



RoHS



Key Features

- Ultra small size, thickness only 1.5CM
- Ultra high efficiency, up to 90%
- Wide voltage input: 100-420Vdc/90-305 Vac, 50/60Hz
- Output protection, low ripple and noise
- EMC surge beyond four level EMC
- Lower power, RoHS, no-load loss < 0.1W
- 3 Years product warranty

DP20 series --- a super small size modular power supply offered by Zhongyiguang. The output power of this series module power supply is 20W, with extremely low no-load loss (< 0.6W), low leakage current, which is only 0.1mA, small size (50.80*25.40*15.50mm) and isolation voltage up to 4kv, etc. The product is safe and reliable, which has a good EMC. EMC and Safety specifications meet many related standards, such as IEC/EN61000-4, CISPR22/EN55022, UL60950/ EN60950/ EN60601. This series of products are widely used in industrial, office and civil industries. If applied to a relatively harsh environment electromagnetic compatibility, it must be referenced the application circuit.

Electrical Specifications

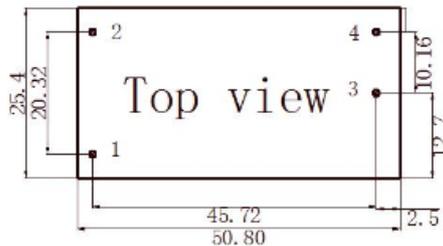
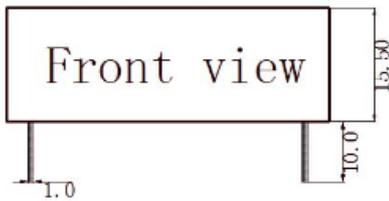
Model	Input voltage	Output Power(W)	Output voltage(V)	Output current(A)	Ripple(mv)	Efficiency (%)
DP20-S03	100-420VDC (90-300Vac)	9.9	3.3	4.00	100	83
DP20-S05		20	5.0	4.00	100	85
DP20-S09		20	9.0	2.22	100	87
DP20-S12		20	12	1.66	100	90
DP20-S15		20	15	1.33	100	90
DP20-S24		20	24	0.83	100	89

General Features

output	Voltage accuracy	±2.0%
	Line regulation	±1.0%
	Load regulation	±1.0%
	Set-up, rise time (TYP)	100ms/230VAC 200ms/115VAC at full load
	hold-up time (TYP)	40ms/230VAC 15ms/115VAC at full load
Input	Input voltage range	90~ 264VAC 100 ~ 420VDC
	Input frequency	47 ~ 440Hz
	Input current (TYP)	DP20: 525mA / 115VAC 270mA / 230VAC DP25: 590mA / 115VAC 310mA / 230VAC
	Dash current (TYP)	30 A / 230 VAC
	Recommended value of external fuse	T2A/250
	Leakage current (TYP)	< 0.1mA at 265VAC/50Hz
Protection	Over-voltage, over-current, short circuit protection, self recovery after troubleshooting.	
Work	Operating temperature	-40 ~ +70 °C (≥40°C, Derating at 0.25W/ centigrade)
	Humidity	85% .RH max

environment	Storage temperature	-40 ~ +85, 10 ~ 95% RH
	Temperature coefficient	0.03%/ (0~ 50°C)
	Vibration coefficient	10~500Hz,2G10min./1cycle, 60min.each along X,Y,Z axes
Safety and EMC (Note:3)	Safety standards	EN60950,EN60601,UL60950
	I/O-isolation voltage	I/P-O/P:4000VAC
	Isolation resistance	I/P-O/P>100M Ohms/500VDC 25°C 70% RH
	EMI / RFI conducted	EN55011, EN55022 (CISPR22) CLASS B (Note: see the application circuit)
	ESD	IEC/EN 61000-4-2 level 4 8kV/15kV (Note: see the application circuit)
	RF	IEC/EN 61000-4-3 (Note: see the application circuit)
	EFT	IEC/EN 61000-4-4 level 4 4kV (Note: see the application circuit)
	Surge	IEC/EN 61000-4-5 level 4 2kV
Others	MTBF	200K hrs min. MIL-HDBK-217F(25)
	size	50.8*25.4*15.5mm.
Notes	1. In addition to the special description, the above data are measured at the environment of TA=25°C, humidity less than 75%, input nominal voltage 230Vac and output rated load;	
	2. Ripple and noise are measured by using 300mm twisted pair and referring to the connection of the manual application circuit in the case of bandwidth 20MHz.	
	3. The power supply is considered as a component in the system, and it is necessary to confirm the EMC combining the terminal equipment.	

Dimension

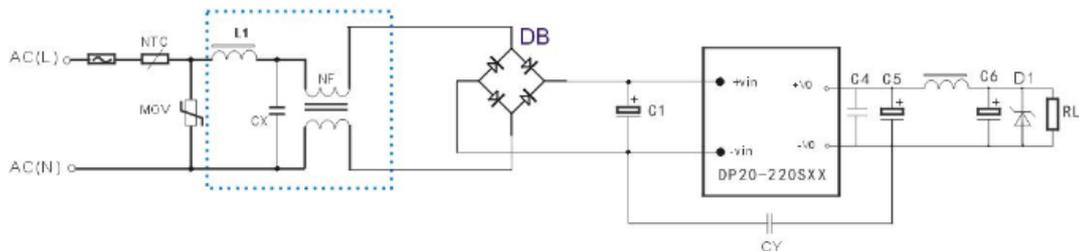


DP20-220SXX Pin function	
PIN	SINGLE
1	-Vin
2	+Vin
3	-Vo
4	+Vo

Note: the size of unit: mm;
the terminal section size: 1.0mm;
unlabeled tolerance: ± 0.5 mm.

terminal length: more than 4.0mm;
terminal tolerance: ± 0.1 mm;

Typical application drawing



Note:

- The output filter capacitor is C5, and C6 is electrolytic capacitor. Electrolytic capacitors with high frequency and low resistance are recommended. Capacity and flow current refer to the technical specifications provided by the manufacturer. C4 is used to remove high frequency noise.
- In Figure 2, the EMC filter is meet the higher EMC requirements in the dashed frame. It can be omitted when it was used in general places.