

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

Battery-free instantaneous voltage sag compensators, TSP® Small·Medium 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®
Medium·Small Capacity

Capacity : AC 3P LV 5kVA ~ 200kVA

AC 1P 0.5kVA ~ 20kVA

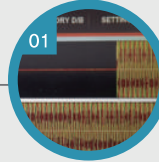
Voltage : AC 3P LV 208V, 220V, 380V, 440V, 480V

AC 1P 110V, 208V, 220V, 240V

- ✓ Voltage Sag Compensation & Monitoring Function get into one
- ✓ Ultra-highspeed SCR switching
- ✓ 1~3 seconds Voltage Sag compensation
- ✓ No Battery
- ✓ No Cooling FAN(not more than 50kVA)
- ✓ No Maintenances



Equipped Ultra-Capacitor
10 Years Long Life
Short Time Charge/Discharge
High Output Power
Efficiency 98% and Low Standby Power



Voltage Sag Compensation and detection monitoring Function get into one

Instant voltage-drop monitoring **Sag-VIEWER™**
TSP® situation, operation/stop, trouble recognition
Equipped with Monitoring 7" Touch LCD HMI
Sag event or history-DB data and sag event statistics report
Net-Work Monitoring performance
- Number of occupation 254 devices in the same network, up to 500 devices with multiple network
Supports detection monitoring software **Sag-VIEWER™**
Various Communication Function including Ethernet, USB, RS485 and etc
Integrating Wattmeter : Compute the integrated watt-hour meter in respect of amount of electricity consumption
- Degree of precision : 1.0 level (standard specification less than 500kW level)

Ultra highspeed Switching



Temperature Sensor
Temperature monitor for major parts

Article	TSP®	Battery UPS	CVCF
Regular check and periodic replacement for Battery & Cooling fan	NO	YES	NO
Sag Wave Form Information Record / Support	YES	Some	NO
Compensation Method	Off-Line	On-Line	On-Line
Safety - Reliability - Economic Feasibility	YES	Some	Some
Safe Transfer with Wuper-highspeed of faster than 2mS		NO	N/A
Variable Load Suitability		NO	NO
Instant Blackout Compensation From cycles to second		YES	NO
Accuracy of Instant Voltage Drop Compensation Adjustment Function		NO	NO
Support for Provision for Instant Voltage Drop and Instant Blackout		YES	NO
Capacity Selection Standard		Min. Actual Load *1.3	Min. Actual Load *2.5

TSP® Small·Medium Capacity

Battery-free instantaneous voltage sag compensators, TSP® Small·Medium 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.



AC 3P LV 5kVA ~ 200kVA | AC 3P LV (208V, 220V, 380V, 440V, 480V) | AC 1P 0.5kVA ~ 20kVA | AC 1P (110V, 208V, 220V, 240V)

TSP® Small·Medium Capacity AC 1P

		TSP-1V005-M Capacity : 0.5kVA	TSP-1V010-M Capacity : 1kVA	TSP-1V010-S Capacity : 1kVA	TSP-1V020-S Capacity : 2kVA	TSP-1V030-S Capacity : 3kVA	TSP-1V050-S Capacity : 5kVA	TSP-1V100-S Capacity : 10kVA	TSP-1V200-S Capacity : 20kVA
Structural Specifications	Size W×D×H(mm) Wall Type	230×122×520	320×130×340	320×160×440	400×200×480		-	-	-
	Size W × D × H (mm) Standard Type	-	320×340×130	320×440×160	400×480×200		430×530×280		-
	Size W × D × H (mm) Tower Type	-	-	-	-	-	280×550×500		480×700×900
	Weight (kg)	10kg	15kg	18kg	27kg	31kg	44kg(Tower Type 46kg)	48kg(Tower Type 55kg)	110kg
AC Single Phase HMI	Input Output Terminal Screw Size	M4	M4	M4	M5	M5	M6	M6	M8
	Technical Spec	20×4 Text LCD, 4 Buttons							
Communication	STATUS	Sag Event Record (Occurred Time, Sag Voltage, Sag Duration, etc.), Voltage, Current, Power, Frequency, Operation History, etc.							
	DATA Communication	N / A		RS-485, Ethernet TCP (RS485 to Ethernet Converter) - option					
	Monitoring Tool	N / A		Real Time Power Monitoring Application S/W, Sag-VIEWER™ capable of connecting up to 500 TSP's.					
	Information	N / A		Sag History Report of Accident Occurrence Time, Accident Duration Time, Accident Voltage Wave Type, Compensation Output Waveform, Etc. Sag History Statistics Report, System Voltage, Current, Electrical Energy, Frequency, Operation History, and XML Support					
	Sag Event Data	N / A		Data Size: from 2 cycles before the sag occurs to 260ms after the sag ends, Max. 64 cycles(60Hz base), Frequency: whenever it occurs					
Patent	Voltage sag management system(No.1140177), Emergency Transport Switch(No.10-1246036) Dynamic voltage restorer and method thereof(No.10-0974079), CIRCUIT FOR COMPENSATION INTERRUPTION OF ELECTRIC POWER A MOMENT OF ELEVATOR(No.10-0897833)								
Certification	S-Mark (No. 2013-48, Korea Occupational Safety and Health Agency), CE (K5475/L13, TUV), KC (ZH10098-17001, Korea Industry Technology Institute)								

[MODEL] TSP - 1

V	999	T	S
Voltage	Capacity	Type	Shape

 Ex) TSP-12010-SW
: 1Phase, AC220V, 1kVA, Standard, Wall

1: 110V
2: 220V
4: 240V
8: 208V

0 0 5 : 0.5kVA
0 1 0 : 1kVA
0 2 0 : 2kVA
0 3 0 : 3kVA
0 5 0 : 5kVA
1 0 0 : 10kVA
2 0 0 : 20kVA

S : Standard
C : Customized
M : Mini

S : Stand
W : Wall
T : Tower
R : Rack

TSP® Small·Medium Capacity AC 3P

		TSP-3WV005-010 Capacity : 5-10kVA	TSP-3WV020 Capacity : 20kVA	TSP-3WV030 Capacity : 30kVA	TSP-3WV050 Capacity : 50kVA	TSP-3WV100 Capacity : 100kVA	TSP-3WV150 Capacity : 150kVA	TSP-3WV200 Capacity : 200kVA	
Size W × D × H (mm)		500x600x985	500x800x1365	500x800x1665	500x800x1665	1000x600x1940	1600x900x2000	208V / 220V 380V / 440V	
Weight (kg)		120kg(5kVA)/130kg(10kVA)	250kg	350kg	410kg	650kg	1200kg	1600kg 1300kg	
Input Output Terminal Screw Size		M8	M8	M8	M8	M10	M12	M12	
HMI for 3-phase TSP	Technical Spec	7" TFT/LCD Touch Screen							
	STATUS	Sag Event Record (Sag Waveform, Occurred Time, Sag Voltage, Cycle, etc.), Power/Voltage/Current/Frequency/Operation History							
	Sag Event Data	Build In Real Time clock (Standby 3 years by internal battery) Data Size: from 2 cycles before the event occurrence to event finish Max. 64 cycles(60Hz base), Frequency: when it occurs							
Communication	DATA communication	Ethernet Modbus TCP/IP (SCADA Connected Support)							
	Monitoring Tool	TCP/IP(LAN) Communication, Real Time Power Monitoring Application S/W, Sag-VIEWER™ capable of connecting up to 500 TSP's.							
	Information	Sag History Report of Accident Occurrence Time, Accident Duration Time, Accident Voltage Wave Type, Compensation Output Waveform, Etc. Sag History Statistics Report, System Voltage & Current, Electric Energy, Operation History, Frequency, Operation History, XML Support and Data Available for SCADA							
SAG Event Data	Data Size: from 2 cycles before the sag occurs to 260ms after the sag ends, Max. 64 cycles(60Hz base), Frequency: whenever it occurs								
Patent	Voltage sag management system(No.1140177), Emergency Transport Switch(No.10-1246036) Dynamic voltage restorer and method thereof(No.10-0974079) CIRCUIT FOR COMPENSATION INTERRUPTION OF ELECTRIC POWER A MOMENT OF ELEVATOR(No.10-0897833)								
Certification	S-Mark (No. 2013-48, Korea Occupational Safety and Health Agency), CE (K5475/L13, TUV), KC (ZH10098-17001, Korea Industry Technology Institute)								

[MODEL] TSP - 3

W	V	999	
Wiring	Voltage	Capacity	

 Ex) TSP-348050
: 3Phase 4Wire, AC208V, 50kVA

3 : 3Wire
4 : 4Wire

2: 220V
3: 380V
4: 440V
8: 208V
0: SO

0 0 5 : 5kVA
0 1 0 : 10kVA
0 2 0 : 20kVA
0 3 0 : 30kVA
0 5 0 : 50kVA
1 0 0 : 100kVA
1 5 0 : 150kVA
2 0 0 : 200kVA

Ex) TSP-340100-415
: 3Phase 4Wire, Special Stock, AC 415V, 100kVA

Anytime 365 Days Secure Your Power Quality™

Head Office | R&D Factory 13, LS-ro Gunpo-si, Gyeonggi-do, Republic of Korea (15843)
Ansan | EMS Factory 34, Emtibeui 12-ro 22beon-gil, Danwon-gu, Ansan-si, Gyeonggi-do, Republic of Korea
TEL +82.31.689.4600 FAX +82.31.689.4629 E-MAIL wesco@wesco.co.kr URL http://www.wesco.co.kr



WESCO-LEFT-TSPSmallMedium-20200122-Ver1.10-EN