Feston
always on

Vega Series

Three Phase
Hybrid Inverter

FES- 14/15/16/18/20K- HB

- **100** 100% unbalanced output, each phase; Max. output up to 50% rated power
- AC couple to retrofit existing solar system
- **10** Max.10 pcs parallel for on-grid and off-grid operation: Support multiple batteries parallel
- **350** Max. charging/discharging current of 350A
- **48** 48V low voltage battery, transformer isolation design
- **6** 6 time periods for battery charging/discharging
- Support storing energy from diesel generator

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Technical Data

Model	FES-14K-HB	FES-15K-HB	FES-16K-HB	FES-18K-HB	FES-20K-HB
Battery Input Data					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	40-60				
Max. Charging Current (A)	260	280	300	330	350
Max. Discharging Current (A)	260	280	300	330	350
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	1				
PV String Input Data					
Max. PV Access Power (W)	28000	30000	32000	36000	40000
Max. PV Input Power (W)	22400	24000	25600	28800	32000
Max. PV Input Voltage (V)	800				
Start-up Voltage (V)	160				
MPPT Voltage Range (V)	160-650				
Rated PV Input Voltage (V)	550				
Max. Operating PV Input Current (A)	36+36				
Max. Input Short-Circuit Current (A)	54+54				
No. of MPP Trackers/ No. of Strings MPP Tracker	2/2+2				
AC Input/Output Data					
Rated AC Input/Output Active Power(W)	14000	15000	16000	18000	20000
Max. AC Input/Output Apparent Power(VA)	15400	16500	17600	19800	22000
Rated AC Input/Output Current (A)	21.3/20.3	22.8/21.8	24.3/23.2	27.3/26.1	30.4/29
Max. AC Input/Output Current(A)	23.4/22.4	25/24	26.7/25.6	30/28.7	33.4/31.9
Max. Continuous AC Passthrough (grid to load) (A)	70				
Peak Power (off-grid) (W)	2 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/380V 230/400V 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55 60/55-65				
Grid Connection Form	3L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	97.6%				
Euro Efficiency	97.0%				
MPPT Efficiency	>99%				
Equipment Protection					
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level				
Surge Protection Level	TYPE II(DC), TYPE II(AC)				
Interface					
Communication Interface	RS485/RS232/CAN				
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)				
General Data					
Operating Temperature Range (℃)	-40 to +60℃, >45℃ Derating				
Permissible Ambient Humidity	0-100%				
Permissible Altitude	3000m				
Noise (dB)	<60				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	456×750×268.5 (Excluding Connectors and Brackets)				
Weight (kg)	51.9				
Type of Cooling	Intelligent Air Cooling				
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy				
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105				
Safety / EMC Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

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