

KEOR XPE 1800-2100



1800 kW



2100kW

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1. Technical Features

1. General Features		
Power (KVA)	1800	2100
UPS Topology	ON LINE – Double Conversion	
Architecture	Scalable, Configurable, Hot Serviceable	
Power Unit (kW)	300	300
No.Power Unit : syst N (Syst N+1 Redundant)	6 (6 +1)	7
Nominal Active Power (kW Cosφ 1.0)	1800	2100
Efficiency (AC ÷ AC) (%)		
@25% load	Up to 95%	
@50% load	Up to 96%	
@75% load	Up to 96%	
@100% load	Up to 95,5%	
Efficiency (AC ÷ AC) (Eco Mode)	>99%	
Heat dissipation at rated load, VFI, voltage (kW)	85	99
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 %	< 95% (not condensing)	
Altitude m	<1000 (Above Sea level)	
Power derating for altitude > 1000 m	According to "IEC62040-3", 0,5% every 100m	
Ventilation	Forced	
Audible noise level (IEC EN 62040-3)	< 78dBa	
Protection Degree	IP20 (IP21 Optional)	
Electromagnetic Compatibility	According to "IEC EN 62040-2" (CE marking)	
Safety	IEC EN 62040-1	
Test and performance	IEC EN 62040-3	
Colour	RAL9005 (Black) RAL9003 (White)	
Accessibility	Front Access	
Installation	Against the Wall, Line, Back to Back, L or U Shape	
Dimensions (mm): System N (WxDxH)	7580x1200x2100	8460x1200x2100
Weight (kg) : System N without battery	6400	7300
Input/output connection	Busbar entry from top	
Transport	Base provided for forklift handling	
Reference standards	EN 62040-1 - EN62040-2 - EN62040-3 ISO 9001:2008 - ISO 14001	
Front panel	10" Touch-screen	
Voltage-free contact interface	signalisations / alarms	
Serial interface	Standard: RS232 - USB RS485 (Mod-Bus RTU protocol)	
Estimated content of circular economy derived materials	20% (approx)	
Recyclability rate calculated using the method described in technical report IEC/TR 62635*	60% (approx)	

2. Input: rectifier and battery charger		
Power (KVA)	1800	2100
Input	Three-phase + Neutral	
Nominal input voltage (Vac)	400	
Input voltage range (%)	-20/+15	
Input frequency (Hz)	45 to 65	
Input frequency range (%)	Adjustable from ±5 to ±10	
Input power factor	>0,99	
Input current THD at nominal voltage and THDV <0,5% (%)		
@25% load	< 8	
@50% load	< 3	
@75% load	< 2	
@100% load	< 2	
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)	40A / power unit	40A / power unit
- at nominal load		
- with DCM function (max current)	100A/ power unit	100A/ power unit
AC-DC converter type	IGBT-based PFC	
Input protection	Fast Fuses	
Nominal current absorbed from mains at nominal load and battery charged (A)	2732	3187
Maximum current absorbed from mains at nom. load, nom. voltage and max. recharging current (A)	3000	3500
Rectifier soft-start (walk-in) (sec)	Settable from 5" to 30"	
Rectifier sequential start-up (hold-off) (sec)	Settable from 1" to 300"	

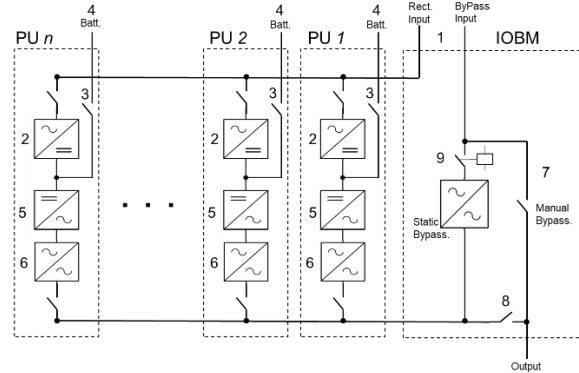
3. Batteries		
Power (KVA)	1800	2100
Topology	Distributed battery = one battery per Power Unit	
Battery cable entry	Bottom in each Power Unit	
Technology	Sealed lead acid, Li-Ion, Ni-Cd	
Number of 2V Cells	360 – 372	
Floating Voltage at 25°C	812 - 840	
Minimum Discharge Voltage Vdc	620 - 632	
Power drawn by the PU inverter (at rated load cosφ = 1) (KW)	306	306
Current drawn by the PU inverter at rated load and minimum battery voltage (A)	494	494
Battery Protection	Fast Fuses	
Battery Test	Provided as Standard	

*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.

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4. Output Inverter		
Power (KVA)	1800	2100
Inverter Bridge	3-Level IGBT (High Frequency PWM)	
Nominal Apparent Output Power (kVA Cosφ 1.0)	1800	2100
Nominal Active Output Power (kW Cosφ 1.0)	1800	2100
Efficiency (DC ÷ AC) (%)	Up to 97	
@25% load	Up to 98	
@50% load	Up to 98	
@75% load	Up to 98	
@100% load	Up to 98	
Output	3 Phase / 4 Wires	
Rated 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	VFI-SS-111	
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)	2609	3044
Overload Capability	5mn up to 125% 30 s up to 150% 100 ms >150%	
Short Circuit Current (A)	6300	7350
Short Circuit Characteristic	Current limited with electronic protection Automatic stop after 5 seconds	
Output Waveform	Sinewave	
Output Harmonic Distortion (%)		
- Linear Load	< 1	
- Non Linear Load	< 5	
- IEC EN 62040-3	Fully compliant	
Max Crest Factor without derating	3 : 1	

2. Block Diagram



PU: Power Unit

IOBM: In Out Bypass Module

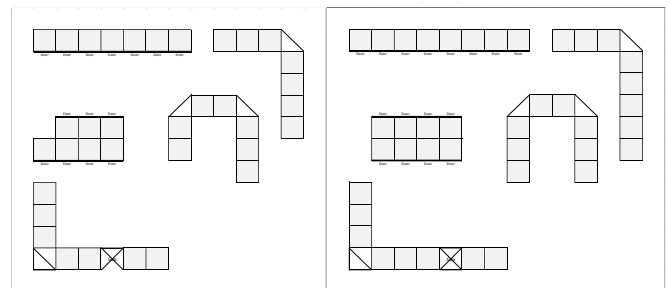
1. Dual Mains input for rectifier and bypass
2. Rectifier battery-charger
3. Battery switch
4. External Battery cabinet (Distributed/Centralized)
5. Inverter
6. Inverter static switch (SSI)
7. Maintenance bypass Line
8. Output switch
9. Back-feed protection
10. By pass disconnecter

3. Options to configure

Redundancy N+1: Yes / No	lcw kit 100kA: Yes / No
Future scalability: Yes / No	By pass disconnecter: Yes / No
Hot Scalability: Yes / No	
Manual Bypass: Yes / No	
Grounding System: TNC/TNS	
Cabinets Layouts	

Some of Possible Layouts:

Linear, L Shape, Back to Back, U Shape, Linear with Gap



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4. Software Enabled Functions

- Diesel Mode Operation
- Rectifier Walk-In Time
- Rectifier Delay On Startup (Hold-Off Time)
- Dynamic Charging Mode (Dcm)
- Vfi / Vfd (Eco) Operating Mode Management
- Frequency Converter

5. Bypass		
Input	Three-phase + Neutral	
Nominal input voltage (Vac) 3Ph + N	380 – 400 - 415	
Input voltage range (%)	±10	
Input frequency (Hz)	50 - 60	
Input frequency range (%)	±10	
Automatic static by-pass	Electronic Thyristor Switch 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	
Nominal Current In (A)	2609	3044
Static by pass overload current – 20 ms	17,5 In	15 In
Max Icw according IEC 62040-1	85 kA (100kA Optional)	
Manual By-Pass	- Electronically controlled - No-break assisted re-start procedure	
Back-feed protection	Internal back feed disconnecter	