

## Step-Down 48V to 24V 10A DC-DC Converters 240W

### Features:

1. 100% full power & stable current output
2. 100% Imported components
3. Wide input voltage from 30-63Vdc
4. 100% waterproof & anti-shock protection, Ultra compact size, light weight
5. Industry grade step-down converter, efficiency up to 98%
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, Over-temperature, and Short-circuit, Auto-recovery when device is back to normal operating
10. Non-Isolated Module
11. 1 year warranty



WG-48S12 series is a compact size high reliability power converter offered by SZWENGGAO, It features wide input voltage, low power consumption, high efficiency, high reliability. It can work safely and reliability in -40℃ ~ 80℃. It widely used in industrial, automotive, instruments, telecommunication and civil applications.

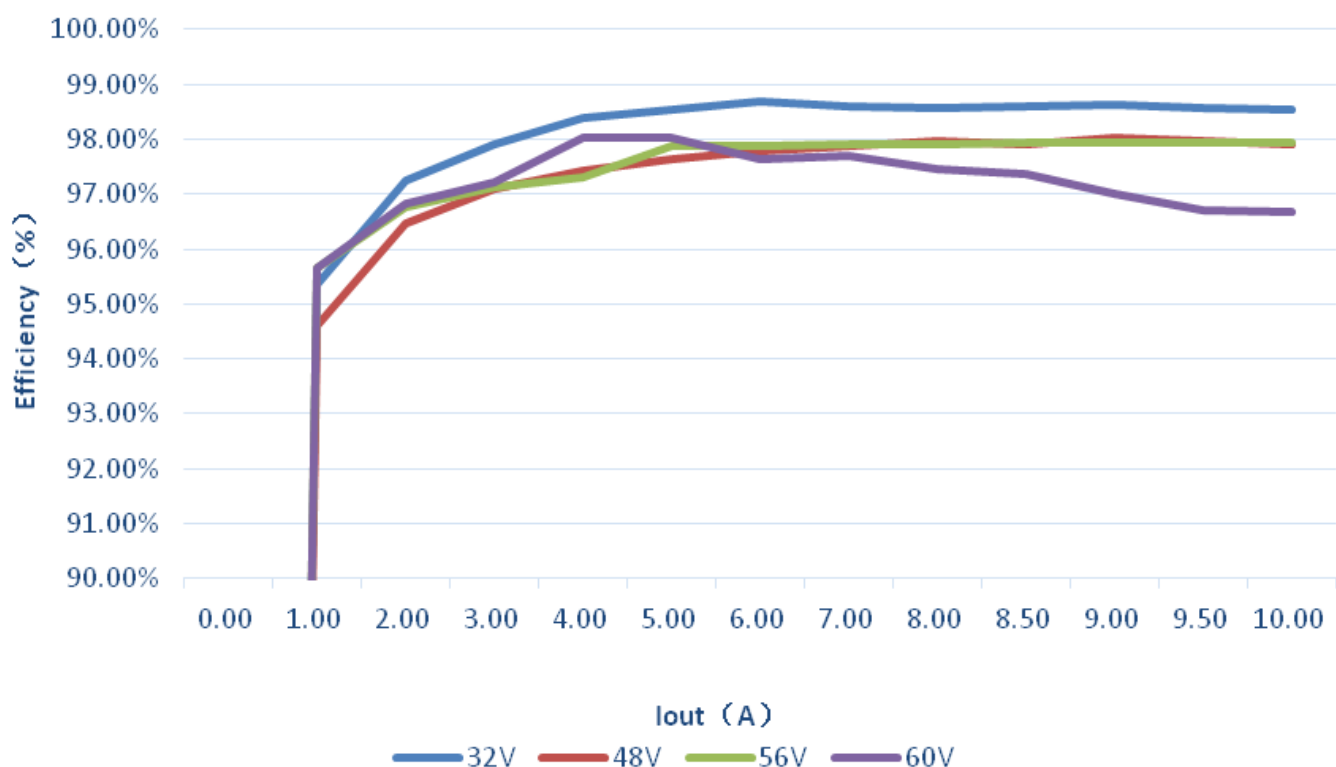
### Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input voltage range	--	32	48	60	VDC
Input current	--	7.63	5.13	4.16	A
No-load loss	--	1.28	1.92	1.80	mA
Input filter	--	Without capacitances			
Hot plug	--	Unavailable			
Recommended input fuse	--	External connect 10A fuse			

### Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output voltage accuracy	Full load test, input volt range	--	±1	±2	%
Line regulation	Full load	--	±0.5	±1	%
Load regulation	10%~100% load	--	±0.5	±1	%
Ripple & Noise*	20 MHz bandwidth	--	85	100	mVp-p
Temperature coefficient	-40℃ ~ +80℃	--	--	±0.03	%/℃
Over temperature protection	Chip (built-in protection)	--	130	--	℃
Short-circuit protection	--	Self-recovery, when device is back to normal operating			
Over current protection	--	≥130% load, self-recovery			
Thermal impedance	--	--	5	--	℃/W

**Efficiency**



Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)	Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)
32.03	0.04	0.00	24.12	0.00	1.28	0.00%	48.00	0.04	0.00	24.12	0.00	1.92	0.00%
32.02	0.79	1.00	24.12	24.12	1.18	95.35%	48.10	0.53	1.00	24.12	24.12	1.37	94.61%
32	1.55	2.00	24.12	48.24	1.36	97.26%	48.09	1.04	2.00	24.12	48.24	1.77	96.45%
31.99	2.31	3.00	24.12	72.36	1.54	97.92%	48.08	1.55	3.00	24.12	72.36	2.16	97.10%
32.05	3.06	4.00	24.12	96.48	1.59	98.38%	48.07	2.06	4.00	24.12	96.48	2.54	97.43%
32.04	3.82	5.00	24.12	120.60	1.79	98.54%	48.06	2.57	5.00	24.12	120.60	2.91	97.64%
32.02	4.58	6.00	24.12	144.72	1.93	98.68%	48.05	3.08	6.00	24.12	144.72	3.27	97.79%
32.01	5.35	7.00	24.12	168.84	2.41	98.59%	48.05	3.59	7.00	24.12	168.84	3.66	97.88%
31.99	6.12	8.00	24.12	192.96	2.82	98.56%	48.04	4.10	8.00	24.12	192.96	4.00	97.97%
31.99	6.50	8.50	24.12	205.02	2.91	98.60%	48.03	4.36	8.50	24.12	205.02	4.39	97.90%
31.99	6.88	9.00	24.12	217.08	3.01	98.63%	48.03	4.61	9.00	24.12	217.08	4.34	98.04%
31.98	7.27	9.50	24.12	229.14	3.35	98.56%	48.03	4.87	9.50	24.12	229.14	4.77	97.96%
32.08	7.63	10.00	24.12	241.20	3.57	98.54%	48.02	5.13	10.00	24.12	241.20	5.14	97.91%

Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)	Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)
56.03	0.04	0.00	24.12	0.00	2.24	0.00%	60.04	0.03	0.00	24.12	0.00	1.80	0.00%
56.03	0.45	1.00	24.12	24.12	1.09	95.66%	60.04	0.42	1.00	24.12	24.12	1.10	95.65%
56.02	0.89	2.00	24.12	48.24	1.62	96.76%	60.02	0.83	2.00	24.12	48.24	1.58	96.84%
56.02	1.33	3.00	24.12	72.36	2.15	97.12%	60.02	1.24	3.00	24.12	72.36	2.06	97.23%
56.02	1.77	4.00	24.12	96.48	2.68	97.30%	60.02	1.64	4.00	24.12	96.48	1.95	98.02%
56.01	2.20	5.00	24.12	120.60	2.62	97.87%	60.01	2.05	5.00	24.12	120.60	2.42	98.03%
56	2.64	6.00	24.12	144.72	3.12	97.89%	60.01	2.47	6.00	24.12	144.72	3.50	97.64%
55.99	3.08	7.00	24.12	168.84	3.61	97.91%	60.00	2.88	7.00	24.12	168.84	3.96	97.71%
55.99	3.52	8.00	24.12	192.96	4.12	97.91%	59.99	3.30	8.00	24.12	192.96	5.01	97.47%
55.98	3.74	8.50	24.12	205.02	4.35	97.92%	59.99	3.51	8.50	24.12	205.02	5.54	97.37%
55.98	3.96	9.00	24.12	217.08	4.60	97.92%	59.99	3.73	9.00	24.12	217.08	6.68	97.01%
55.97	4.18	9.50	24.12	229.14	4.81	97.94%	59.98	3.95	9.50	24.12	229.14	7.78	96.72%
55.97	4.40	10.00	24.12	241.20	5.07	97.94%	59.97	4.16	10.00	24.12	241.20	8.28	96.68%

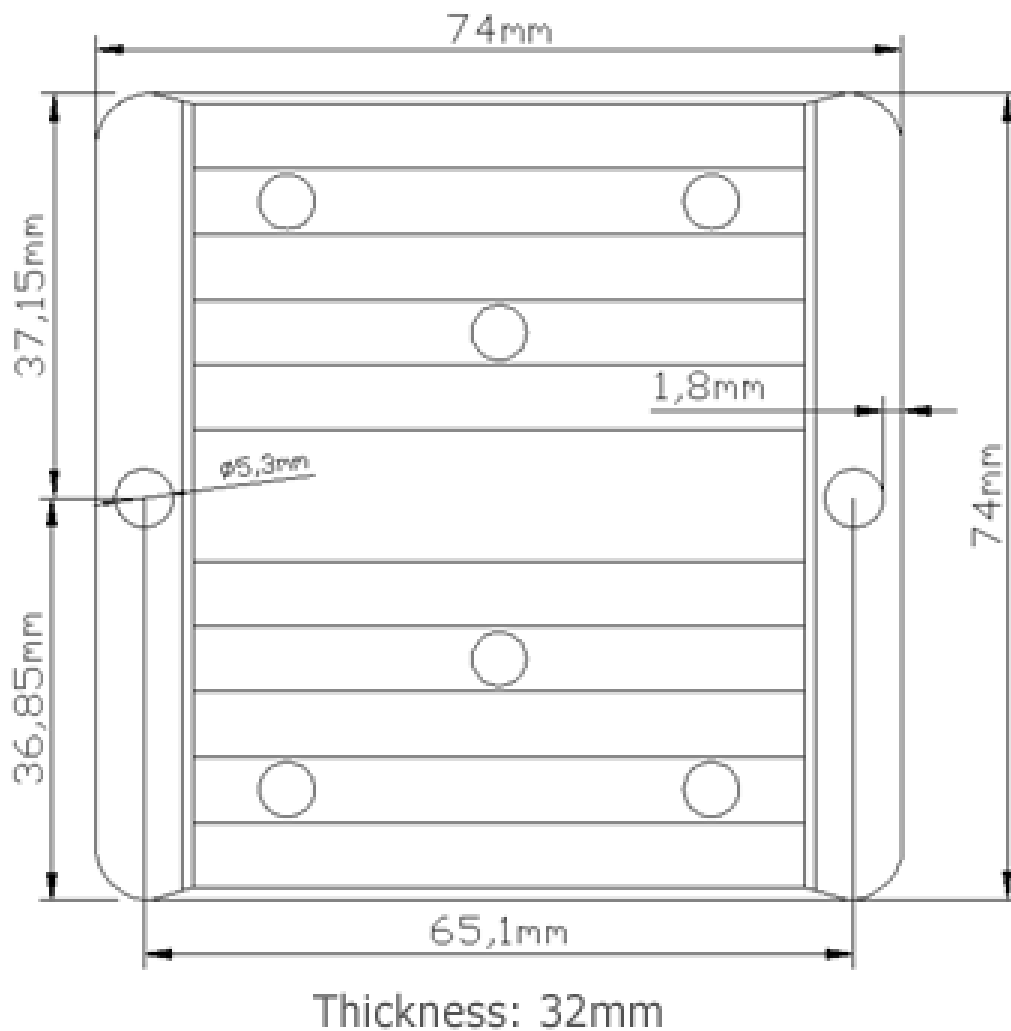
#### General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Working temperature	--	-40	--	80	℃
Storage temperature	--	-55	--	125	℃
Storage humidity	--	--	--	95	%RH
Lifetime		--	--	100,000	Hours

#### Physical Specifications

Casing material	Die-cast aluminum shell
Input cable ( positive "+" )	Red ; 16AWG; 16.5cm length
Input cable ( negative "-" )	Black ; 16AWG; 16.5cm length
Output cable ( positive "+" )	Yellow ; 16AWG; 16.5cm length
Output cable ( negative "-" )	Black ; 16AWG; 16.5cm length
Weight	265g
Cooling method	Free convection
Packing	White box

Dimensions: 74\*74\*32mm



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