

STS Series 250/500kW

Static Transfer Switch

The Static Transfer Switch (STS) is a cabinet-based, cutting-edge switching solution designed for commercial and industrial energy storage systems. Fully compatible with GoodWe ESA 125kW/261kWh, it delivers UPS-level on- and off-grid switching in under 20ms. The STS provides precise control of inverters, enabling seamless transitions between grid-tied and off-grid modes so that, in the event of a grid outage, critical loads are supplied continuously by solar power or batteries and smoothly reconnected to the grid once power is restored. As a versatile cabinet solution, it also supports generator integration and large inductive loads such as heat pumps and motors, ensuring a reliable, flexible and efficient foundation for microgrid energy management.



STS 250/500kW paired with ESA 125kW/261kWh enables UPS-level On/off-grid switching under 20 ms.



Built-in bypass switch to ensure system reliability.



Compatible with ESA 125kW/261kWh and on-grid inverters for easy microgrid setup.



Supports diesel generator integration with remote contactor control for seamless microgrid connection.



Built-in branch switches with no additional distribution cabinet required.



Outdoor-ready for stable operation across wide temperature conditions.

Technical Data		GW250K-STC-PCS-G10	GW500K-STC-PCS-G10
Grid Side			
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE	220 / 380, 230 / 400, 3L / N / PE	
Voltage Range (V)	340 ~ 440		
Nominal Frequency (Hz)	50 / 60		
Frequency Range (Hz)	47.5 ~ 52.5 / 57.5 ~ 62.5		
Rated Current (A)	478.6	957.2	
Max. Current (A)	550 @ 10s	1000 @ 10s	
Rated Power (kW)	250	500	
Max. Apparent Power (kVA)	315	630	
Back-up Side			
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE	220 / 380, 230 / 400, 3L / N / PE	
Voltage Range (V)	340 ~ 440		
Nominal Frequency (Hz)	50 / 60		
Frequency Range (Hz)	47.5 ~ 52.5 / 57.5 ~ 62.5		
Rated Current (A)	417.8	835.6	
Max. Current (A)	550 @ 10s	1000 @ 10s	
Rated Power (kW)	250	500	
Max. Apparent Power (kVA)	275	550	
ESS Side			
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE	220 / 380, 230 / 400, 3L / N / PE	
Voltage Range (V)	340 ~ 440		
Nominal Frequency (Hz)	50 / 60		
Frequency Range (Hz)	47.5 ~ 52.5 / 57.5 ~ 62.5		
Rated Current (A)	417.8	835.6	
Max. Current (A)	550 @ 10s	1000 @ 10s	
Rated Power (kW)	250	500	
Max. Apparent Power (kVA)	275	550	
Smart-port Side			
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE	220 / 380, 230 / 400, 3L / N / PE	
Voltage Range (V)	340 ~ 440		
Nominal Frequency (Hz)	50 / 60		
Frequency Range (Hz)	47.5 ~ 52.5 / 57.5 ~ 62.5		
Rated Current (A)	417.8	835.6	
Max. Current (A)	550 @ 10s	1000 @ 10s	
Rated Power (kW)	250	500	
Max. Apparent Power (kVA)	275	550	
Inverter Side			
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE	220 / 380, 230 / 400, 3L / N / PE	
Voltage Range (V)	340 ~ 440		
Nominal Frequency (Hz)	50/60		
Frequency Range (Hz)	47.5 ~ 52.5 / 57.5 ~ 62.5		
Rated Current (A)	835.6	1519.4	
Max. Current (A)	1100 @ 10s	1800 @ 10s	
Rated Power (kW)	500	1000 (Centralized Access 500 + Independent Access 500)	
Max. Apparent Power (kVA)	550	1000 (Centralized Access 500 + Independent Access 500)	
General Data			
On / Off Grid Transfer Time (ms)	<20		
Operating Temperature Range (°C)	-25 ~ +55		
Relative Humidity	0 ~ 100%		
Max. Operating Altitude (m)	4000		
Cooling Method	Smart Fan Cooling		
Communication With EMS	LAN + CAN		
Weight (kg)	≈450	<750.0	
Dimension (W × H × D mm)	850 × 1600 × 800	1100 × 2010 × 1000	
Mounting Method	Grounded		
Noise Emission (dB)	<60		
Ingress Protection Rating	IP54		
Overvoltage Category	III		
Protective Class	I		
Certification			
Safety Regulation	IEC61439-1 IEC61439-2 EN61439-1 EN61439-2 IEC60730		

*: Please visit GoodWe website for the latest certificates.