

FI H1P-(3-8)-220

Single Phase Low Voltage Energy Storage Inverters

Features:

- Generator-compatible to extend backup duration during grid power outage
- Multiple inverters can operate together to form a microgrid
- Supports dual backup ports for intelligent control of critical and non-critical loads
- 10 seconds of 200% overload capability
- Automatic switchover time is < 4ms, providing seamless transitions from grid to backup
- Ensures excellent power supply stability, keeping the load unaffected by a weak grid or generator supply fluctuations

Models:

FI H1P-3-220 / FI H1P-3.6-220

FI H1P-5-220/ FI H1P-6-220

FI H1P-8-220



DATASHEET

Models	FI H1P-3-220	FI H1P-3.6-220	FI H1P-5-220	FI H1P-6-220	FI H1P-8-220
Input DC (PV side)					
Recommended max. PV array size	6 kW	7.2 kW	10 kW	12 kW	16 kW
Max. usable PV input power	4.8 kW	5.76 kW	8 kW	9.6 kW	12.8 kW
Max. input voltage	500 V				
Rated voltage	330 V				
Start-up voltage	90 V				
MPPT voltage range	90 - 435 V				
Max. input current	16 A / 16 A				32 A / 32 A
Max. short circuit current	20 A / 20 A				40 A / 40 A
MPPT number / Max. input strings number	2 / 2				2 / 4
Battery					
Battery type	Li-ion / Lead-acid				
Battery voltage range	40 - 60 V				
Max. charge / discharge power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. charge / discharge current	70 A	80 A	112 A	135 A	190 A
Communication	CAN / RS485				
Output AC (Grid side)					
Rated output power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. apparent output power	3 kVA	3.6 kVA	5 kVA	6 kVA	8 kVA
Operation phase	L/N/PE				
Rated grid voltage	220 V / 230 V				
Rated grid frequency	50 Hz / 60 Hz				
Rated grid output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Max. output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)				
THDi	< 2%				
Input AC (Grid side)					
Input voltage range	187 - 253 V				
Max. input current	21 A	25 A	32 A	40 A	50 A
Frequency range	45 - 55 Hz / 55 - 65 Hz				
Output AC (Back-up)					
Rated output power	3 kW	3.6 kW	5 kW	6 kW	8 kW
Max. apparent output power	2 times of rated power, 10 s				
Back-up switch time	< 4 ms				
Rated output voltage	L/N/PE, 220 V / 230 V				
Rated frequency	50 Hz / 60 Hz				
Rated output current	13.7 A / 13.1 A	16.4 A / 15.7 A	22.8 A / 21.8 A	27.3 A / 26.1 A	36.4 A / 34.8 A
Max. AC passthrough current	35 A	35 A	40 A	40 A	50 A
THDv (@linear load)	< 2%				
Efficiency					
Max. efficiency	96.2%				
EU efficiency	96.1%				
BAT charged by PV / AC max. efficiency	95.3% / 93.9%				
BAT discharged to AC max. efficiency	93.8%				
Protection					
Ground fault monitoring	Yes				
DC reverse-polarity protection	Yes				
Integrated AFCI 2.0	Optional				
Protection class / Over voltage category	I / II (PV and BAT), III (MAINS and BACKUP and GEN)				
General Data					
Dimensions (W × H × D)	335 × 560 × 253 mm				
Weight	23 kg			23.5 kg	
Topology	High frequency isolation (for battery)				
Operating ambient temperature range	-40 ~ +60°C				
Ingress protection	IP66				
Cooling concept	Natural cooling			Intelligent fan-cooling	
Max. operation altitude	3000 m				
Grid connection standard	NRS 097-2-1, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA, NBR 16149, NBR 16150				
Safety / EMC standard	IEC/EN 62109-1/-2, EN 61000-6-2/-3				
Features					
DC connection	MC4 plug (PV port) / Terminal Block (BAT port)				
AC connection	Terminal Block				
Display	7.0" LCD display & Bluetooth + APP				
Communication	RS485, CAN, Optional: Wi-Fi, GPRS, LAN				