



Application and Standard

The 4-pole generator is suitable for matching with a reciprocating internal combustion engine (commonly called a diesel engine) to form a generator set. Alternators are in compliance to the main domestic and international standards and regulations: GB755, BS5000, IEC60034, VDE 0530, CSA C22.2-100, NEMAMG-1.22. Alternators' manufacturing, design and mark are carried out in the environment of ISO9001.

Electrical features

Automatic voltage regulators: Kwise 4 Pole Alternators are fitted with reliable and performant AVR, adapted to excitation systems, powered by transistors and fulfilling perfect regulation.

Single-phase operation: the 4-pole generators of the 134 series can be connected as single-phase. Single-phase power is listed in the corresponding data sheets. 134 series generators are available with single-phase windings (winding number D51/D61).

Waveform: Total harmonic distortion (THD), at no load or linear load is less than 5% according to IEC. Telephone influence factor (TIF) according to NEMA is less than 50.

Mechanical features

Forms: 4 pole alternators can be provided in single bearing or double bearing configurations according to customer's requirements, as well as Engine adaptors and coupling discs which are fit for the major engines.

Balancing: All the rotors are dynamically balanced according to ISO1940. Double bearing rotors are balanced with a half key.

Insulation and protection: 4 pole alternators are class H insulated. The standard winding protection can accept up to 95% relative humidity and is suitable in the cabins. Specific added coatings can be proposed for harsh environments.

Enclosure: Standard enclosure is IP23.

Terminal box and connectors: 4 pole alternators have a terminal box which allows easy access for connection of AVR or reconnection. Current transformers or other optional modules can be fitted with in the box.

Bearings: Sealed for life bearings up to all Kwise 4 pole alternator.

Overs peed: The maximum overs peed is 2250 rpm for the 4 pole alternator (1.25 times the 60Hz rated speed).

General parameters

Ambient temperature	40°C	Temperature rise	125K	Short circuit current multiple	/
Altitude	1000m	Voltage regulation	±1%	Cooling method	IC01
Insulation class	Class H	Exciter system	Brushless self-excitation	Direction of rotation	Clockwise
Duty type	S1	Winding pitch	2/3	Maximum speed	2250rpm
Phases	3	Power factor	0.8	Protection grade	IP23
Number of poles	4	TIF	<50	Frequency	50/60Hz
AVR model	SX460F	THF	<2%	THD	<3%



Fujian Kwise Generator Co., Ltd.

4 Poles

Kwise from the CASIC, to the world

Electrical parameter

* Please consult factory for other voltages

Reactance (%) - Time constant (ms)

50Hz @ 400V	KLH134	A	B	C	D	E
Short-circuit ratio	Kcc	0.45	0.47	0.46	0.46	0.45
Direct axis synchronous unsaturated reactance	Xd	222	214	217	216	223
Direct axis transient saturation reactance	X'd	19.1	19.6	18.3	17.3	17.4
Direct axis supertransient saturation reactance	X''d	16.0	15.2	13.8	12.8	12.7
Quadrature axis synchronous unsaturated reactance	Xq	147	124	125	124	13
Quadrature axis supertransient saturation reactance	X''q	21.3	19.3	17.7	16.4	16.4
Negative sequence saturation reactance	X2	1.87	1.73	1.58	1.46	1.45
Zero sequence unsaturated reactance	X0	1.42	1.23	0.96	0.77	0.71
Short circuit transient time constant	T'd	11	10	8	7	6
Supertransient time constant	T''d	13.4	12.0	10.0	8.3	7.6
Open circuit time constant	T'do	518	436	393	345	325
Armature time constant	Ta	3.1	3.0	5.0	7.8	10.2