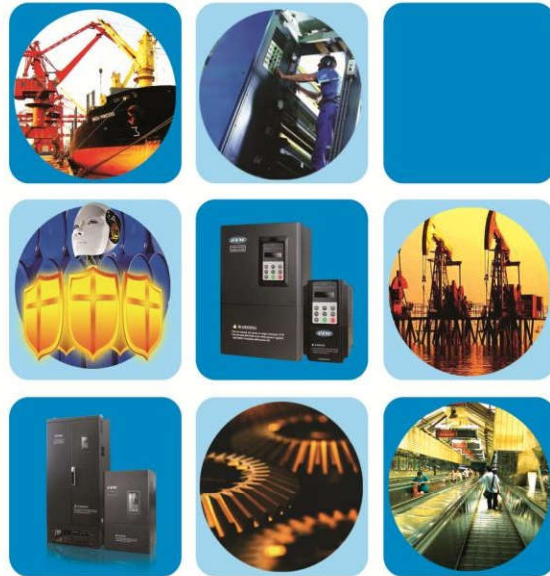


ENC

Inverter > China Great Brand



P

Product

Selection Brochure

ENC ELECTRIC

SHENZHEN ENCOM ELECTRIC TECHNOLOGIES CO.,LTD.

About us

Company introduction

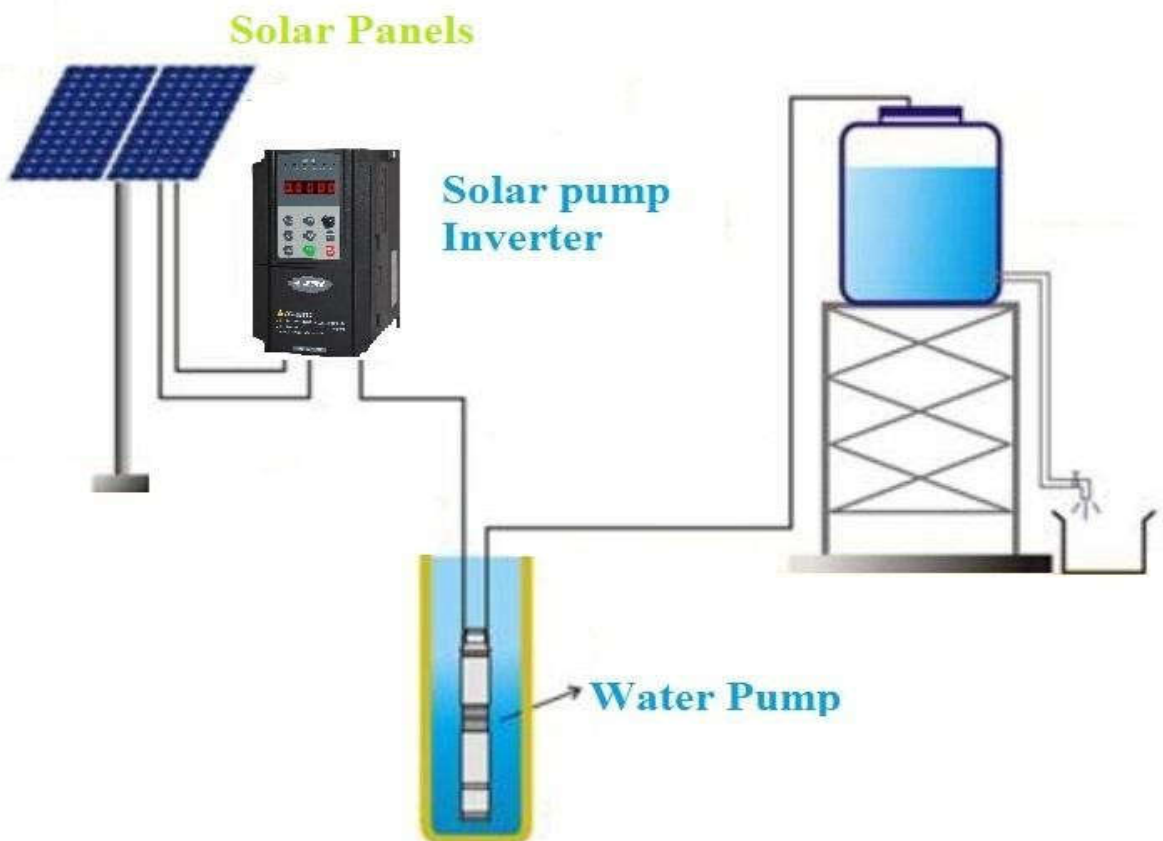
Shenzhen Encom Electric Technologies CO., LTD is a state-level high-tech enterprise with independent intellectual property rights, focusing on industrial automation products' development, production and sales. The main products include frequency inverter/ac drive, servo controller, PLC, new energy systems.

ENC company was established in 2004, has passed ISO9001: 2008 quality management system certification and the European Union CE certification, won the National Innovation Fund, the Shenzhen strategic emerging industries fund, product innovation award, the most investment value award and repeatedly won "China top ten low-voltage inverter domestic brands" title.



1. Won National Innovation Fund enterprise, China's high-tech enterprise
2. Repeatedly won **"China top ten domestic brands"** title
3. With more than **13 years** of rich experience R&D team
4. With completely independent intellectual property rights, has **dozens of patents**
5. Master the world's leading asynchronous, **synchronous vector control technology and torque control technology**
6. **ISO9001:2008 system certification unit**, strict and standard information quality control system
7. Has more than **30 offices** in China
8. ENC provide quality products and services for more than **30 countries'** industrial user

Green Power, Green World.
ENC help you to change the world.



EN600 Solar pump Inverter

EN600 series inverter special for solar pump which has high efficiency.

It supplies by solar panel without extra battery to convert the the electrical energy to ac power and drive three phase pump motor. A lot of applications can be used for, like underground water supply, agriculture irrigation, forestry irrigation, desert control, pasture animal husbandry,

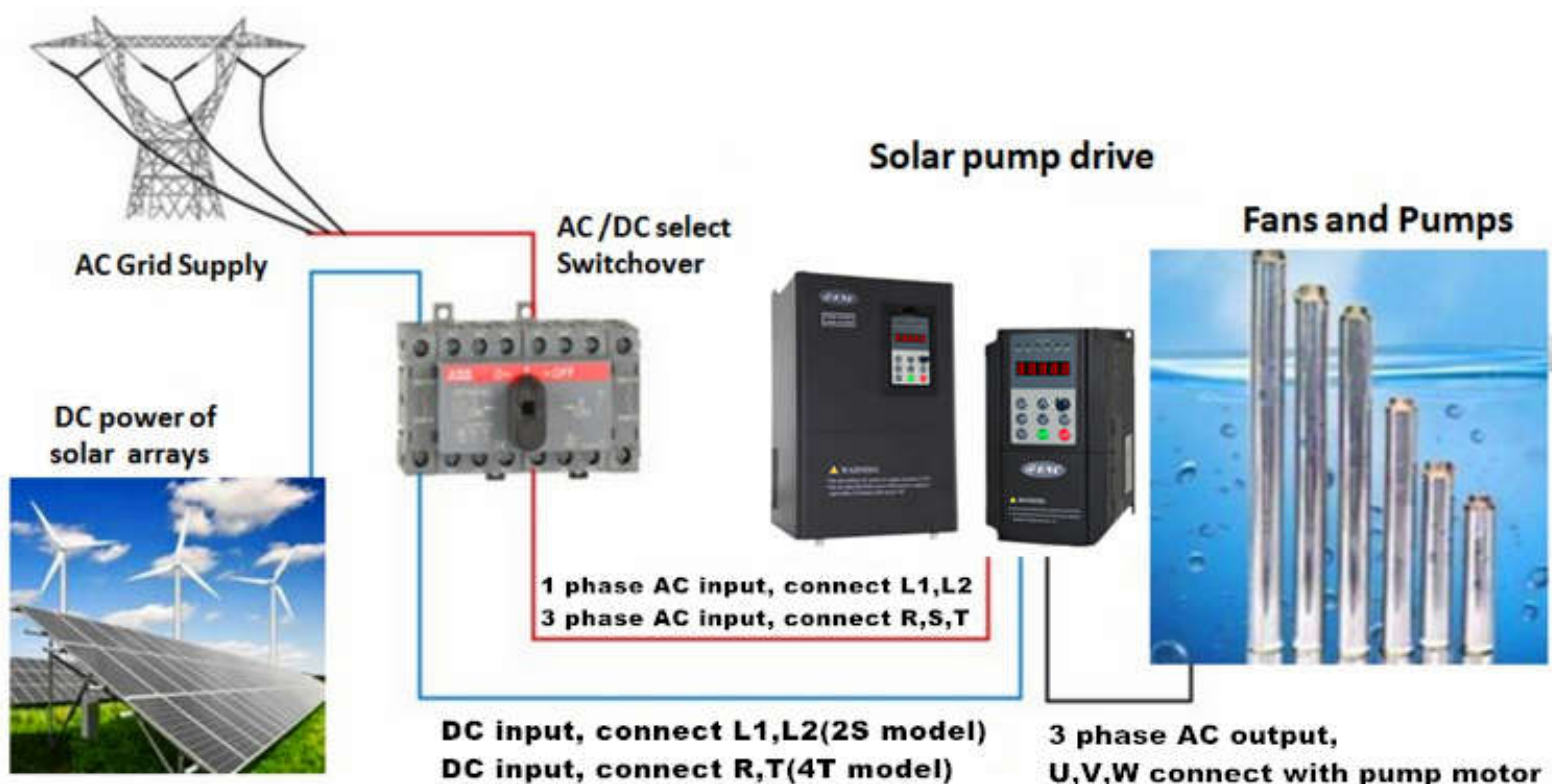
water supply for islands, waste water treatment engineering and so on.

MPPT function(maximum power point tracking), CVT(Constant voltage tracking), weak light auto-sleep, strong light auto wake-up, high water level auto-stop, low water level auto-start, dry run protection(under load protection) etc. functions available.



Features of EN600 series solar pump inverter

1. Two control mode: CVT mode and MPPT mode;
2. Maximum power point tracking;
3. Sun light week auto sleep, with strong light auto wake up;
4. Low water level re-start, high water level automatic stop;
5. Support both DC and AC input. Without sun and during raining days, select grid AC supply and drive the pump by setting parameters;
6. Support RS485 (free protocol and Modbus protocol), Profibus-DP, CanLink and CanOpen;
7. Fast installation, no need extra maintenance;
8. Compatible with most solar panels;
9. Support keyboard upload, download and copy parameters, makes parameters setup easily.



EN600 solar pump inverter Specifications

| | | |
|------------------------------------|---|-----------------|
| Type | 4T series | 2S series |
| Max input DC voltage | 800V DC | 400V DC |
| Recommended MPPT&CVT voltage range | 350V~750V DC | 160V~380VDC |
| Recommended input voltage | 530V DC/380V AC | 310V DC/220V AC |
| Rated output voltage | 3PH 380V AC | 3PH 220V AC |
| MPPT efficiency | >97% | |
| Output frequency range | 0~600Hz | |
| Max efficiency | >97% | |
| Protection level | IP20 Forced Air cooling | |
| Altitude | Below 1000m; above 1000m, de-rated 10% for every additional 1000m | |
| Solar pump inverter type | G:G type for submersible pumps; P:P type for centrifugal pump; | |

Recommended solar array configurations

The power range of solar array should be 1.2 to 1.3 times of the rated power of inverter;

The open-circuit voltage of solar array should be 1.1 times to 1.2 times of rated DC bus voltage.

EN600 solar pump inverter special parameters graph

The instruction just suitable for EN600 series inverter with function for solar pump. For other specifications no wrote here please refer to EN600 series standard manual.

Symbol description

× ---- parameter can't be changed in process of running

○ ---- parameter can be changed in process of running

* ---- read-only parameter, un-modifiable

Function parameter schedule graph

| Function Code | Name | Set Range | Min. Unit | Factory Default | Modification |
|---------------|--|--|-----------|-----------------|--------------|
| F01.00 | Main frequency input channel selection | 11:MPPT provision frequency | 1 | 0 | ○ |
| F08.18 | Input terminal X1 function selection | 1:Forward running FWD terminal 2:Reverse running REV terminal 72:Water upper limit level terminal 73:Water low limit level terminal | 1 | 1 | × |
| F08.19 | Input terminal X2 function selection | 1:Forward running FWD terminal 2:Reverse running REV terminal 72:Water upper limit level terminal 73:Water low limit level terminal | 1 | 2 | × |
| F08.20 | Input terminal X3 function selection | 1:Forward running FWD terminal 2:Reverse running REV terminal 72:Water upper limit level terminal 73:Water low limit level terminal | 1 | 0 | × |
| F08.21 | Input terminal X4 function selection | 1:Forward running FWD terminal 2:Reverse running REV terminal 72:Water upper limit level terminal 73:Water low limit level terminal | 1 | 0 | × |
| F11.01 | Provision channel selection | 9:Setup byF12.14 (CVT target voltage) | 1 | 0 | ○ |
| F11.02 | Feedback channel selection | 9:DC BUS voltage | 1 | 0 | ○ |
| F12.14 | CVT target voltage | 200.0~1000.0V | 0.1 | 500.0V | ○ |

| | | | |
|--------|--------------------------|--------------------------------------|---------|
| F17.06 | Wakeup DC Voltage | Range: 100.0~1000.0V | 450.0V |
| F17.07 | Sleep DC Voltage | Range: 100.0~1000.0V | 350.0V |
| F17.08 | MPPT Low limit Frequency | Range:0.00Hz ~ Upper limit Frequency | 10.00Hz |
| F17.09 | MPPT Mode Function | Range:0~1 | 0 |

0: Disabled

1: Enable MPPT Function

When set F17.09=1 and F01.00=11, the inverter will run under MPPT mode.

| | | | |
|--------|-------------------|---------------|----|
| F17.10 | Wakeup delay time | Range:0~30.0S | 5S |
|--------|-------------------|---------------|----|

For Solar pump application, there are two modes CVT mode and MPPT mode for choose.

CVT mode: Set F11.00=1(PID Close-loop valid), F11.01=9(Choose F12.14 as CVT target voltage), F11.02=9(Choose DC BUS voltage as feedback), F11.13=1, F19.32=0200.

When DC BUS voltage lower than the value of F17.07 (Sleep DC voltage), the inverter will come

into Sleep mode. When DC Bus voltage higher than F17.06 (Wakeup DC voltage) and lasts F17.10 (Wakeup delay time), the inverter will wake up and start to work again.

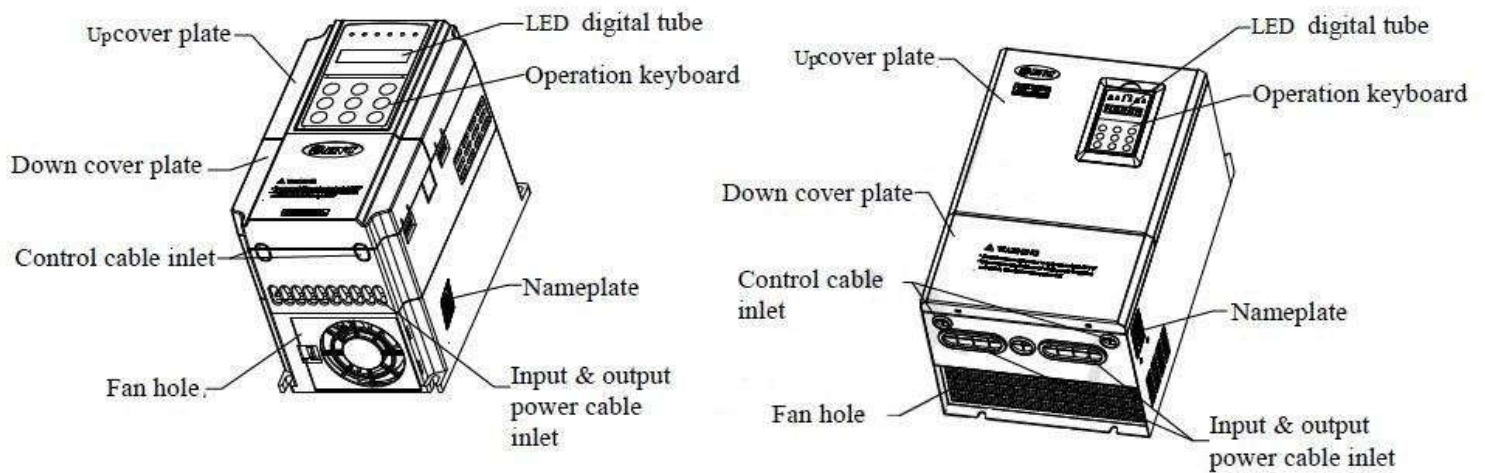
MPPT mode: Set F17.09=1, F01.00=11, MPPT function enabled.

Please adjust F17.06, F17.07, F17.08 and F17.10 properly to get suitable effect.

Water upper limit level and Water low limit level functions available for CVT mode and MPPT mode, please refer to #72 and #73 functions for multi-input function terminal at F8 parameters Group.

Appearance and parts name explanation

EN600 Appearance and parts name explanation



EN600 Parts name sketch

Outer size

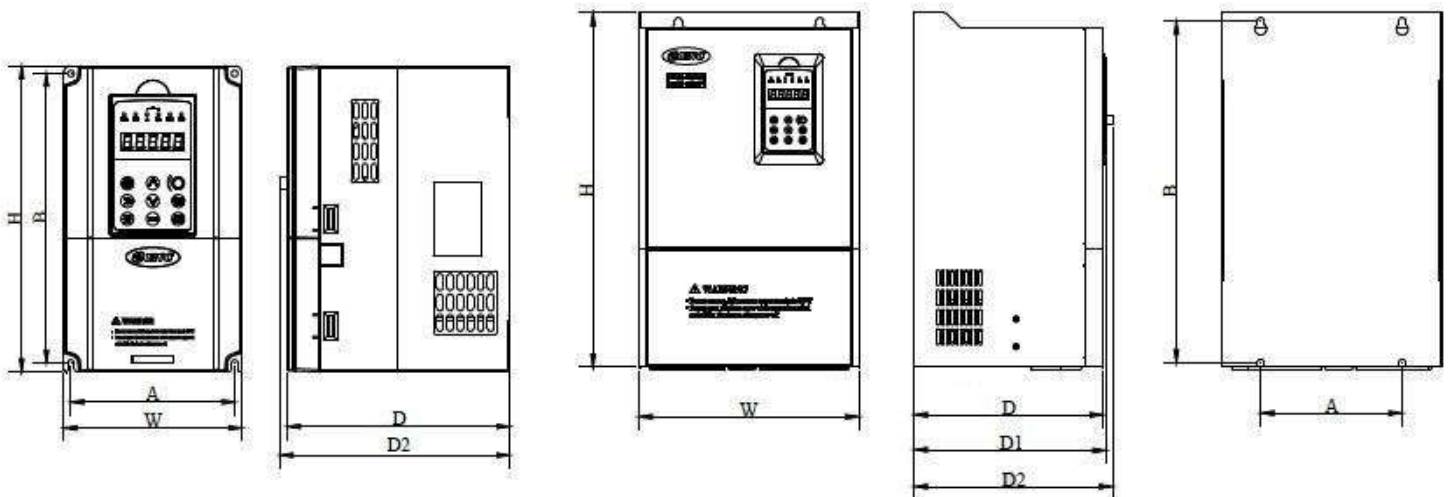


Fig.a

Fig.b

EN600 mounting size

| Inverter type | A (mm) | B (mm) | W (mm) | H (mm) | D (mm) | D1 (mm) | D2 (mm) | Fix Hole (mm) | Fig. No. |
|---------------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------------|----------|
| EN600-2S0004 | 104 | 186 | 115 | 200 | 151 | - | 164 | 5 | Fig.a |
| EN600-2S0007 | | | | | | | | | |
| EN600-2S0015 | | | | | | | | | |
| EN600-2S0022 | | | | | | | | | |
| EN600-2S0037 | 129 | 227 | 140 | 240 | 175 | - | 188 | 5 | Fig.a |
| EN600-4T0007G/0015P | 104 | 186 | 115 | 200 | 151 | - | 164 | 5 | Fig.a |
| EN600-4T0015G/0022P | | | | | | | | | |
| EN600-4T0022G/0037P | | | | | | | | | |
| EN600-4T0037G/0055P | | | | | | | | | |
| EN600-4T0055G/0075P | 129 | 227 | 140 | 240 | 175 | - | 188 | 5 | Fig.a |
| EN600-4T0075G/0110P | | | | | | | | | |
| EN600-4T0110G/0150P | 165 | 281 | 180 | 304 | 189 | - | 202 | 6 | Fig.a |
| EN600-4T0150G/0185P | | | | | | | | | |
| EN600-4T0185G/0220P | 180 | 382 | 250 | 398 | 210 | 214 | 223 | 9 | Fig.b |
| EN600-4T0220G/0300P | | | | | | | | | |
| EN600-4T0300G/0370P | 180 | 434 | 280 | 450 | 240 | 244 | 253 | 9 | Fig.b |
| EN600-4T0370G/0450P | | | | | | | | | |
| EN600-4T0450G/0550P | 190 | 504.5 | 290 | 530 | 250 | 254 | 263 | 9 | Fig.b |
| EN600-4T0550G/0750P | | | | | | | | | |