



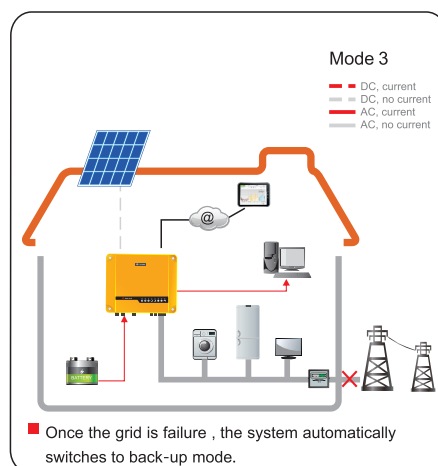
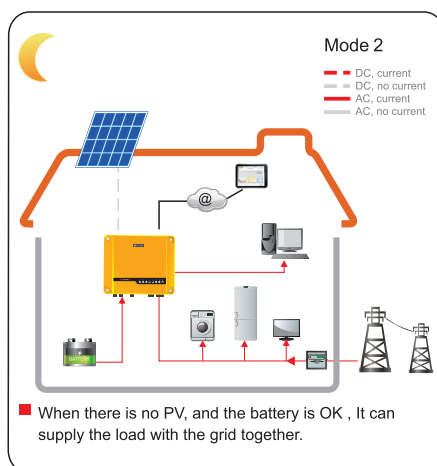
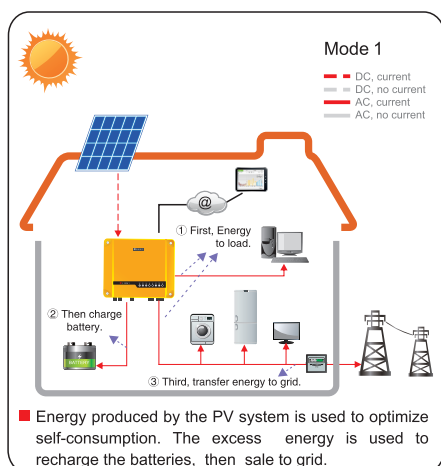
Designed for Australia:

- ★ Earth Fault Alarm
- ★ Zero Export
- ★ Power Factor adjustable
- ★ Remote Upgrade

ES Series Hybrid Inverter 3.6kW/4.6kW

- Future conception for Solar
- Charge controller and inverter integrated
- Intelligent battery management function
- Capable of being grid-interactive or grid-independent
- Compatible with both Lead-acid and Li-Ion battery
- More security & performance for same costs
- Battery max. discharge power up to 4.6kW
- IP65 dust-proof and water-proof rating
- 45°C full-load output
- Monitoring inverters freely via computers or mobile phones
- Fanless low-noise design

How does it work?



Good Quality Good Value Good Service GoodWe

Technical Data

GW5048D-ES

GW3648D-ES

Solar

Max. allowed PV Power [W]	6000	4600
Nominal DC Power [W]	5000	4200
Max. DC voltage [V]	580	580
MPPT voltage range [V]	125~550	125~550
Starting voltage [V]	150	150
Max. DC current [A]	11/11	11/11
No. of DC connectors	2	2
No. of MPPTs	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol

Battery

Battery type	Lead-acid or Li-Ion	Lead-acid or Li-Ion
Norminal Voltage [V]	48	48
Max Discharge power [W]	4600	3600
MAX Charge power [W]	4600, programmable*	3600, programmable
Battery capacity [Ah]	≥ 100 (depending requirement)	≥ 100 (depending requirement)
Charging curve	3-stage adaptive with maintenance	3-stage adaptive with maintenance
Charging voltage [V]	60 (optional)	60 (optional)
Battery temperature compensation	Included (Li-Ion)	Included (Li-Ion)
Battery voltage sense	Integrated	Integrated
Current shunt	Integrated	Integrated

AC Output Data

Norminal AC power [W]	4600	3600
Max. AC power [W]	4600/4850/4950/5100**	3600
Peak power (Back-up) [W]	1.5x Pnom, 10sec	1.5x Pnom, 10sec
Max. AC current [A]	20/21***	16
Norminal AC output	50/60Hz; 230Vac	50/60Hz; 230Vac
AC output range	45~55Hz/55~65Hz; 180~270Vac	45~55Hz/55~65Hz; 180~270Vac
AC output (Back-up)	230Vac ±2%, 50Hz(60Hz optional) ±0.2%, THDv<3% (linear load)	
THDi	<1.5%	<1.5%
Power factor	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging
Grid connection	Single phase	Single phase

Efficiency

Max. efficiency	97.6%	97.6%
Euro efficiency	>97.0%	>97.0%
MPPT adaptation efficiency	99.9%	99.9%

Protection

Residual current monitoring unit	Integrated	Integrated
Anti-islanding protection	Integrated	Integrated
DC switch (PV)	Integrated (optional)	Integrated (optional)
AC over current protection	Integrated	Integrated
Insulation monitoring	Integrated	Integrated

Certifications&Standards

Grid regulation	VDE-AR-N4105, VDE 0126-1-1, G83/2, G59/3, AS4777.2/3	
Safety	IEC62109-1&-2, AS3100, IEC62040-1	
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-11, EN61000-3-12	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-2, EN61000-3-3

General Data

Dimensions [mm]	516*440*184	516*440*184
Weight [kg]	30	28
Mounting	Wall bracket	Wall bracket
Ambient temperature range	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)
Relative humidity	0~95%	0~95%
Max. operating altitude	4000m(> 3000m derating)	4000m(> 3000m derating)
Protection degree	IP65	IP65
Topology	Transformerless	Transformerless
Standby losses [W]	<8	<8
Cooling	Natural convection	Natural convection
Noise emission [dB]	<25	<25
Display	LED light & APP	LED light & APP
Communication	WiFi; RS485; CAN;	WiFi; RS485; CAN;
Standard warranty [years]	5	5

*under off-grid mode, the battery capacity should be more than 100Ah.

under on-grid mode, then battery capacity could be less than 100Ah

**4600 for VDE-AR-N4105, 4850 for Thailand, 4950 for Australia, 5100 for other countries

***21 for Thailand, 20 for other countries