

# SPU series static var generator



**Excellent reactive power compensation performance**  
 Capacitive and inductive load -1 ~ 1 compensation effect;  
 Fast bi-directional linear adjustment of reactive power,  
 effectively avoiding over and under compensation;  
 0.99 level reactive power compensation function.

**Low-order filtering**  
 Built-in low-order filtering function;  
 Effectively filter out the 3rd, 5th, 7th, 11th, and  
 13th harmonics

**Great compensation modes**  
 Adjustable power factor;  
 Reactive power tracking;  
 Voltage stabilization mode;  
 Fixed reactive power.

**Flexible configuration, safe and reliable**  
 Supports up to 24 control outputs, which can be freely  
 combined with traditional reactive power compensation  
 to form a hybrid compensation device;  
 the module itself has small losses and basically requires  
 no maintenance in the later stage;  
 Long service life, MTBF is greater than 100,000 hours.

**High quality of core devices**  
 IGBT imported from Germany, advanced  
 three-level technology;  
 American TI's high-end industrial control chip (28377),  
 dual-core 32CPU + 2CLA, clocked at 200MHz.

**User friendly HMI**  
 Through the graphical display interface, the user can  
 understand the power quality improvement of the system  
 such as the waveform diagram, active power, reactive power,  
 apparent power, current effective value, and power factor  
 of the system before and after compensation.

Product specification	30kvar	50kvar	75kvar	100kvar	200kvar	Cabinet type
<b>System parameter</b>						
Grid voltage	400V/690V (-40%,+20%)					
Rated frequency	50/60±5%Hz					
Wiring system	Three-phase three-wire, three-phase four-wire					
Circuit topology	Three level					
<b>Performance index</b>						
Reactive power compensation capacity	30kvar	50kvar	75kvar	100kvar	200kvar	0~600kvar
Reactive power compensation capacity	Continuously adjustable capacity					
Reactive power compensation range	Adjustable power factor; reactive power tracking; stable voltage method; fixed reactive power					
Filtering ability	Low-order filtering (3 times, 5 times, 7 times, 11 times, 13 times)					
Three-phase unbalance compensation capability	three-phase unbalance compensation capability					
Full response time	Harmonic compensation ≤20ms; reactive power compensation ≤10ms					
Machine efficiency	>97%					
Passive output function	Supports up to 24 passive outputs, working with traditional reactive power compensation components and smart capacitors					
Parallel operation capability	Supports up to 10 modules in parallel					
Protection method	Grid over and under voltage, grid over and under frequency, input voltage reverse order, over current, over heat, overload automatic current limit protection, bus short circuit					
Cooling method	Intelligent air cooling, automatic adjustment of air volume according to heat dissipation conditions and load					
Noise	≤70dB					
<b>Communication and monitoring</b>						
Protocol	Modbus protocol					
Communication Interface	RS485/RS232 /Ethernet communication interface optional					
Monitoring module	8-inch LCD touch screen monitoring module (can achieve active + passive unified control)					
Display content	Real-time running information such as voltage, current, frequency, power factor, waveform curve, parameter setting, record query, etc.					
<b>Mechanical properties</b>						
IP rating	IP20(others can be customized)					
Dimension	refer to product mechanical characteristics for details					Specific refer- ence Cabinet capacity
Weight	refer to product mechanical characteristics for details					
Color	RAL7035					
<b>Environmental requirements</b>						
Operating temperature	-25°C~+50°C, derating operation above 45°C					
Relative humidity	5%~95%, no frost					
Altitude at Full Load	2000m, exceeding derating operation					
<b>Related qualifications</b>						
Certification	CQC certification, type test report					