

Battery-free voltage sag compensators **TSP®** (The Second POWER)



Battery-free instantaneous voltage sag compensators, **TSP®** Large Capacity which has solved the shortcomings of existing battery UPS prevents the accident of automatic production equipment at the time of instantaneous voltage sag with better performance in terms of stability, reliability, versatility and economy.

TSP® Large Capacity

Capacity : AC 3P LV 300kVA ~ 2400kVA
Voltage : AC 3P LV 208V, 220V, 380V, 440V, 480V

- ✓ 3P AC LV 300kVA ~ 2400kVA, 3 seconds Sag Compensation Standard
- ✓ 3seconds Sag Compensation Standard - Sag & Swell
- ✓ Ultra Capacitor
- ✓ No Battery, No Maintenance
- ✓ Ultra highspeed switching Off-line Sag Compensation Standard
- ✓ High Efficiency more than 99%
- ✓ Ethernet remote monitoring system
- ✓ Modular design
- ✓ Highly reliable design considering economic operation time
- ✓ Holds CE Certificate



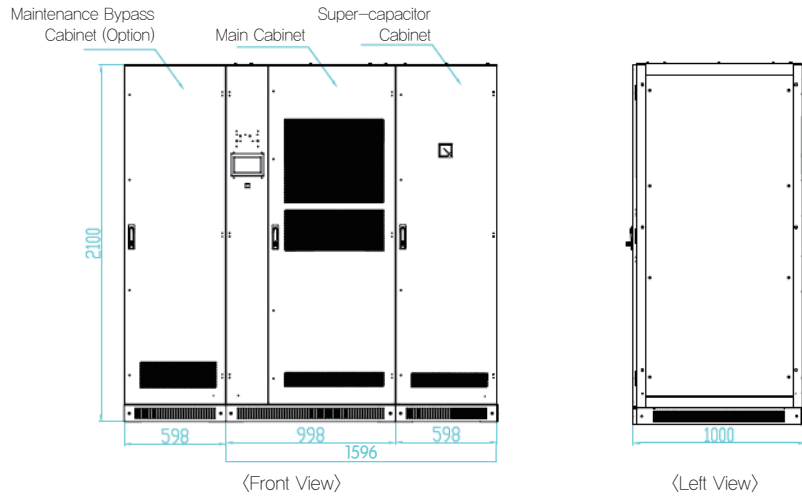
Compared Characteristic		TSP® Large Capacity	Battery UPS
Power storage medium		Ultra-Capacitor	Lead or li-ion storage battery
Operating characteristic		Off-Line(standby at all time)	On-Line(Compensation at all time)
Compensation operating time		Within 4ms	Within 4~8ms
Voltage compensation		3 seconds	15~30min, Blackout compensation
Power loss		Low(Within 4%)	High(Within 18%)
Air-conditioning loss		No additional investment cost for air-conditioning	Loss in 20% of additional cost for air-conditioning
maintenance	Periodical check and replace	1% of investment cost Ultra-Capacitor replacement every 10 years	30% of investment cost Battery replacement every 3 years in average
Area of installation	When TSP® is "1"	1	3
Investment cost	Direct investment cost	70	100
	Indirect investment cost	10	100

TSP[®] Large Capacity

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AC 3P LV 300kVA ~ 2400kVA | AC 3P LV (208V, 220V, 380V, 440V, 480V)



Model Number		TSP-3WV0300-E	TSP-3WV0300-E	TSP-3WV0600-E	TSP-3WV0800-E	TSP-3WV1200-E	TSP-3WV1500-E	TSP-3WV1800-E	TSP-3WV2100-E	TSP-3WV2400-E	
		Capacity : 300kVA	Capacity : 300kVA	Capacity : 600kVA	Capacity : 800kVA	Capacity : 1200kVA	Capacity : 1500kVA	Capacity : 1800kVA	Capacity : 2100kVA	Capacity : 2400kVA	
Alternating Current Input	Input Voltage	208V		380V ± 20%							
	Input Frequency	45-62Hz									
	Input Current	832A	450A	900A	1350A	1800A	2250A	2700A	3150A	3600A	
Alternating Current Output	Rated Output during Normal Operation	Output Voltage	Same as grid voltage								
		Output Current	Same as grid voltage								
		Instantaneous Overload Current	Depending on the thyristor characteristics: 120% for 60s, 150% for 30s, 200% for 10s, 300% for 5s (only once in 10 minutes)								
		Load Power Factor	Same as normal input								
	Rated Output during Inverter Operation	Output Voltage	208V		380V						
		Normal Output Frequency	50Hz/60Hz ± 0.1								
		Output Current	832A	450A	900A	1350A	1800A	2250A	2700A	3150A	3600A
	Specification during Inverter Output Operation	Instantaneous Overload Current	110% for 3s								
		Load Power Factor	1								
		Output Frequency	50Hz/60Hz ± 0.1								
Output Waveform		Sinusoidal wave									
Waveform Distortion Rate (THD)		< 2.5% with linear load									
Compensation Voltage		Rated Voltage -40 ~ 20% , (default: -20% for Sag, 15% for Swell)									
Protection Function	TSP [®] Protection	Overcurrent Protection	Bypass contactor, Inverter switch								
		Overvoltage Protection	Bypass contactor, Inverter switch, auxiliary power switch								
	Load Protection	TSP [®] Low Voltage Output Protection	Bypass contactor, Inverter switch								
		TSP [®] Malfunction Protection	Bypass contactor, Inverter switch, auxiliary power switch								
Signal Output	Alarm (HMI Setting)	Over voltage, over current, system fault									
	System Fault	250VAC / 5A Relay									
	Power Fail(Sag or Interruption)	250VAC / 5A Relay									
Operating Environment	Place for Use	Indoor									
	Ambient Operating Temperature	-10°C~40°C									
	Ambient Operating Humidity	5%~95%, non condensing									
	Cooling Type	Fan cooling									
HMI	Voltage Resistance	Comply with IEC-62040-1									
	Size(*3) W×D×H(mm)	1600×1000×2100	1600×1000×2100	3200×1000×2100	4800×1000×2100	6400×1000×2100	8000×1000×2100	9600×1000×2100	11200×1000×2100	12800×1000×2100	
	Weight(kg)	1500	1500	3000	4500	6000	7500	9000	10500	12000	
	Input Output Terminal Screw Size	M12	M12	M12	M12	M12	M12	M12	M12	M12	
	Technical Spec	7-inch touch screen									
	STATUS	Power/Voltage/Current/Frequency/Alarm/Operation history/Sag event record(Voltage, Waveform, Response time, etc)									
	SAG Event Data	Voltage, Waveform, Response time, etc									
	DATA communication	Modbus TCP/IP, Monitor S/W for PC									
	Information	Power/Voltage/Current/Frequency/Alarm/Operation history/Sag event record(Voltage, Waveform, Response time, etc)									
	SAG Event Data	Voltage, Waveform, Response time, etc									
Certification	CE										

* If required to exceed the standard compensation time, orders for customized specifications available.

Anytime 365 Days Secure Your Power Quality™

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