

KEOR HPE 200-250-300



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1. TECHNICAL FEATURES

1. General Features			
Power (KVA)	200	250	300
UPS Topology	ON LINE – Double Conversion		
Nominal Apparent Output Power (kVA Cosφ 1.0)	200	250	300
Nominal Active Output Power (kW Cosφ 1.0)	200	250	300
Efficiency (AC ÷ AC) (%)	Up to 94,5 Up to 95,8 Up to 96 Up to 95,5		
@25% load			
@50% load			
@75% load			
@100% load			
Efficiency (AC ÷ AC) (Eco Mode)	>98%		
Heat dissipation at rated load, VFI voltage (kW)	9,4	11,8	14,1
UPS Ambient Temperature (°C)	0 ÷ 40		
BATTERY ambient temperature (°C)	0 ÷ +25		
UPS storage temperature (°C)	-10 ÷ +70		
BATTERY storage temperature (°C)	-15 ÷ +40		
Relative humidity % (not condensing)	< 95%		
Altitude m	<1000 (Above Sea level)		
Power derating for altitude > 1000 m	According to "IEC62040-3", 0,5% every 100m		
Ventilation	Forced		
Requested cooling air volume (m³/h)	1800	2200	2300
Audible noise level (according to IEC EN 62040-3)	< 65dB		
Number of cells for standard Lead acid battery	360 ÷ 372		
Protection Degree	IP20		
Electromagnetic Compatibility EMI	According to "IEC EN 62040-2" (CE marking)		
Safety	IEC EN 62040-1		
Test and performance	IEC EN 62040-3		
Colour	RAL9005		
Accessibility	Front Access		
Installation	Against the Wall		
Dimensions (mm) (WxDxH)	880 x 966 x 1976		
Weight kg (without battery)	720	850	900
Input/output cable connection	Cables entry front bottom		
Transport	Base provided for forklift handling		
Storage and transport conditions	According to "IEC EN 62040-3"		
Reference standards	EN 62040-1 - EN62040-2 - EN62040-3 ISO 9001:2008 - ISO 14001		
Front panel	10" Touch-screen		
Voltage-free contact interface	Optional for signalisations / alarms Standard: RS232 - USB		
Serial communication interface	Optional: RS485 (Mod-Bus RTU protocol)		
Parallel configuration (optional)	Up to 5+1 (redundant parallel) Up to 6 (power parallel)		

2. Input: rectifier and battery charger			
Power (KVA)	200	250	300
Input	Three-phase		
Nominal input voltage (Vac)	400		
Input voltage range (%)	-20/+15		
Input frequency (Hz)	50 - 60		
Input frequency range (%)	±10		
Input power factor	>0,99		
Input current THD at nominal voltage and THDV <0,5% (%)			
@25% load	< 9		
@50% load	< 5		
@75% load	< 3		
@100% load	< 3		
DC output voltage accuracy (%)	±1		
DC output voltage ripple (%)	<1 (RMS)		
Battery recharging characteristic	Intermittent charging with prevailing state of complete rest and control of the battery status IU (DIN 41773)		
Maximum recharging current (A)			
- at nominal load	30	40	40
- with DCM function (max current)	100	100	100
AC-DC converter type	IGBT-based PFC		
Input protection	Fuses		
Nominal current absorbed from mains (at nominal load and battery charged) (A)	302	378	453
Maximum current absorbed from mains (at nom. load, nom. voltage and max. recharging current) (A)	423	518	611
Rectifier soft-start (walk-in) (sec)	Settable from 5" to 30"		
Rectifier sequential start-up (hold-off) (sec)	Settable from 1" to 300"		

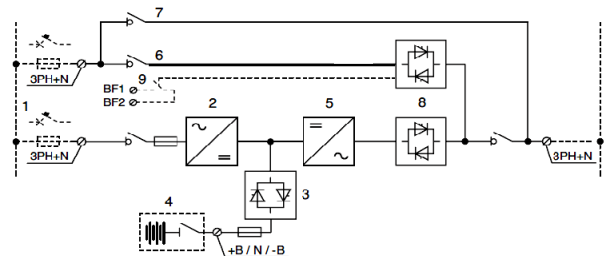
3. Batteries			
Power (KVA)	200	250	300
Type (standard) other on request	Sealed lead acid (VRLA - maintenance free)		
Number of Cells	360 - 372		
Floating Voltage at 25°C	812 for 360 cells, 840 for 372 cells		
Minimum Discharge Voltage Vdc	620 for 360 cells, 632 for 372 cells		
Power drawn by the inverter (at rated load cosφ = 1) (KW)	204,1	255,1	306,1
Power drawn by the inverter (at rated load and minimum battery voltage) (KW)	329,0	411,0	494
Battery Protection	Fuses		
Battery Test	Provided as Standard		

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4. Output Inverter			
Power (KVA)	200	250	300
Inverter Bridge	3-Level IGBT (High Frequency PWM)		
Nominal Apparent Output Power (kVA Cosφ 1.0)	200	250	300
Nominal Active Output Power (kW Cosφ 1.0)	200	250	300
Efficiency (DC ÷ AC) (%)	Up to 96		
@25% load	Up to 97		
@50% load	Up to 97		
@75% load	Up to 97		
@100% load	Up to 98		
Output	3 Phase / 4 Wires		
Rated Output Voltage (selectable) (Vac)	380-400-415		
Output Voltage Stability	± 1		
- Static (Balanced Load) (%)	± 2		
- Static (Unbalanced Load) (%)	± 5		
- Dynamic (Step Load 20%÷ 100% ÷20%) (%)	< 20		
- Output Volt. Recovery Time(after step load) (ms)	VFI-SS-111		
- IEC EN 62040-3			
Phase Angle Accuracy (°)	± 1		
- Balanced Load	± 1		
- 100% Unbalanced Load			
Output Frequency (selectable) (Hz)	50 / 60		
Output Frequency Stability	± 0,001		
- Free Running Quartz Oscillator (Hz)	± 2 (other on request)		
- Inverter Sync. with Mains (Hz)	< 1		
- Slew rate (Hz/s)			
Nominal Output Current (@ 400 Vac output) (A)	289	361	433
Overload Capability	5 min >110%...125%		
	30 s >125%...150%		
	100 ms >150%		
Short Circuit Current (A)	720	900	1050
Short Circuit Characteristic	Current limited with electronic protection Automatic stop after 5 seconds		
Output Waveform	Sinewave		
Output Harmonic Distortion (%)	< 1		
- Linear Load	< 5		
- Non Linear Load	Fully compliant		
- IEC EN 62040-3			
Max Crest Factor	Up to 3 : 1		

5. Bypass	
Automatic static by-pass	Electronic Thyristor Switch Three-phase + Neutral
Nominal input voltage (Vac)	380 – 400 - 415
Input voltage range (%)	±10
Input frequency (Hz)	50 - 60
Input frequency range (%)	±10
Transfer mode	Without break
Transfer: inverter - automatic bypass	In case of: - Short-circuit - Battery discharged - Inverter test - Inverter failure
Transfer: automatic bypass - inverter	- Automatic - Block on bypass after 6 transfers within 2 minutes, reset by front panel
Overload Capability (%)	150 Continuously 1000 For 1 Cycle
Manual By-Pass	- Electronically controlled - No-break assisted re-start procedure
Back-feed protection	NC contact for the control of an external device

6. Block Diagram



1. Separate mains input for rectifier and bypass
2. Rectifier battery-charger
3. Battery static switch
4. External battery
5. Inverter
6. Emergency line (bypass)
7. Maintenance bypass line
8. Inverter (SSI) and bypass(SSB) static switch
9. Optional contact for external back-feed protection

OPTIONS

1. BATTERY TEMPERATURE VOLTAGE COMPENSATION
2. SERIAL INTERFACE RS-485 (ModBus protocol RTU)
3. SNMP ADAPTER
4. PARALLEL CARD INTERFACE KIT
5. LOAD-SYNC CARD INTERFACE KIT
6. ISOLATION TRANSFORMER
7. WALL MOUNTED FUSED SWITCH BOX

SOFTWARE ENABLED FUNCTIONS

1. DIESEL MODE OPERATION
2. RECTIFIER WALK-IN TIME
3. RECTIFIER DELAY ON STARTUP (HOLD-OFF TIME)
4. DYNAMIC CHARGING MODE (DCM)
5. VFD (ECO) OPERATING MODE MANAGEMENT
6. UHE (ULTRA HIGH EFFICIENCY) OPERATING MODE MANAGEMENT
7. FREQUENCY CONVERTER