



**ADC Series**

**DC Switching Power Supply**

**Modular Design**

**Professional Power Solutions Provider**



## Product Description

ADC series of DC switching power supply adopt the technology of pulse-width modulation, with advantage of high power density, high power factor, perfect protection function, fast response speed and high accuracy.

This series has 3 power module units with capacity of 2kW, 4kW, 8kW, and can be supplied with 18U/32U/42U 19" standard cabinet, and supervisor unit, composed of DC power systems (max capacity up to 64kW), provided flexible configuration to meet a variety of power needs.

## Product features

- **High power density:**  
The height of 2kW and 4kW power module is only 2U, and 8kW is only 4U<sup>①</sup>
- **Multi-protection function:**  
Over voltage, over current, short circuit, and over temperature protection.
- **Remote control:**  
Remote control can be achieved with analog monitor interface, to monitor 0~100% output voltage and output current.
- **19" standard cabinet:**  
Save space and can be accommodate to users' environment.
- **Remote sensing compensation:**  
Can compensate voltage drop during transmission cable and contact resistance. The range of compensation is 0~3V.

[Remarks]:

① 1U = 1.75inch = 4.445cm.

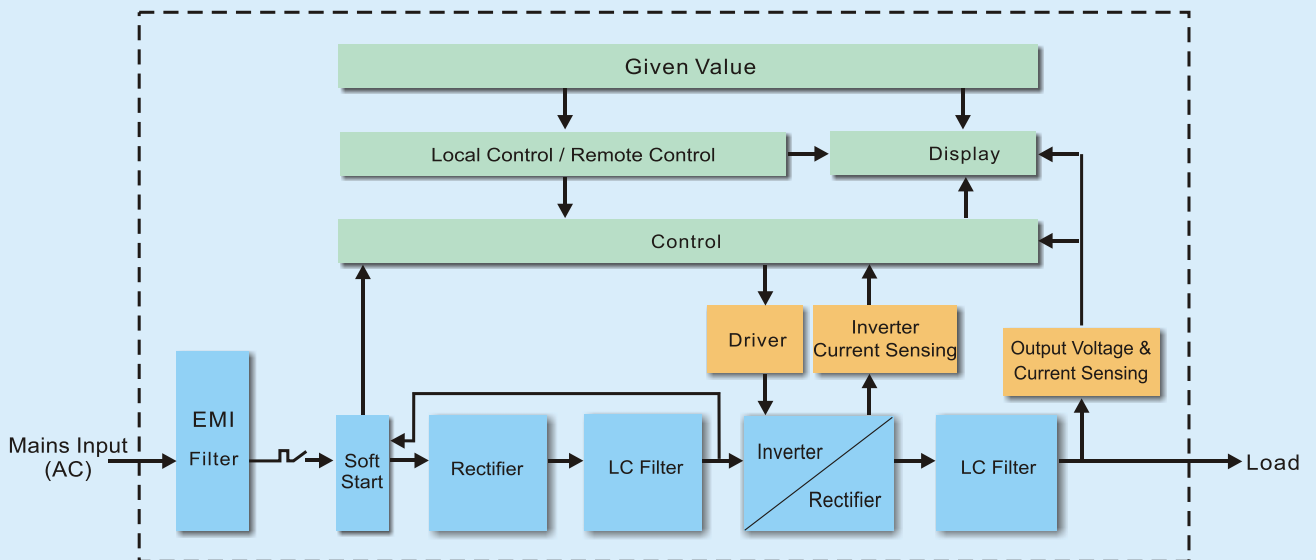
2U



4U



## Product Block Diagram



**Product Specification**

Input/Output							
Input	Rated voltage	187~253Vac, 1Φ2W+G	187~253Vac, 3Φ3W+G 或 323~437Vac, 3Φ3W+G		187~253Vac, 1Φ2W+G 或 187~253Vac, 3Φ3W+G 或 323~437Vac, 3Φ3W+G		
	Current	Please refer to the form "Input/Output Specification"					
	Frequency	47~63Hz					
Output	Capacity	2 kW	4 kW	4 kW	8 kW	24 kW max	48 kW max 64 kW max
	Voltage	Please refer to the form "Input/Output Specification"					
	Current	Please refer to the form "Input/Output Specification"					
	Ripple	<0.15%					
	Voltage Adjustment	0~100% adjustable					
	Current limit adjustment	10~100% adjustable					
	Over-voltage adjustment	110% setting value~110% given value adjustable					
	Line Regulation	<±0.05% full scale					
	Load Regulation	<±0.05% full scale					
	Transient response time	< 1ms (load changes from 50% to 100% or from 100% to 50%)					
Other Specification							
Efficiency (at rated input, max load)		>0.85	>0.89	Depending on configuration			
Circuit type		Switching power supply					
Protection function		Over voltage, over current, short circuit, over temperature					
Local control	Voltage meter	3 1/2digital meter				4 digital meter	
	Current meter	3 1/2digital meter				4 digital meter	
	Indicator light	Abnormal, external control, constant voltage, constant current					
	Pre-set	Output voltage, output current, output over current, reset					
Remote control	Compensation	0~3V					
	Control	Output voltage, output current 0~100% adjustable through external 0~5Vdc Voltage External control and reset					
	Monitor	Remote control to output voltage, output current from 0 to 100% through external 0~5Vdc voltage					
Environment	Operation temperature	0~50℃					
	Storage temperature	-25~65℃					
	Humidity	0~90% ( non-condensing )					
	Cooling mode	Wind enter from the front and out in the back. Can be installed with rack from top to bottom.					
	Noise	< 55dB / 1m ( fan speed control )					
Withstand voltage		Input to crust 220Vdc/1min without arc /4mA					
Insulation Resistance		Input to crust ≥100MΩ (500Vdc)					
Electromagnetic Compatibility(EMC)		Input EMI filter					
Mechanical Specification							
Input mode		Terminal strips				Air switch	
Output mode		Copper busbar					
Structure		19" (483 mm) , xU rack type					
Demension	W×D×H (mm)	430×500×88	430×500×176	430×500×88	430×500×176	600×700×1036	600×700×1659 600×700×2104
Weight (kg)		14	22	18	30	Depending on configuration	

**Input / Output Specification**

Power Rating		2 kW	4 kW	8 kW	24 kW max	48 kW max	64 kW max
Input	Rated Input Voltage(Vac)	Max Input Current (Aac)					
	Single Phase 220	17	34	—	The max input current of power unit × The number of power units configured		
	Three Phase 220	—	15	30			
	Three Phase 380	—	9	18			
Output	Rated Output Voltage(Vdc)	Max Output Current (Adc)					
	30	67	133	267	The max output current of power unit × The number of power units configured		
	40	50	100	200			
	60	33	67	133			
	80	25	50	100			
	100	20	40	80			
	120	17	33	66			
	160	13	25	50			
	240	8	16	33			
	330	6	12	24			
600	3	7	13				

[Remarks]: ① Custom-made specifications are on request;  
② All specifications are subject to change without prior notice.

## Standard Cabinet Dimensions and Max Capacity

[Dimension: Width×Depth×Height]



## Optional Parts

### ■ 19" standard cabinet:

Three different height 19-inch standard cabinet: 18U, 32U, 42U.

18U power system — the max capacity can be 24kW;

32U power system — the max capacity can be 48kW;

42U power system — the max capacity can be 64kW;

### ■ Power unit:

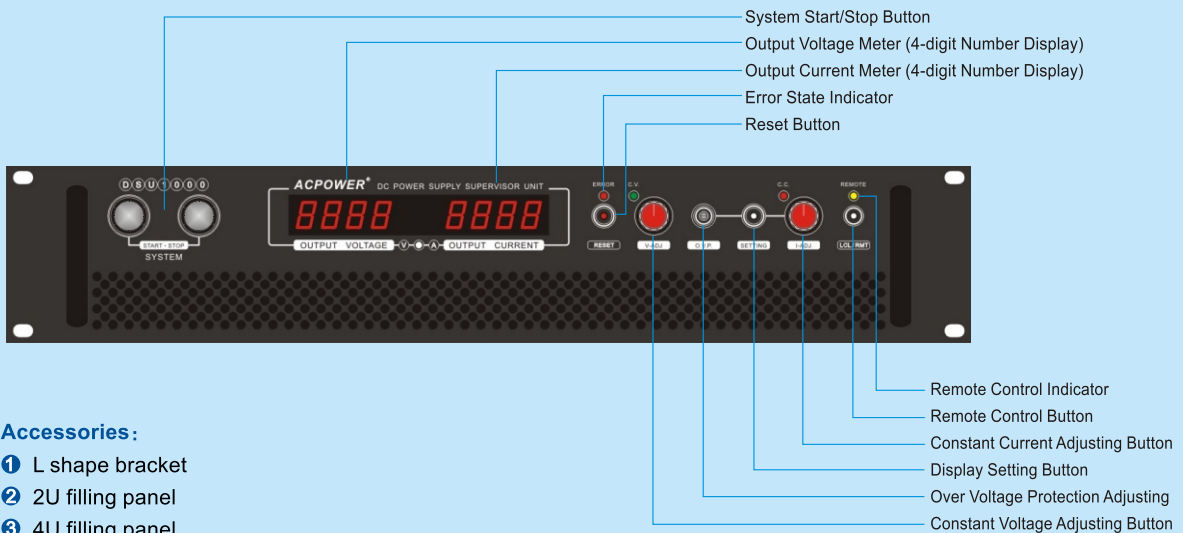
There are three power module units with capacity of 2kW, 4kW, 8kW available for configuration.

Power units with different input voltage specifications and output voltage specifications should not be mixed use.

### ■ Supervisor unit:

Display system running status and provide system control functions of high capacity DC power supply system (10~64kW);

Two type interfaces for options: standard interface, isolated analog interface.



### ■ Accessories:

- ① L shape bracket
- ② 2U filling panel
- ③ 4U filling panel
- ④ 6U filling panel



Product order information

DC Switching Power Supply

ADC-

Input specification

- 15 - 1Φ2W 187~253Vac
- 35 - 3Φ3W 187~253Vac
- 37 - 3Φ3W 323~437Vac

Output current value (see output specification form)

Output voltage value (see output specification form)

Example 1: ADC-0400050-15      Input: 1Φ2W 220V      Output: 40V 50A  
 Example 2: ADC-1600400-35      Input: 3Φ3W 220V      Output: 160V 400A  
 Example 3: ADC-0401200-37      Input: 3Φ3W 380V      Output: 40V 1200A

\* If total capacity of orders is beyond the largest capacity of single module (8kW), please refer to the below formula and 19" standard cabinet configuration list form:

$$(19" \text{ Standard Cabinet} \times 1) + (\text{Monitoring Unit} \times 1) + (\text{Power Module Unit} \times N) + (\text{Cabinet Accessory} \times N)$$

Standard Cabinet	Power Module Unit	Supervisor Unit
<p>DFR-<span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff8c00; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff8c00; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff8c00; border: 1px solid #ccc;"></span></p> <p>① Rack height                      18 - 19" 18U standard cabinet                      32 - 19" 32U standard cabinet                      42 - 19" 42U standard cabinet</p> <p>② Input specification                      15 - 1Φ2W 187~253Vac                      35 - 3Φ3W 187~253Vac                      37 - 3Φ3W 323~437Vac</p> <p>③ Output current                      02 - &lt; 200A                      06 - &lt; 600A                      12 - &lt; 1200A                      20 - &lt; 2000A                      30 - &lt; 3000A</p>	<p>DPU-<span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff8c00; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #ff8c00; border: 1px solid #ccc;"></span></p> <p>① Output voltage/current (see output specification form)                      Example: 30067 - 30V 67A                      60013 - 600V 13A</p> <p>② Input specification                      15 - 1Φ2W 187~253Vac                      35 - 3Φ3W 187~253Vac                      37 - 3Φ3W 323~437Vac</p>	<p>DSU-1000A-<span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc; margin-right: 2px;"></span><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid #ccc;"></span></p> <p>① Interface options                      00 - standard interface                      10 - isolated analog interface</p> <p><b>Accessories</b></p> <p>DOP-0101A - Simple fix rack                      DOP-0102A - L shape bracket                      DOP-0202A - 2U filling panel                      DOP-0204A - 4U filling panel                      DOP-0206A - 6U filling panel</p>

Standard Cabinet Configuration List

Cabinet Model	Power units can be configured (Q'ty)			Monitoring Unit	Capacity (kW)	Input Current (A <sub>ac</sub> )		Output Current (A <sub>dc</sub> )					
	DPU2000	DPU4000	DPU8000			DSU1000	Pmax	I <sub>in</sub> max	CB <sup>①</sup>	200	600	1200	2000
DFR-18A15-xx	5			⊙	10	90	100	⊙	⊙				
DFR-18A35-xx		6		⊙	24	90	100	⊙	⊙	⊙			
DFR-18A37-xx			3	⊙	24	52	63	⊙	⊙	⊙			
DFR-32A15-xx	10			⊙	20	180	225	⊙	⊙	⊙			
DFR-32A35-xx		12		⊙	48	181	225	⊙	⊙	⊙	⊙		
DFR-32A37-xx			6	⊙	48	105	125	⊙	⊙	⊙	⊙		
DFR-42A15-xx	16			⊙	32	288	350	⊙	⊙	⊙			
DFR-42A35-xx		16		⊙	64	241	315	⊙	⊙	⊙	⊙	⊙	
DFR-42A37-xx			8	⊙	64	140	180	⊙	⊙	⊙	⊙	⊙	⊙

[Remarks]: ① Circuit breaker.

# APPLICATION & SERVICE

AC Power Corp. offers products widely applied in multi-professional fields and provides the best power solutions to customers. Our mission is to satisfy customers' demand by considering the whole conditions including power environment, loading allocation, module solution alternative, thoughtful design, efficient manufacturing, and complete maintenance.

## Application



Radar



Auto-Test System



Lab



Physical Vacuum Deposition



Automotive Electronics



DC Brushless Motor



Wheel Hub Motor



Car Inverter



Integrated Circuit Plate



Capacitor



IGBT Module



Electric Tools

## Automotive Electronics

- Automobile headlight
- Automobile harness
- Car air-conditioner and electromotor inverter
- Brushless motor of EPS and MG units
- Car power component, sound power amplifier test
- Car ABS test application

## Electronic Industry

- Passive component e.g. capacitor test
- Integrated circuit test and inspection process
- Semiconductor
- Product design, manufacture, QA and test

## Production testing process

- Plating
- Vacuum deposition system (PVD)
- Auto test equipment (ATE)
- LCD panel test
- DC motor test
- Electric tool test
- Aging or life test

## Other fields

- Radar system
- Factory and research institute
- Simulated power source of UPS converter
- Battery charging
- Process control
- Navigation wireless communication
- Land moving communication equipment
- Other applications which need constant voltage or constant current power supply