         |         |         |

|                        |                              |    |     |     |     |     |
|------------------------|------------------------------|----|-----|-----|-----|-----|
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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    |    |     |     |     |     |

|                           |         |        |             |             |         |             |
|---------------------------|---------|--------|-------------|-------------|---------|-------------|
| <b>PV input</b>           |         |        |             |             |         |             |
| 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 |        |             |             |         |             |

|                           |         |         |             |             |         |             |
|---------------------------|---------|---------|-------------|-------------|---------|-------------|
| <b>Battery</b>            |         |         |             |             |         |             |
| 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+<br>1,200*800*2,050 | (600*720*2,050)*2+<br>1,600*1,050*2,050 |
| Weight (kg)                | 620/650                 | 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 (m)     | <5,000(>3,000 Derating) |               |                   |                   |                                       |                                         |
| Cooling                    | Air Cooling             |               |                   |                   |                                       |                                         |

**Display and communication**

|                   |                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display           | LCD touch-screen                                                                                                                                                  |
| BMS communication | RS485, CAN                                                                                                                                                        |
| EMS communication | RS485, TCP/IP                                                                                                                                                     |
| Certificates      | EN 62109-1/-2, EN 62477-1, EN 61000-6-2/-6-4, IEC61727, IEC62116, IEC61683<br>NRS 097-2-1:2017, ASGC, AS/NZS 4417.1, CEI 0-21, CEI 0-16, G99 EN 50549-1, VDE 4105 |

## 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.