

Keor HP 60-80

311125 - 311126



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1. TECHNICAL FEATURES

General Features		
Power (kVA)	60	80
UPS Topology	ON LINE - Double Conversion	
Nominal output power (kVA Cosφ 0.9)	60	80
Nominal output power (kW Cosφ 1.0)	54	72
Efficiency* (AC ÷ AC) (%)		
@25% load	> 92	
@50% load	> 95	
@75% load	> 94,5	
@100% load	> 94,5	
Efficiency (AC ÷ AC) (Eco Mode)	> 98	
Heat dissipation at nominal load and voltage : (kW)	4,3	5,3
(kcal/h x 1000)	3,7	4,5
UPS ambient temperature (°C)	0 ÷ +40	
BATTERY ambient temperature (°C)	0 ÷ +25	
UPS storage temperature (°C)	-10 ÷ +70	
BATTERY storage temperature (°C)	-10 ÷ +60	
Relative humidity % (non condensing)	< 95	
Altitude m	< 1000 (Above Sea Level)	
Power derating for altitude > 1000 m	According to "IEC62040-3", 0,5% power derating every 100m above 1000m, up to max 2000m	
Ventilation	Forced	
Requested cooling air volume (m³/h)	1600	1800
Audible noise level (according to IEC EN 62040-3)	< 60	
Standard battery type lead acid	300 - 312 adjustable	
Protection degree	IP 20	
Electromagnetic compatibility EMI	According to "IEC EN 62040-2" (CE marking)	
Safety	IEC EN 62040-1	
Test and performance	IEC EN 62040-3	
Paint	RAL 7016 RAL 9005	
Accessibility	Front and top access for service	
Installation	Also against wall and/or side-by-side	
Dimensions (mm) (WxDxH)	815 x 825 x 1670	
Weight kg (without battery)	570	600
Static load (kg/m²) (without battery)	948	998
Input/output cable connection	Bottom Side (Top Side on Request)	
Transport	Base provided for forklift handling	
Transport mechanical stress	According to "IEC EN 62040-3"	
Design standard	"IEC EN 62040" "ISO 9001:2008" - "ISO 14001"	
Free contact interface	Standard to remotize the following contact: EPO – MBCB – BCB – DIESEL MODE	
Serial communication interface	Standard: RS232 - USB Optional: RS485 (Mod-Bus protocol)	
Parallel configuration (optional)	Up to 5+1 (redundant parallel) Up to 6 (power parallel)	

Input: rectifier and battery charger		
Power (kVA)	60	80
Input	Three-phase	
Nominal input voltage (Vac)	400	
Input voltage range %	-20/+15	
Input frequency (Hz)	50 – 60	
Input frequency range	±5 / ±10 adjustable	
Input power factor	> 0.99	
Input current THD at nominal voltage and THDV < 0,5% * (%)		
@25% load	< 10	
@50% load	< 7	
@75% load	< 5	
@100% load	< 3	
DC output voltage accuracy	±1	
DC output voltage ripple	1	
Battery recharging characteristic	IU (DIN 41773)	
Maximum recharging current (A)		
- at nominal load	15	15
- with DCM function (max current)	50	50
AC-DC converter type	PFC IGBT	
Input protection	Fuses	
Nominal current absorbed from mains (at nominal load and battery charged) (A)	83	111
Maximum current absorbed from mains (at nom. load, nom. voltage and max. recharging current) (A)	99	127
Sectable walk-in (sec)	Sectable from 5" to 30"	
Sectable hold-off (sec)	Sectable from 1" to 300"	

Batteries		
Power (kVA)	60	80
Type (standard) other on request	Lead Sealed maintenance free	
Number of Cells	300 – 312 adjustable	
Floating Voltage at 25°C	680 for 300 cells, 707 for 312 cells (adjustable)	
Minimum Discharge Voltage Vdc	496 for 300 cells, 516 for 312 cells (adjustable)	
Inverter input power (A at nominal Load) Vdc	56	75
Inverter input current (A) (at nominal load - minimum Vdc)	114	152
Battery Protection (external to the UPS)	Wall mounted fused switch box on request	
Battery Test	Included as standard	

Environment	
Estimated content of circular economy derived materials	11%
Recyclability rate calculated using the method described in technical report IEC/TR 62635*	69%

*This value is based on data collected from a technological channel operating on an industrial basis. It does not pre-validate the effective use of this channel for end-of-life of this product.

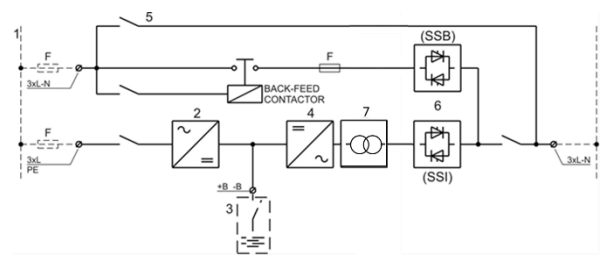
* Certified by TÜV NORD GmbH

1. TECHNICAL FEATURES (continued)

Output: Inverter	
Power (kVA)	60 80
Inverter Bridge	IGBT (High Frequency PWM)
Nominal output power (kVA Cosφ 0.9)	60 80
Nominal output power (Kw Cosφ 1.0)	54 72
Efficiency (AC ÷ AC) (%)	
- @25% load	> 92
- @50% load	> 96
- @75% load	> 96
- @100% load	> 96
Output	Three-phase + Neutral
Nominal Output Voltage (selectable) (Vac)	380-400-415
Output Voltage Stability	
- Static (Balanced Load) (%)	± 1
- Static (Unbalanced Load) (%)	± 2
- Dynamic (Step Load 20%+ 100% +20%) (%)	± 5
- Output Volt. Recovery Time(after step load) (ms)	< 20
- IEC EN 62040-3	Class 1
Phase Angle Accuracy	
- Balanced Load	± 1
- 100% Unbalanced Load	± 1
Output Frequency (selectable) (Hz)	50 - 60
Output Frequency Stability	
- Free Running Quartz Oscillator (Hz)	± 0,001
- Inverter Sync. with Mains (Hz)	± 2 (other on request)
- Slew rate (Hz/s)	1
Nominal Output Current (@ 400 Vac output) (A)	A 87
- Cosφ 0.9 (leading and lagging)	78
- Cosφ 1 (purely resistive load)	
Overload Capability	
10 min	>100%...125%
1 min	>125%...150%
10 s	>150%...199%
100 ms	at 200%
Short Circuit Current IK1 (phase-neutral) (A)	273 364
Short Circuit Current IK2 (phase-phase) (A)	156 208
Short Circuit Current IK3 (three phase) (A)	133 177
Short Circuit Characteristic	Elect. short circuit protection, current limited at above values. Automatic stop after 5 seconds
Selectivity	Within ½ cycle (Fuse gl 20% In)
Output Waveform	Sinusoidal
Output Harmonic Distortion (%)	
- Linear Load	< 1
- Non Linear Load	< 5
- IEC EN 62040-3	Fully compliant
Max Crest Factor without derating	3:1

Bypass	
Automatic static by-pass	Electronic Thyristor Switch
Protection	Fuses
Bypass	Three-phase + Neutral
Nominal input voltage (Vac)	380-400-415
Input voltage range (%)	±10
Input frequency (Hz)	50-60
Input frequency range (%)	± (1+5) ±10 adjustable
Transfer mode	Without break
Transfer inverter - automatic bypass	In case of : - Static Switch test - Inverter test - Inverter not operating - Battery end of discharge - Automatic
Retransfer automatic bypass - inverter	- Block on bypass after 6 transfers within 2 minutes, reset by front panel
Overload Capability (%)	150 Continuously 1000 For 1 Cycle
Manual By-Pass	Standard: - Electronically controlled - No break

2. BLOCK DIAGRAM



1. Input mains (separate for by-pass and rectifier)
2. Rectifier and battery charger
3. External battery
4. Inverter
5. Emergency line (by-pass) with backfeed
6. Inverter (SSI) and by-pass (SSB) static switch
7. Inverter transformer

3. OPTIONS

1. Insulation transformer on by-pass
2. Voltage adaptation auto-transformers
3. Serial interface rs-485 (mod-bus protocol)
4. Snmp adapter
5. Remote monitoring panel
6. Parallel card interface kit
7. External battery cabinet
8. Wall mounted fused switch box
9. In/out top cable entry
10. Special paint
11. Load-sync bus card interface kit

4. SOFTWARE ENABLED FUNCTIONS

1. Diesel-mode
2. Eco-mode
3. Boost-charge
4. Rectifier walk-in time
5. Rectifier delay on startup (hold-off time)
6. Frequency converter mode
7. Dcm function