

Energy Saving Products Company - Energy-saving Products



ESE-GY High Voltage Energy Saving System

System Composition

1. chief control unit

1). Parameter settings, the system running and monitoring are conducted by the CPU.

1). True Color LCD touch screen; brief and intuitive display of system monitoring situation;

1). Built-in PLC-specific technical requirements for transmission control; can set programmes

2. power unit

1).several serial power unit modules compose the control circuit of each phase

2)modular power units are installed in the power control cabinet which is convenient to disassemble and maintain

3).Strong fault-tolerant function of the power unit control loop ensures the reliability of the system. If a certain power module breaks down, it can bypass the power unit out and reduce the electrical load, so that the system can keep running with the remaining power units;

3 Phase-shifting transformer

specially designed input isolate transformer is of compact structure and perfect cooling wind channel which enable it to enjoy long life span under normal conditions.

Basic Principle

1. ESE—GY Series High Voltage Energy Saving System is composed of phase-shifting, current-adjusting and multiple inverted output circuits. The chart below shows the low-voltage power unit becomes high-voltage output structure by multiple superimpositions. Each power module is of the secondary winding power supply of the input isolation transformer, which is of 590 input voltages and six for each phase. Therefore, the phase voltage is 3540V and the corresponding wire voltage is 6KV. There is a phase drop between the secondary winding groups which supply power to power unit. It realizes multiple inputs to remove the harmonics

generated by the power units.

2. Each power unit module is of IGBT three-phase input. The output situation of single phase output inverter (pulse width adjustment type) is: 1,0,-1. By superimposing the six units of each phase can produce thirteen different voltages. EII has perfect superimposed voltage output waveform.

System Features

1. pure power input without harmonics interference

ESE-GY series high voltage energy saving system can meet the strict requirements of the harmonic distortion proposed by the power supply department and can avoid other networked electrical devices suffering harmonic interference. Do not have to worry about the expensive harmonic filters and related resonant problems.

2. high power factor

the power factor under normal speed range is higher than 0.96. do not need any power capacitor.

3. high quality power output

1) As a result of a multiple of the PWM design, ESE-GY series of high-voltage energy-saving system can provide the perfect sine without any input filter.

2) Multiple PWM output waveform can avoid electrical equipment heating caused by harmonic currents.

3) No matter how long the output cable of high-voltage energy-saving equipment is, it can protect electrical devices from the damage of common mode voltage and dv / dt stress;

4) Even the motor is running at low-speed, there was no shortage of torque problems caused by the harmonics of high-voltage energy-saving system. It can meet insulation requirements for normal electrical devices and cables.

Reliability of the system

1) Application of mature and reliable technology, combined with multi-control technology, relatively independent power unit integrated ESE-GY series of high-voltage energy-saving system can ensure maximum reliability.

2) Surge protection circuit; protect energy-saving high-voltage system against instantaneous over-voltage.

3) ESE-GY series of high-voltage energy-saving system, which can withstand 100 ms without power grid electricity while energy saving high-voltage system can operate normally.

4) ESE-GY series of high-voltage energy-saving system can withstand $\pm 20\%$ of the power grid voltage fluctuations.

5) Protection against high environmental temperature

ESE-GY series of energy-saving high-voltage system has built-in multi-point temperature detection circuit to ensure the operation of energy-saving high-pressure system in normal temperature environment.

6) Power unit bypass function

if some power unit breaks down, the system can bypass it and keep operating with

lower high voltage energy saving system load capability.

7) Urban electricity bypass switch

By the urban electricity bypass switch circuit, it can form a drive-motor with double power supplies.

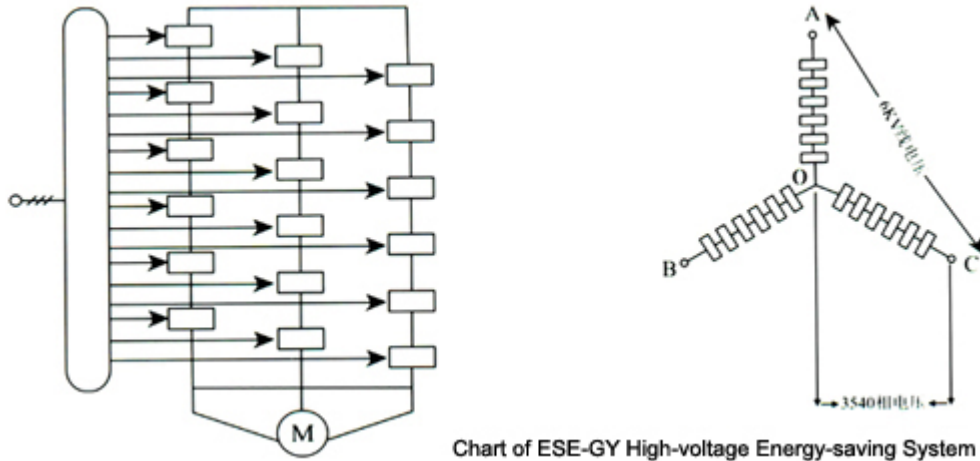
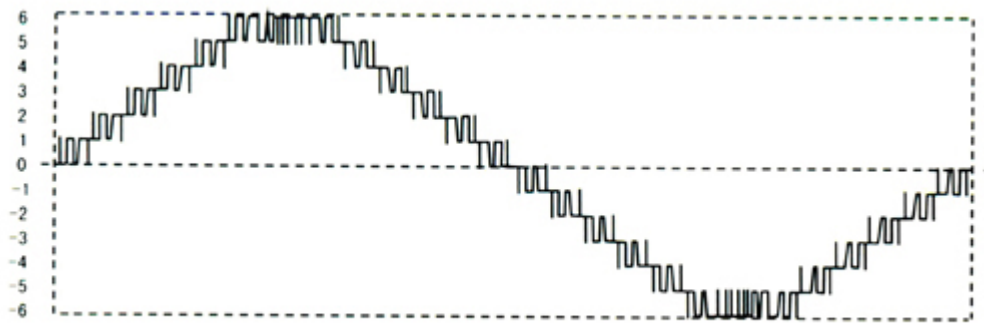
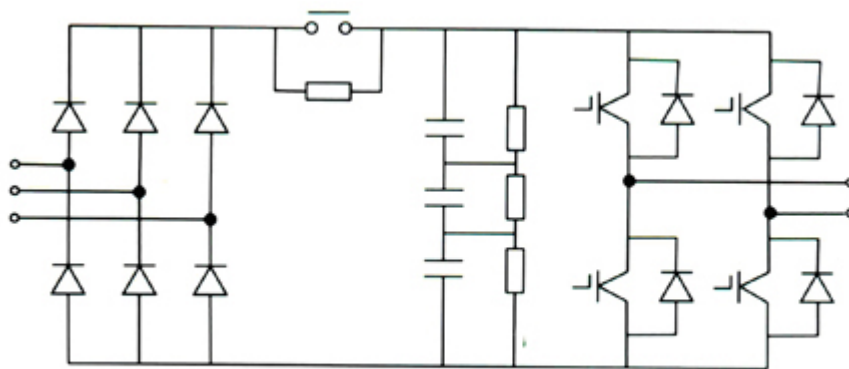


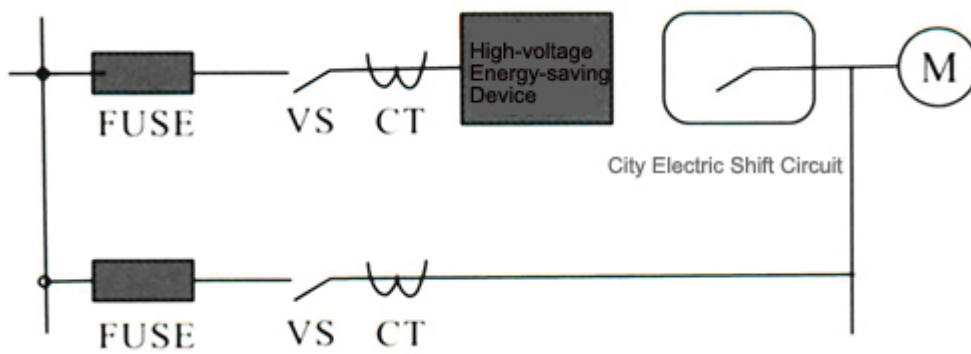
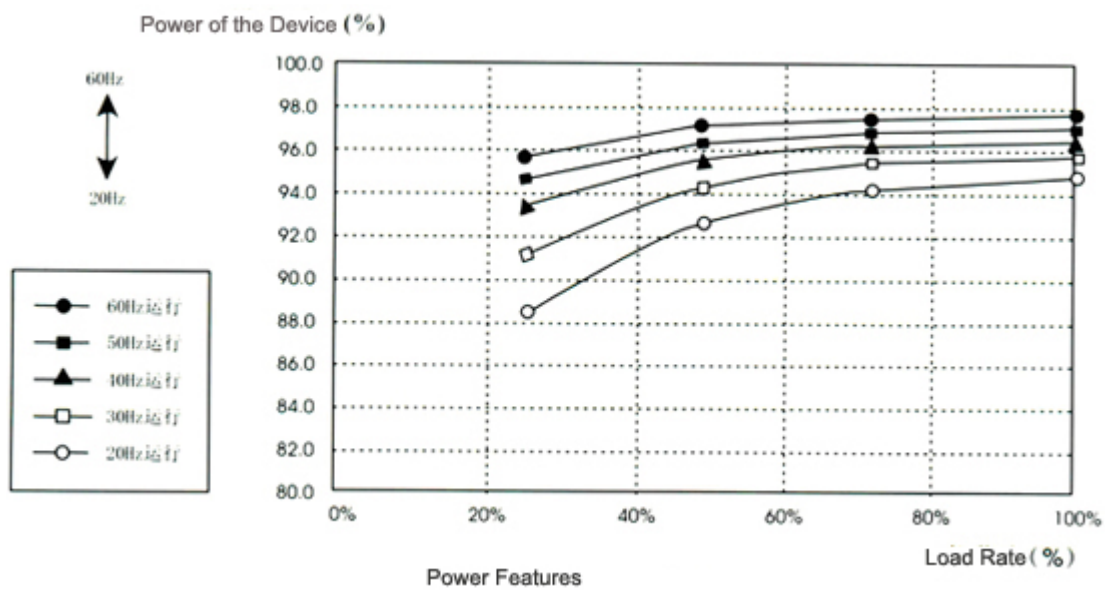
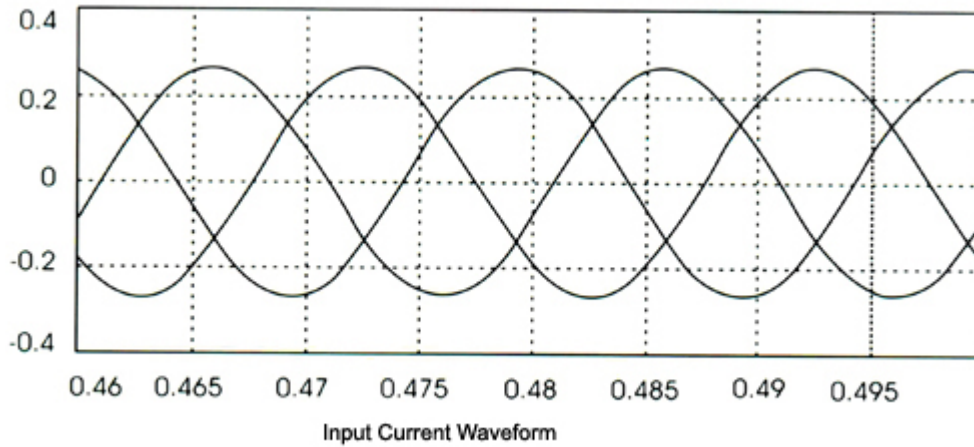
Chart of ESE-GY High-voltage Energy-saving System



Output Voltage Waveform



Schematic Chart of Power Unit

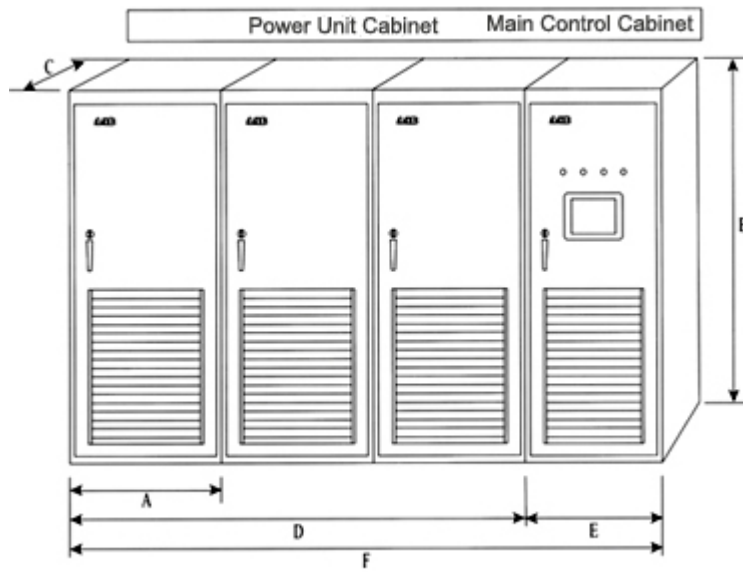


Technical

specifications

item	specifications										
model	ESE-GY6KV	036	048	061	077	096	120	144	173	190	220
	ESE-GY10KV	036	046	058	072	092	104	115	130	144	182

output	rated capacity(KVA)	375	500	630	800	1000	1250	1500	1800	2000	2250
		630	800	1000	1250	1600	1800	2000	2250	2500	3150
	suitable motor power(KW)	315	400	500	630	800	1000	1250	1400	1600	1800
		500	630	800	1000	1250	1400	1600	1800	2000	2500
	rated current(A)	36	48	61	77	96	120	144	173	190	220
		36	48	58	72	92	104	115	130	144	182
serial units quantity of each phase	6						9				
power supply	input frequency	45 ~ 55 HZ									
	input voltage	T60:6KV.T100 : 100(KV)±15%									
	allowed failure time	100MS									
	input power factor	Rated load > 0.97(> 20%load)									
	power	Rated load > 96%									
control features	control mode	multiple PWM									
	frequency output	0~120HZ									
	resolution of the output frequency	0.010HZ									
	overload capability	120% /minute , 150% immediate protection									
	simulation input	1-10V/4-20mA adjustable									
	simulation output	Two circuits1-10V/4-20mA selectable									
	switch input/output	24 in/16 out can be expanded according to the user's requirement									
	Top communications	Isolate RS485 access, MODBUS statute									
	ac/deceleration time	0.1~300S									
environment	operation environment	0 ~+40									
	shipping and storage temperature	-10 ~+60									
	cooling mode	forced wind cooling									
	environmental temperature	<90%(no dew)									
	altitude	<1000m									
	protection rank	IP20									



voltage(KV)	capacity(KW)	contour dimensions (mm)						weight(Kg)
		A	B	C	D	E	F	
6KV/10KV	315KW	1100	2200	600	3300	800	4100	4000~4500
	400KW	1100	2200	600	3300	800	4100	4000~4500
	500KW	1100	2200	600	3300	800	4100	4000~4500
	630KW	1100	2200	600	3300	800	4100	5000~6000
	800KW	1100	2200	600	3300	800	4100	5000~6000
	1000KW	1100	2200	600	3300	800	4100	5000~6000

Note: we won't inform you for any change in the dimension. Please refer to the specific equipment.