

THE HIGH-FREQUENCY TRANSFORMER-LESS UPS

KEY FEATURES:

- High frequency on-line double conversion
- Advanced DSP control and 3-level technology
- Input power factor up to 0.99
- Output power factor @0.9
- High efficiency of 95% on mains mode (up to 98% in ECO mode)
- Wide input voltage range of 190 - 485 Vac
- Linear load derating for input voltages under 277 V to reduce battery usage
- Wide input frequency range of 40 - 70 Hz
- 50 / 60 Hz or 60/ 50 Hz frequency conversion feature
- Flexible battery configuration (settable 16 - 20 nos. of batteries)
- Cold start available – can switch on the UPS on battery mode in the absence of mains
- Settable delayed start time when mains power is restored, reducing the impact on power grid or generator
- Intelligent fan control – fan speed changes with temperature for less noise and extended service life
- Smaller footprint – well engineered internal layout to save up to 20% floor space
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Multiple communications: RS232 (standard), SNMP, RS485 and dry contacts (optional)
- Effective software and hardware protection function, robust self-diagnostic function, and abundant event log for check



AVAILABLE OPTIONS:

- SNMP card
- RS485 card
- Parallel Redundancy Function (x 4 units)
- Dry contacts

MODEL	EH 31 - 010	EH 31 - 020
Rated Capacity	10 kVA / 9 kW	20 kVA / 18 kW
INPUT		
Input Wiring	Single-phase Three-wire (1Φ + N + E)	
Rated Voltage	380 / 400 / 415 Vac	
Voltage Range	190 ~ 305 Vac (linear derating between 50% ~ 100% load), 305 ~ 499 Vac (no derating)	
Rated Frequency	50 / 60 Hz (auto-sensing)	
Frequency Range	40 ~ 70 Hz	
Power Factor	≥ 0.99	
Bypass Voltage Range	-40% ~ +15% (settable)	
Total Harmonic Distortion (THDi)	≤ 5%	
OUTPUT		
Output Wiring	Single-phase Three-wire (1Φ + N + PE)	
Rated Voltage	208 (PF=0.9) / 220 / 230 / 240 Vac	
Voltage Regulation	±1%	
Frequency	Synchronized to bypass in mains mode, 50 / 60 Hz ± 0.1% in Battery mode	
Waveform	Sinusoidal	
Power Factor	0.9	
Total Harmonic Distortion (THDv)	≤ 1% (linear load); ≤ 3% (non-linear load)	
Crest Factor	3:1	
Overload	102% ~ 110% for 10 min, 111% ~ 125% for 1 min, 126% ~ 150% for 30 s	
BATTERIES		
DC Voltage	192 Vdc (192 ~ 240 Vdc settable)	
No. of Batteries	16 pcs (16 ~ 20 settable)	
Charging Current(max.)	5A default, 10A optional	
Recharge Time	8hrs depends on capacity of battery	
SYSTEM		
Efficiency	≥ 94% at 100% load, ≥ 98% in ECO mode	
Protections	Short-circuit, Over load, Over Temp, Battery Low Voltage, Over Voltage, Under Voltage, Fan Failure	
Max. no. of Parallel Connections	4	
Communications	Standard configuration: RS232; Optional configuration: SNMP, RS485, dry contacts, Battery Temperature compensation	
Display	LCD + LED	
OTHERS		
Operating Environment	0°C ~ 40°C	
Storage Temperature	-25°C ~ 55°C (without battery)	
Relative Humidity	0% ~ 95% (non-condensing)	
Altitude	≤ 1000 m; derating 1% for each additional 100 m	
IP rating	IP 20	
Noise level at 1m	≤ 58 dB	
Dimensions (W × D × H) (mm)	191 x 465 x 350	191 x 495 x 515
Weight (kg)	18.5	26.5