

3.6 to 6kW Single-phase Hybrid Inverter

Easy installation

- Easy installation and space-saving with ultrathin and ultralight design

AI management

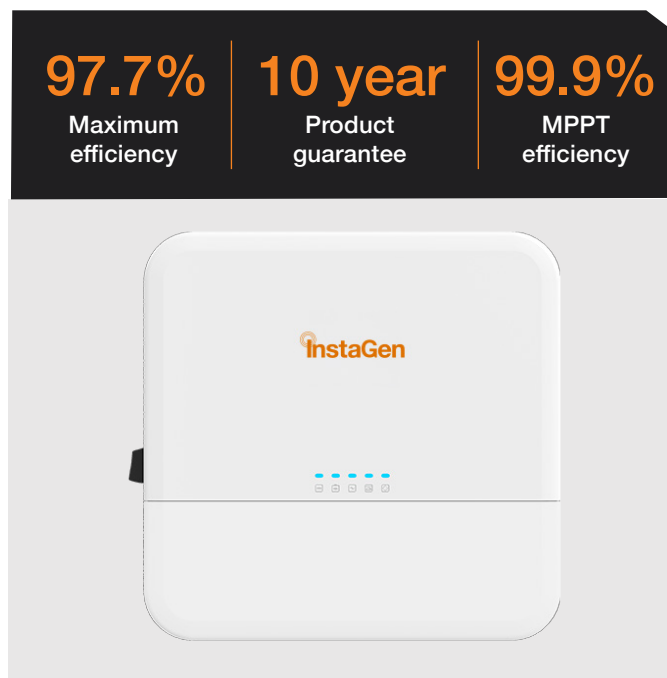
- Integrated AI energy management with generator, heat pump, and smart load

Intelligent operating modes

- Supports multiple intelligent operating modes, including Peak Shaving and up to eight configurable 24-hour TOU schedules

Advanced solar tracking

- Double MPPT tracker, up to 18 A MPPT current



Model	INS-3.6L-G3	INS-5L-G3	INS-6L-G3
Battery			
Battery type	LiFePO4		
Battery voltage range (V)	40-60		
Max. charging/discharging current (A)	90/90	120/120	135/135
Max. charging/discharging power (W)	3600/3800	5000/5250	6000/6300
Charging strategy for LiFePO4 battery	Self-adaption to BMS		
Charging curve	3 stages / Equalization		
Communication	CAN		
PV Input			
Recommended max. PV power (W)	7200	10000	12000
Max. input voltage (V)	550		
Rated voltage (V)	360		
Start-up voltage (V)	100		
MPPT voltage range (V)	90-500		

Model	INS-3.6L-G3	INS-5L-G3	INS-6L-G3
PV Input (cont.)			
Max. input current (A)		18/18	
Max. short circuit current (A)		27/27	
MPPT number/max. input strings number		2/2	
AC Input and Output (On-grid)			
Rated output power (W)	3680 ⁽¹⁾	5000	6000
Max. output apparent power (VA)	3680 ⁽¹⁾	5500	6600
Max. continuous AC bypass current (A)		50	
Grid form		L/N/PE	
Rated AC output voltage/Range (V)		161 to 276	
Rated grid frequency (Hz)		50	
Max. output current (A)	16 ⁽¹⁾	25	30
Power factor		>0.99 (0.8 leading-0.8 lagging)	
AC Output (Backup)			
Rated output power (W)	3680	5000	6000
Max. output apparent power (VA)	7360 for 10s	10000 for 10s	12000 for 10s
Backup switch time (ms)		0	
Grid form		L/N/PE	
Rated output voltage (V)		230	
Rated output frequency (Hz)		50	
Max. continuous output current (A)	16	22.7	27.3
THDv (@linear load)		<3%	
Efficiency			
MPPT efficiency		99.9%	
Max. efficiency		97.7%	
EU efficiency		97.0%	
Protection			
Anti-islanding protection		Integrated	
PV string input reverse polarity protection		Integrated	
Insulator resistor detection		Integrated	
Residual current monitoring unit		Integrated	
AC overcurrent protection		Integrated	
AC short current protection		Integrated	
AC overvoltage and undervoltage protection		Integrated	
Surge protection		DC Type II/AC Type II	

(1) This value compliance with G98.

(2) This value compliance with VDE 4105

Model	INS-3.6L-G3	INS-5L-G3	INS-6L-G3
General			
Dimensions (W x H x D [mm])	506 x 495 x 99		
Weight (kg)	17		
Mounting	Wall-mounted		
Operating temperature (°C)	-25 to 65 (>45, derating)		
Relative humidity	0-95%, no condensation		
Topology (Solar / Battery)	Transformerless/High-frequency isolation		
Altitude (m)	≤4000		
Protection degree	IP66		
Noise (dB)	<35		
User interface	LED, App		
Digital input/output	DRM, 2 x DI, 2 x DO		
Communication	RS485, Wi-Fi/Ethernet/4G (optional)		
Certificates and Standards			
Grid connected standard	G98, G99, G100, EN 50549-1/-10, NF EN 50549-1/-10, CEI 0-21, PEA, MEA, IEC 62116, IEC 61727, IEC 60068, IEC 61683, DEWA		
Safety/EMC standard	IEC 62109-1/-2, EN 61000-6-1/-2/-3/-4		