

Step-up 12V to 24V 20A DC-DC Converters 480W

Features:

1. 100% full power & stable current output
2. 100% Imported components
3. Wide input voltage from 9.8-23Vdc
4. 100% waterproof & anti-shock protection, Ultra compact size, light weight
5. Industry grade step-up converter, efficiency up to 95%
6. Waterproof level: IP68
7. According CE(EN61000) / RoHS design
8. Die-cast aluminum shell, epoxy potting, Cooling by free air convection,
9. Protections: Over-current, Over-voltage and Over-temperature, Auto-recovery when device is back to normal operating
10. Non-Isolated Module
11. 1 year warranty



WG-12S24 series is a compact size high reliability power converter offered by SZWENGAO, It features wide input voltage, low power consumption, high efficiency, high reliability. It can work safely and reliability in $-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$. It widely used in industrial, automotive, instruments, telecommunication and civil applications.

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input voltage range	Not working @ 9.8Vdc	9.8	12	24	VDC
Input current	--	52	42	21	A
No-load loss	--	55	60	70	mA
Input low voltage protection	Recovery point		10.2	10.5	VDC
	Under voltage point	9.8	10.2		VDC
Efficiency	--	94	95	95	%
Input filter	--	Without capacitances			
Hot plug	--	Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output voltage accuracy	Full load test, input volt range	--	± 1	± 2	%
Line regulation	Full load	--	± 0.2	± 0.5	%
Load regulation	10%~100% load	--	± 0.2	± 0.5	%
Ripple	20 MHz bandwidth	130	150	170	mVp-p
Over temperature protection	Chip (built-in protection)	100	105	110	$^{\circ}\text{C}$
Noise (peak-to-peak)	20 MHz bandwidth	400	480	500	mV

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Switch frequency	--	47	50	55	KHz
Overcurrent protection	--	25	28	30	A
Overvoltage protection	Item will damage @ 25Vdc	--	24	25	V
Short-circuit protection	Hiccup, continuous, self-recovery	--	--	40	mΩ

Security Features

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Insulation withstand voltage	--	--	--	500	V
Insulation resistance	--	--	10	--	mΩ
Isolate the capacitor	Non-isolated module	--	--	--	PF

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Working temperature	--	-55	--	100	°C
Storage temperature	--	-65	--	125	°C
Temperature coefficient	-40°C ~ +80°C	--	0.003	0.005	%/°C
Relative humidity	No condensation	20	--	100	%RH
Lifetime		--	--	100,000	Hours

Physical Specifications

Casing material	Die-cast aluminum shell
Input cable (positive "+")	Red ; 10AWG; 15cm length
Input cable (negative "-")	Black ; 10AWG; 15cm length
Output cable (positive "+")	White ; 14AWG; 15cm length
Output cable (negative "-")	Black ; 14AWG; 15cm length
Weight	500g
Cooling method	Free convection
Packing	White box

Dimension

Shell installation diagram
Thickness: 32mm

