

Medium Voltage UPS

For Smart Factories And Large Data Centers

LDC provides high-quality , high-reliability power supply solutions for smart factories and large data centers

SDP series medium voltage UPS
(rated power up to 20 MVA , voltage level 10 kV)

Medium Voltage Uninterruptible Power Supply



Comprehensive power protection

Providing high-quality and reliable power supply for smart factories and large data centers



Product Introduction

In recent years, the reliance on absolutely reliable, high-quality electricity supply has led to a massive growth in the uninterruptible power supply (UPS) and voltage regulator business. Almost every organization - health authorities, banks, government departments, retail stores, companies, etc. - needs to safely store huge amounts of information. The solution is to install UPS in the medium voltage section to achieve comprehensive power protection.

If the SDP series medium voltage UPS is installed in the medium voltage section, it can be placed in a spacious area such as a medium voltage distribution room or a factory substation, far away from the protected load, thereby freeing up space for installing more important infrastructure such as servers or manufacturing tools.

LDC 's SDP series medium voltage UPS aims to provide clean, reliable and efficient power to factories and large data centers with sensitive or critical loads, helping customers save costs. The single conversion topology used is the natural choice for medium voltage UPS because it has extremely low losses, which means its efficiency can reach more than 99.5% . The SDP series medium voltage UPS can be used to protect the entire power supply or specific sensitive loads.



Data Center

The SDP series medium voltage UPS can be installed in the power supply to protect the entire power supply of the data center or the server or mechanical load. The installation of medium voltage UPS



Industrial Applications

Large critical manufacturing processes such as chemical or semiconductor manufacturing require many uninterruptible power supplies. Protecting critical manufacturing processes with the SDP series medium voltage UPS ensures that the plant is fully protected while minimizing operating costs. It is also suitable for upgrades by providing power protection at the medium voltage supply.



Unique technology

The SDP series medium voltage UPS allows the power conversion and energy storage system to remain at a low voltage level. There is also a thyristor-based grid disconnect switch in the medium voltage section, which prevents power from being fed back to the grid in the event of a power outage or voltage drop. Because the energy storage device is still at a low voltage level, the energy storage unit of the medium voltage UPS has a wide range of options.

SDP series medium voltage UPS (rated power up to 20 MVA , voltage level 10 kV) The lowest total cost of ownership solution for comprehensive power protection



Advantages of SDP Series Medium Voltage UPS



Highlights

- Industry-leading efficiency
- Suitable for industrial loads and large data centers
- Modular design with integrated redundancy
- High fault current capability
- Generator wandering algorithm transfers load control to backup generators
- Rated power up to 20MVA , voltage 10 kV



Comprehensive power protection

If the SDP series medium voltage UPS is installed in the medium voltage section, it can be placed in a spacious area such as a medium voltage distribution room or a factory substation, far away from the protected load, thereby freeing up space for installing more important infrastructure such as servers or manufacturing tools.



Lowest total cost of ownership

The SDP series MV UPS has unparalleled efficiency, low maintenance costs and a small footprint, which can minimize the cost of ownership. In addition, since the energy storage and inverter are still at a low voltage level, it can also greatly



Modifiable

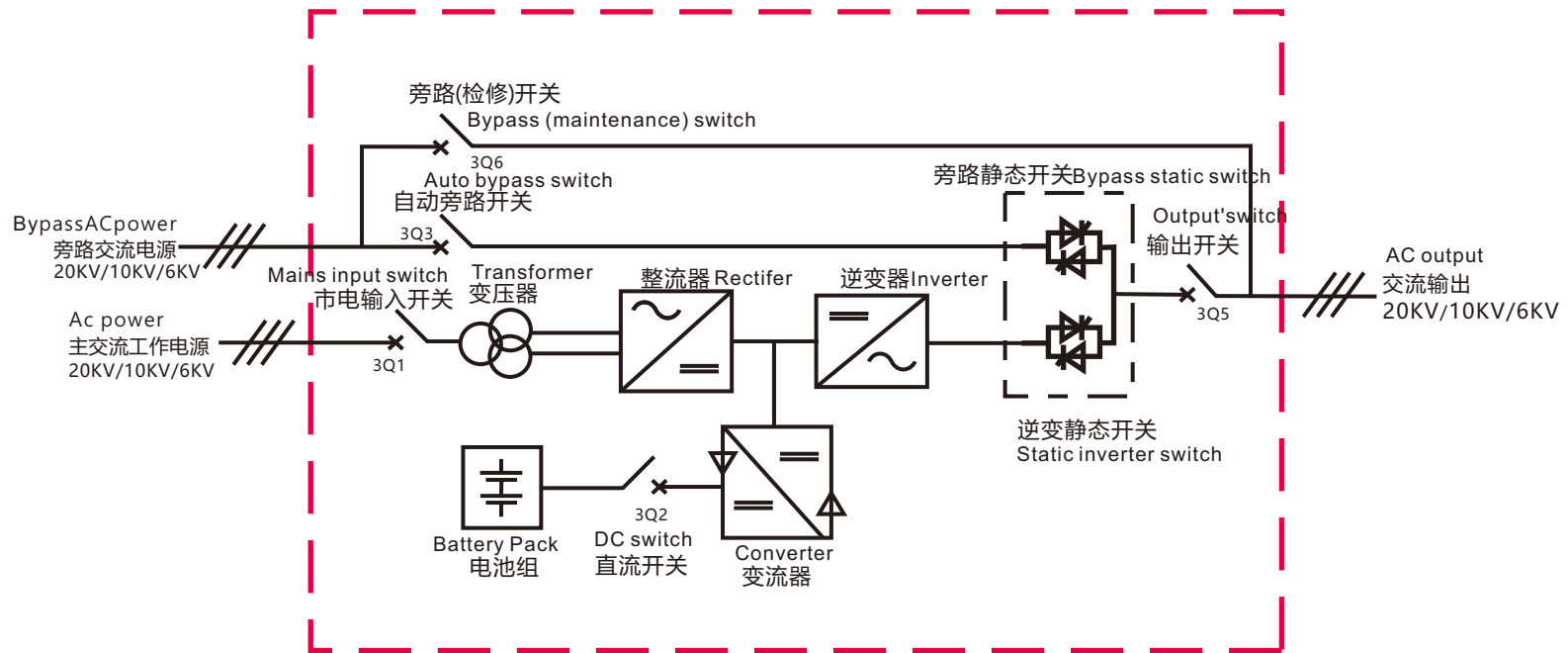
The SDP Series Medium Voltage UPS can be retrofitted and custom designed for applications in plants that are currently unprotected or require replacement of traditional rotary UPS solutions.



Energy storage device selection

The SDP series medium voltage UPS is compatible with a wide range of energy storage devices, depending on the required protection time. Supercapacitors and flywheels can provide high-density protection within seconds, while batteries can achieve a backup time of up to 15 minutes.

Medium voltage UPS system schematic

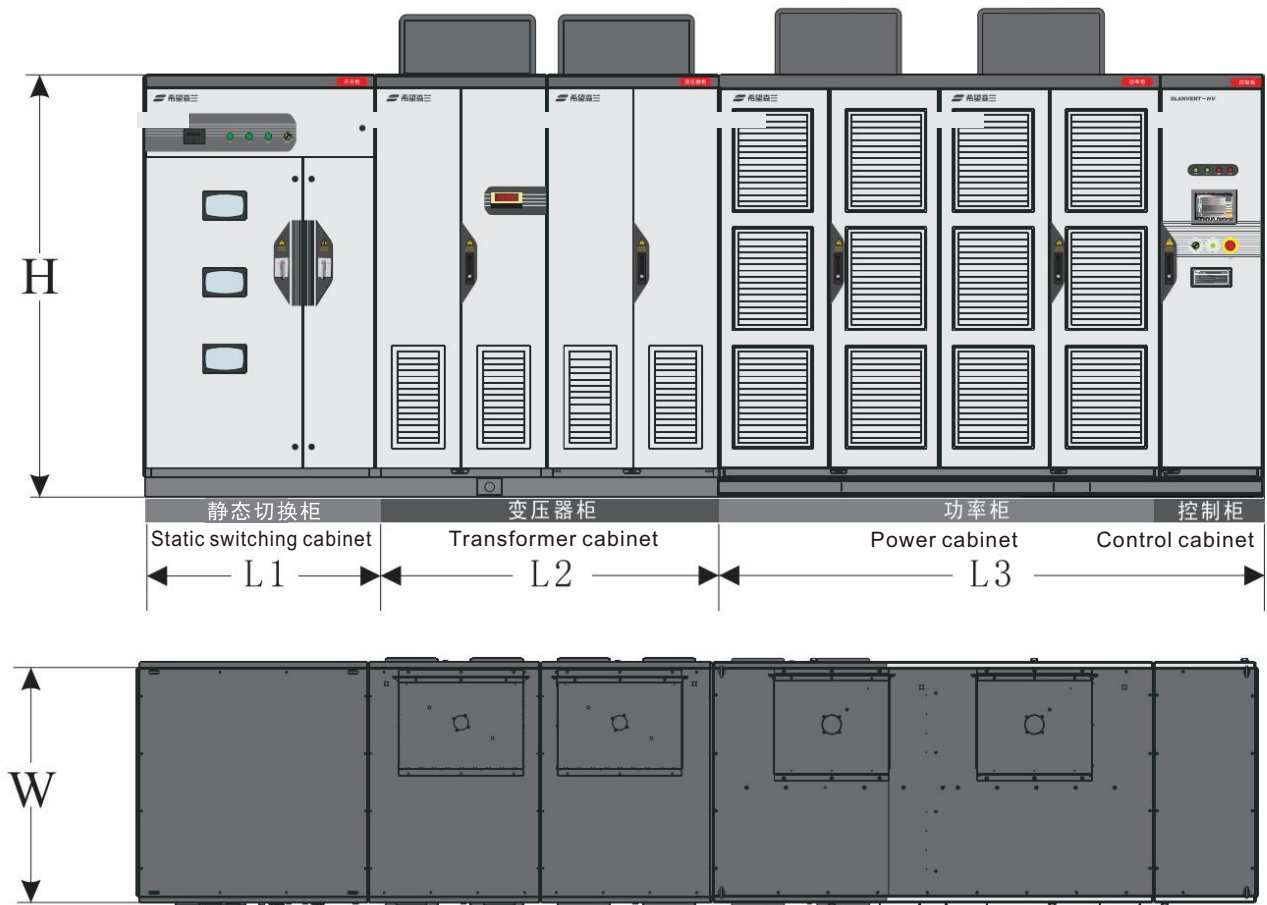


Technical parameters (High efficiency UPS)

Content		Parameter	Remark
Input	Rated input voltage	Three-phase, 3 ~ 11kV \pm 10%	
	Rated input frequency	50/60Hz \pm 3%	
	Fluctuating voltage	When the grid voltage drops within 35% , the rated voltage is reduced.	
	Power Factor	\geq 0.96(load >20%)	
	Surge voltage (BIL)	10 times the input voltage	
Output	Rated output voltage	Three-phase, 3kV ~ 11kV	
	Rated output current	79 ~ 800A	
	Output power range	40 0 ~ 12000KVA	
	Power factor range	0.7 (lagging) - 0.9 (leading)	
	Switching time	\leq 1.8 ms (typical)	
	Backup time	The standard configuration is 30 minutes , and longer time can be configured according to customer requirements	
	Inverter efficiency	98.5%	
	Frequency accuracy	0.01Hz	
	Voltage accuracy	\pm 1.0%	
	Total Harmonic Distortion(THD)	Linear load: < 2% THDv	
Overload capacity	General: 120%/1min, 150%/2s, 160% immediate protection Heavy load: 150%/1min, 180%/2s, 200% immediate protection	Protection curve can be set	
Energy Storage Batteries	Rated DC voltage	7 6 0 V dc	
	DC voltage range	950 ~5 70 V dc	
	Charging power	10% of rated power (kVA)	
	Energy Storage Technology	Supercapacitors, flywheels, or batteries (lead acid, lithium-ion)	
Control interface	Display	Multi-language human-machine interface, capable of simultaneously displaying input (output) voltage, current, power, Basic electrical parameters such as power factor, real-time operating status, and fault alarm Recording and event logging functions	
	set up	Multi-function parameter setting	
	operate	Local touch control, DCS and field operation box remote control, host computer communication control	
Control	Inverter start time	0.1 ~ 3600.0S adjustable	
	Analog input and output	3 analog inputs, 4 analog outputs Voltage type and current type can be set Input frequency, output current, output frequency and other functions can be set to 0(4) ~ 20mA, 0(2) ~ 10V and other 7 types.	
	Digital input and output	8 digital inputs, 5 digital outputs (expandable) 38 digital input functions can be set 52 digital output functions can be set	
	Communication function	RS485 , MOD BUS-RTU (standard) PROFI BUS - DP (optional) , TCP/IP (optional)	
	Control power capacity	Single-phase 220 VAC /3 kVA , 50/60 Hz (DC power supply is optional according to project requirements)	

Environment and others	Ambient temperature and humidity	-10 ~ 40 °C , 20% ~ 90% (no condensation)	
	Storage temperature	-40 ~ 70 °C	
	Altitude	<1000m , if higher than 1000m , derating is required	
	Cooling method	Forced air cooling	
	Protection level	IP30	
	Place of use	Indoors, no explosive or corrosive gas, no conductive dust, no oil mist	

Dimensions



Product Specifications

Voltage level 3KV

Model	Rated Capacity (kVA)	Rated Output Current (A)	Rated Active power (KW)	Dimensions and weight					
				L1	L2	L3	W	H	Weight (kg)
SDP-030-315	400	79	315	1200	1800	1655	1200	2200	2600
SDP-030-355	450	88	355	1200	1800	1655	1200	2200	2700
SDP-030-400	500	98	400	1200	1800	1655	1200	2200	2800
SDP-030-450	560	110	450	1200	1800	1655	1200	2200	2950
SDP-030-500	630	124	500	1200	1800	1655	1200	2200	3050
SDP-030-560	700	137	560	1200	1800	1655	1200	2200	3150
SDP-030-630	800	157	630	1200	1800	1655	1200	2200	3200
SDP-030-710	900	177	710	1200	2100	1840	1500	2300	3350
SDP-030-800	1000	196	800	1200	2100	1840	1500	2300	3450
SDP-030-900	1125	221	900	1200	2100	1840	1500	2300	3600
SDP-030-1000	1250	245	1000	1200	2100	1840	1500	2300	3800
SDP-030-1120	1400	275	1120	1200	2100	1840	1500	2300	3950
SDP-030-1250	1600	314	1250	1200	2100	1840	1500	2300	4150
SDP-030-1400	1750	343	1400	1200	2300	3330	1500	2400	4350
SDP-030-1600	2000	392	1600	1200	2300	3330	1500	2400	4500
SDP-030-1800	2250	441	1800	1200	2300	3330	1800	2400	4750
SDP-030-2000	2500	490	2000	1200	2300	3330	1800	2400	4950
SDP-030-2240	2800	549	2240	1200	2300	3330	1800	2400	5100
SDP-030-2500	3150	618	2500	1200	2300	3330	1800	2400	5300
SDP-030-2800	3500	686	2800	1200	2300	3330	1800	2400	5450
SDP-030-3150	4000	770	3150	1200	2300	3330	1800	2400	5600

Product Specifications

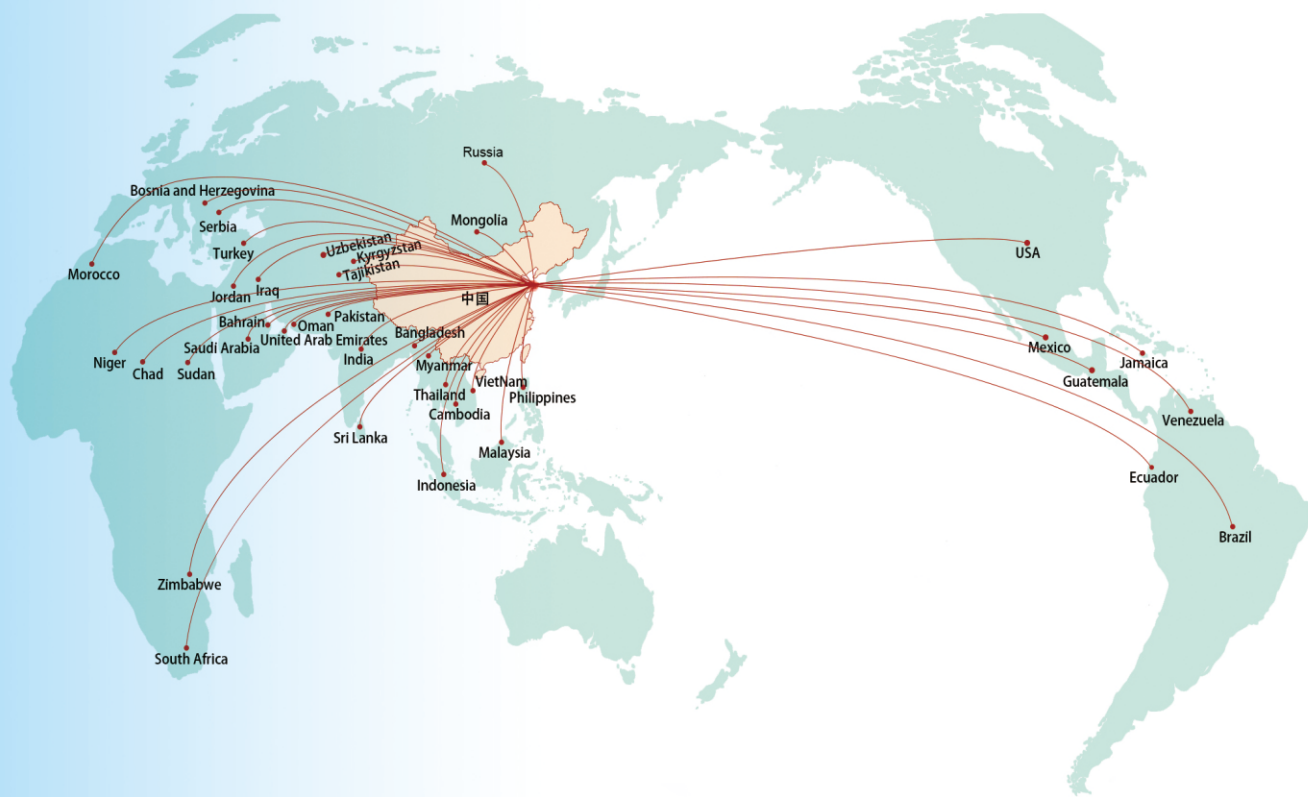
Voltage level 6KV

Model	Rated Capacity (kVA)	Rated Output Current (A)	Rated Active power (kW)	Dimensions and weight					
				L1	L2	L3	W	H	Weight (kg)
SDP-060-160	200	20	160	1200	1800	1540	1100	2000	2800
SDP-060-200	250	25	200	1200	1800	1540	1100	2000	2900
SDP-060-220	275	28	220	1200	1800	1540	1100	2000	3000
SDP-060-250	315	31	250	1200	1800	1540	1100	2000	3150
SDP-060-280	350	35	280	1200	1800	1540	1100	2000	3250
SDP-060-315	400	39	315	1200	1800	1540	1100	2000	3350
SDP-060-355	450	44	355	1200	1800	1540	1100	2000	3400
SDP-060-400	500	50	400	1200	1800	1540	1100	2000	3500
SDP-060-450	560	56	450	1200	1800	1540	1100	2000	3550
SDP-060-500	630	62	500	1200	1800	1540	1100	2000	3650
SDP-060-560	700	69	560	1200	1800	1540	1100	2000	3750
SDP-060-630	800	78	630	1200	1800	1665	1200	2200	3900
SDP-060-710	900	88	710	1200	1800	1665	1200	2200	4000
SDP-060-800	1000	99	800	1200	1800	2155	1200	2200	4200
SDP-060-900	1125	111	900	1200	1800	2155	1200	2200	4450
SDP-060-1000	1250	123	1000	1200	1800	2155	1200	2200	4600
SDP-060-1120	1400	138	1120	1200	1800	2155	1200	2200	4850
SDP-060-1250	1600	154	1250	1200	1800	2155	1200	2200	5100
SDP-060-1400	1750	173	1400	1200	2300	2430	1500	2300	5500
SDP-060-1600	2000	198	1600	1200	2300	2430	1500	2300	6000
SDP-060-1800	2250	222	1800	1200	2300	2430	1500	2300	6500
SDP-060-2000	2500	247	2000	1200	2300	2430	1500	2300	7000
SDP-060-2240	2800	277	2240	1200	2300	2430	1500	2300	7200
SDP-060-2500	3150	309	2500	1200	2300	2430	1500	2300	7600
SDP-060-2800	3500	343	2800	1200	2300	2950	1500	2400	8000
SDP-060-3150	4000	392	3150	1200	2300	2950	1500	2400	8500
SDP-060-3500	4500	441	3500	1200	2800	3150	1800	2500	9000
SDP-060-4000	5000	490	5000	1200	2800	3150	1800	2500	9800
SDP-060-4500	5700	559	4500	1200	2800	3150	1800	2500	10300
SDP-060-5000	6250	613	5000	1200	2800	3150	1800	2500	11000
SDP-060-5600	7000	687	5600	1200	2800	3150	1800	2500	11500
SDP-060-6300	8200	773	6300	1200	2800	3150	1800	2500	12000

Product Specifications

Voltage level 10KV

Model	Rated Capacity (kVA)	Rated Output Current (A)	Rated Active power (KW)	Dimensions and weight					
				L1	L2	L3	W	H	Weight (kg)
SDP -100-200	250	15	200	1200	1800	2315	1100	2000	3000
SDP -100-250	315	19	250	1200	1800	2315	1100	2000	3150
SDP-100-280	350	21	280	1200	1800	2315	1100	2000	3250
SDP-100-315	400	24	315	1200	1800	2315	1100	2000	3350
SDP-100-355	450	27	355	1200	1800	2315	1100	2000	3450
SDP-100-400	500	30	400	1200	1800	2315	1100	2000	3500
SDP-100-450	560	34	450	1200	1800	2315	1100	2000	3600
SDP-100-500	630	38	500	1200	1800	2315	1100	2000	3650
SDP-100-560	700	42	560	1200	1800	2315	1100	2000	3750
SDP-100-630	800	47	630	1200	1800	2315	1100	2000	4000
SDP-100-710	900	53	710	1200	1800	2315	1100	2000	4200
SDP-100-800	1000	60	800	1200	1800	2315	1100	2000	4400
SDP-100-900	1125	68	900	1200	1800	2315	1100	2000	4500
SDP-100-1000	1250	75	1000	1200	1800	2315	1100	2000	4950
SDP-100-1120	1400	84	1120	1200	2100	2555	1200	2200	5100
SDP-100-1250	1600	94	1250	1200	2100	2555	1200	2200	5500
SDP-100-1400	1750	105	1400	1200	2100	3090	1200	2200	6000
SDP-100-1600	2000	115	1600	1200	2100	3090	1200	2200	6500
SDP-100-1800	2250	130	1800	1200	2100	3090	1200	2200	6900
SDP-100-2000	2500	144	2000	1200	2100	3090	1200	2200	7200
SDP-100-2240	2800	162	2240	1200	2300	3565	1500	2300	7500
SDP-100-2500	3150	182	2500	1200	2300	3565	1500	2300	8000
SDP-100-2800	3500	205	2800	1200	2300	3565	1500	2300	8500
SDP-100-3150	4000	230	3150	1200	2600	3565	1500	2300	9000
SDP-100-3550	4500	260	3550	1200	2600	3565	1500	2300	9500
SDP-100-4000	5000	290	4000	1200	2600	3565	1500	2300	10800
SDP-100-4500	5700	331	4500	1200	2600	4200	1800	2500	11000
SDP-100-5000	6250	368	5000	1200	2800	4200	1800	2500	11800
SDP-100-5600	7000	412	5600	1200	2800	4200	1800	2500	12500
SDP-100-6300	8000	462	6300	1200	2800	4400	1800	2500	13000
SDP-100-7100	9000	520	7100	1200	2800	4400	1800	2500	15000
SDP-100-8000	10000	578	8000	1200	3000	4400	1800	2500	16000
SDP -100-9000	11500	650	9000	1200	3000	4400	1800	2500	17500
SDP -100-10000	12500	735	10000	1200	3000	4400	1800	2500	19500



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