Three-phase Hybrid Inverter Datasheet

HIT-5L-G3
HIT-6L-G3
HIT-8L-G3
HIT-10L-G3
HIT-12L-G3
HIT-15L-G3
HIT-17L-G3
HIT-20L-G3

Description

The HIT-(5-20)L-G3 series is a high-performance three-phase hybrid inverter with excellent reliability, including power classes ranging from 5 kW to 20 kW.

The intelligent EMS function supports self-consumption mode, economical 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 16 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

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Technical Specifications

Model	HIT-5L-G3	HIT-6L-G3	HIT-8L-G3	HIT-10L-G3	HIT-12L-G3	HIT-15L-G3	HIT-17L-G3	HIT-20L-G3
Battery								
Battery type	Li-ion/Lead-acid							
Battery voltage range (V)	40-60							
Max. charge/discharge current (A)	120/120	150/150	190/190	210/210	250/250	300/300	350/350	350/350
Charging strategy for Li-ion battery	Self-adaption to BMS							
Charging curve	3 Stages/Equalization							
External temperature sensor	Optional							
Communication	CAN							
PV Input								
Recommended max. PV power (W)	10000	12000	16000	20000	24000	30000	34000	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)	16/16	16/16	16/16/16	16/16/16/16	16/16/16/16	16/16/16/16	16/16/16/16	16/16/16/16
Max. short circuit current (A)	20/20	20/20	20/20/20	20/20/20/20	20/20/20/20	20/20/20/20	20/20/20/20	20/20/20/20
MPPT number/Max. input strings number	2/2	2/2	3/3	4/4	4/4	4/4	4/4	4/4
AC Input and Output (On-grid)								
Rated output power (W)	5000	6000	8000	10000	12000	15000	17000	20000
Max. output apparent power (VA)	5500	6600	8800	11000	13200	16500	18700	22000
Grid form	3L/N/PE							
Rated AC output voltage/Range (V)	380/400, 266-480							
Rated grid frequency (Hz)	50/60							
Max. output current (A)	8.3	10	13.3	16.7	20	25	28.3	33.3
Power factor	>0.99 (0.8 leading ... 0.8 lagging)							
THDi (@rated output)	<3%							
AC Output (Back-up)								
Rated output power (W)	5000	6000	8000	10000	12000	15000	17000	20000
Max. output apparent power (VA)[1]	10000, 10s	12000, 10s	16000, 10s	20000, 10s	24000, 10s	30000, 10s	34000, 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)	7.6	9.1	12.2	15.2	18.2	22.8	25.8	30.4
Max. continuous AC bypass current (A)	50							
THDv (@linear load)	<3%							
Efficiency								
MPPT efficiency	99.9%							
Max. efficiency	98.2%					98.5%		
EU efficiency	97.6%					98.0%		
Max. battery discharge to AC efficiency	95.7%							
Protection								
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							
General								
Dimensions (W × H × D [mm])[2]	552 × 692 × 222							
Weight (kg)	37							
Mounting	Wall mounting							
Operating temperature (°C)	-25 to +65 (>45, derating)							
Relative humidity	0-95%, no condensing							
Cooling	Natural convection					Smart fan		
Topology (Solar/Battery)	Transformerless/High-frequency isolation							
Altitude (m)	≤4000 (>2000, derating)							
Protection degree	IP66							
Noise (dB)	<35					<45		
User interface	LED, App							
Digital input/output	DRM, 4 × DI, 4 × DO							
Communication	RS485, optional: Wi-Fi/4G/Ethernet							
Certifications and Standards								
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.