



## Three-phase Hybrid Inverter

**HIT-12L-G3S**  
**HIT-15L-G3S**  
**HIT-20L-G3S**

### Description

The HIT-(12-20)L-G3S series is a high-performance three-phase hybrid inverter with excellent reliability, including power classes ranging from 12 kW to 20 kW.

The intelligent EMS function supports self-consumption mode, economy mode, backup mode, peak shaving mode, and time of use mode for multi-scenario applications.

Monitoring management through S-Miles Cloud allows users to remotely diagnose and track the individual system performance over time, offering superior energy production.

### Features

- 01 4 MPPTs with 20 A input; DC/AC oversizing up to 200%
- 02 100% unbalanced output; max. output of each phase up to 50% rated power
- 03 Support multiple intelligent working modes including Peak Shaving and 8×24h Time of Use
- 04 Integrated AI energy management with generator, heat pump and smart load
- 05 Max. 10 inverters in parallel for on-grid and off-grid system extension
- 06 Ultralight for easy installation and space-saving; unique built-in meter solution with up to 50 A bypass



# Technical Specifications

Model	HIT-12L-G3S	HIT-15L-G3S	HIT-20L-G3S
<b>Battery</b>			
Battery type		Li-ion/Lead-acid	
Battery voltage range (V)		40-60	
Max. charge/discharge current (A)	250/250	300/300	350/350
Charging strategy for Li-ion battery		Self-adaption to BMS	
Charging curve		3 Stages/Equalization	
External temperature sensor		Optional	
Communication		CAN	
<b>PV Input</b>			
Recommended max. PV power (W)	24000	30000	40000
Max. input voltage (V)		1000	
Rated voltage (V)		720	
Start-up voltage (V)		150	
MPPT voltage range (V)		150-900	
Max. input current (A)	20/20/20/20	20/20/20/20	20/20/20/20
Max. short circuit current (A)	30/30/30/30	30/30/30/30	30/30/30/30
MPPT number/Max. input strings number	4/4	4/4	4/4
<b>AC Input and Output (On-grid)</b>			
Rated output power (W)	12000	15000	20000
Max. output apparent power (VA)	13200	16500	22000
Grid form		3L/N/PE	
Rated AC output voltage/Range (V)		380/400, 266-480	
Rated grid frequency (Hz)		50/60	
Rated output current (A)	17.3	21.7	28.9
Max. output current (A)	20	25	33.3
Power factor		>0.99 (0.8 leading ... 0.8 lagging)	
THDi (@rated output)		<3%	
<b>AC Output (Back-up)</b>			
Rated output power (W)	12000	15000	20000
Max. output apparent power (VA) <sup>(1)</sup>	24000, 10s	30000, 10s	40000, 10s
Back-up switch time (ms)		<10	
Grid form		3L/N/PE	
Rated output voltage (V)		380/400	
Rated output frequency (Hz)		50/60	
Max. continuous output current (A)	18.2	22.8	30.4
Max. continuous AC bypass current (A)		50	
THDv (@linear load)		<3%	
<b>Efficiency</b>			
MPPT efficiency		99.9%	
Max. efficiency		98.5%	
EU efficiency		98.0%	
Max. battery discharge to AC efficiency		95.7%	
<b>Protection</b>			
Anti-islanding protection		Integrated	
PV string input reverse polarity protection		Integrated	
Insulation resistor detection		Integrated	
Residual current monitoring unit		Integrated	
AC overcurrent protection		Integrated	
AC short current protection		Integrated	
AC overvoltage and undervoltage protection		Integrated	
AFCI		Optional	
Surge protection		DC Type II/AC Type II	
<b>General</b>			
Dimensions (W x H x D [mm]) <sup>(2)</sup>		539 x 696 x 232	
Weight (kg)		41	
Mounting		Wall mounting	
Operating temperature (°C)		-25 to +65 (>45, derating)	
Relative humidity		0-95%, no condensing	
Cooling		Smart fan	
Topology (Solar/Battery)		Transformerless/High-frequency isolation	
Altitude (m)		≤4000 (>2000, derating)	
Protection degree		IP66	
Noise (dB)		<60	
User interface		LCD & App	
Digital input/output		DRM, 2 x DI, 2 x DO	
Communication		RS485, Wi-Fi/Ethernet/4G (optional) <sup>(3)</sup>	
<b>Certifications and Standards</b>			
Grid connection standard		IEC 61727, IEC 62116, EN 50549, VDE-AR-N 4105	
Safety/EMC standard		IEC 62109-1/-2, EN 61000-6-1/-2/-3/-4	

(1) Can be achieved only if PV and battery power are sufficient.

(2) Excluding Connectors and Brackets.

(3) The DTS-4G solution will be coming soon.

