



GSL ENERGY

# Three Phase Hybrid Inverter

GSL-8/ 10/ 12K-3PH-EU



- 100** 100% unbalanced output, each phase; Max. output up to 50% rated power
-  DC couple and AC couple to retrofit existing solar system
- 16** Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 240** Max. charging/discharging current of 240A
- 48** 48V low voltage battery, transformer isolation design
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

## Technical Data

Model	GSL-8K-3PH-EU	GSL-10K-3PH-EU	GSL-12K-3PH-EU
<b>Battery Input Data</b>			
Battery Type	Lead-acid or Li-Ion		
Battery Voltage Range (V)	40~60		
Max. Charging Current (A)	190	210	240
Max. Discharging Current (A)	190	210	240
External Temperature Sensor	Yes		
Charging Curve	3 Stages / Equalization		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
<b>PV String Input Data</b>			
Max. DC Input Power (W)	10400	13000	15600
Rated PV Input Voltage (V)	550 (160~800)		
Start-up Voltage (V)	160		
MPPT Voltage Range (V)	200~650		
Full Load DC Voltage Range (V)	350~650		
PV Input Current (A)	13+13	26+13	
Max. PV I <sub>sc</sub> (A)	17+17	34+17	
No.of MPP Trackers	2		
No.of Strings per MPP Tracker	1	2+1	
<b>AC Output Data</b>			
Rated AC Output and UPS Power (W)	8000	10000	12000
Max. AC Output Power (W)	8800	11000	13200
AC Output Rated Current (A)	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Current (A)	18.2/17.4	22.7/21.7	27.3/26.1
Max. Continuous AC Passthrough (A)	45		
Peak Power (off grid)	2 time of rated power, 10 S		
Power Factor	0.8 leading to 0.8 lagging		
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac		
Grid Type	Three Phase		
Total Harmonic Distortion (THD)	<3% (of nominal power)		
DC current injection	<0.5% I <sub>n</sub>		
<b>Efficiency</b>			
Max. Efficiency	97.60%		
Euro Efficiency	97.00%		
MPPT Efficiency	99.90%		
<b>Protection</b>			
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection		
Output Over Voltage Protection	DC Type II/AC Type III		
<b>Certifications and Standards</b>			
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150		
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2		
<b>General Data</b>			
Operating Temperature Range (°C)	-40~60°C, >45°C derating		
Cooling	Smart cooling		
Noise (dB)	<45 dB		
Communication with BMS	RS485; CAN		
Weight (kg)	33.6		
Size (mm)	422W x 699.3H x279D		
Protection Degree	IP65		
Installation Style	Wall-mounted		
Warranty	5 years		