

SER Series

Application industry

- ☑ Oil & natural gas (onshore, offshore platforms, pipelines, refining, floating production and storage)
- ☑ Petrochemical (onshore, offshore platforms, pipelines, refining, floating production and storage)
- ☑ Nuclear power generation, photothermal power generation, hydrogen energy and other new energy sources.
- ☑ New materials, semiconductors and other strategic emerging industries
- ☑ Coal chemical industry
- ☑ Other industrial applications



High reliability industrial rectifier

Designed for the worst application environment.

- 1. Aims to protect important industrial processes
- 2. Robust shell (2mm thick heavy steel structure)
- 3. Eight-degree seismic design, which can resist 9-degree earthquake.
- 4. Ultra-high altitude 4500 meters design, no derating.
- 5. Standard IP31 protection level, Optional easy-to-replace dust-proof filter and dust-proof and splash-proof housing (Ip52)
- 6. Operate safely under ambient temperature of -30°C~+50°C.
- 7. Wide input voltage range, allowable tolerance of -40% to 30%.
- 8. All metal shielding of control board and control line, higher EMI performance
- 9. Sealed control unit, no cooling air duct, highly dustproof
- 10. Compared with the UPS international standard IEC62040-2, it provides EMC immunity;
- 11. Use low temperature resistant flame retardant power cable
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Technical characteristics of rectifier

- 1. Built-in input isolation transformer
- 2. 6-pulse, 12-pulse, 18-pulse or 24-pulse SCR rectifier can be selected.
- 3. Software-free control technology and DSP full digital control technology can be selected.
- 4. The parameters can be controlled and set by software programs.
- 5. ABM fast charging design, which can be set through the panel.
- 6. The input power factor of 0.98 can be achieved by using multiphase rectifier with 12 pulses or more.
- 7. Multiple infinite parallel redundant systems
- 8. Very high overall efficiency
- 9. International standard communication protocol

Rectifier Input		
Voltage	3x380 / 400 / 415V	
Input voltage tolerance:		
DC in tolerance	+/-10%	
for function	+15%/-25% (below -15 % the battery might begin to discharge)	
Frequency	50 / 60 Hz	
Frequency tolerance	+/- 8 %	
Power factor:		
at nominal line power and float voltage	~ 0.83	
at -10 % line power and float voltage	~ 0.90	
at +10 % line power and float voltage	~ 0.75	
DC Output		
Voltage	24 / 48 / 110/125/220/360/380VDC	
Setting range:		
Float voltage at -10 / +10 % line power voltage	100 –120 %	
Float voltage at 0 / +10 % line power voltage	100 –130 %	
Boost voltage at nominal line power voltage	100 –130 %	
Initial charge voltage up to maximum	150 %	
DC voltage tolerance	+/-1 %	
Dynamic behavior:		
10 –100 % and 100 –10 % load step	maximum +/-10 %Vrms	
regulation time	< 100 ms +/-2 %	
DC ripple voltage		
Standard with parallel battery capacity of 3x nominal current:		
Optional without battery	≤ 2 % rms	
Optional without battery	≤ 1 % rms	
Optional without battery (24 / 48V)	≤ 2mV (at 800 Hz, psophometric)	
DC current	according to type range	
Setting range		
Total output current limitation	50 –100 %	
Battery current limitation	0 –100 %	
DC current tolerance	+/-2 %	
Characteristic	IU according to DIN 41773	
DC overcurrent capability	150 % for 2s	
General Data		
Ambient conditions		Rated Power
Storage temperature range	from -20 to +70 °C	
Operating temperature range	from -10 to +40 °C	100%
	from -10 to +45 °C	94%
	from -10 to +50 °C	88%
	from -10 to +55 °C	80%
Altitude above sea level	4500 m	100%
Allowable air humidity	<95 % (non condensing)	
Noise level standard n+1 fans	55 – 65 dBA	
Noise level 100 % redundant fans	65 – 70 dBA	
Degree of protection	IP20 according to IEC 60529	
Paint	Pebble gray, RAL 7032 structured	
Standards		
Safety	IEC / EN 62040-1-2	
EMC	IEC 62040-2, EN 50091-2	
Performance	IEC / EN 62040-3, IEC 60146-1-1	
Conformity	CE-Label	
Efficiency	up to 94 % depending on type	
Cooling	Natural convection up to 100A / 220V and Top forced-air ventilation with redundant n+1 monitored fans	
Data subject to change		