

Step-Down/Up 8-40V to 12V 6A DC-DC Converters 72W

Features:

1. 100% full power & stable current output
2. 100% Imported components
3. Wide input voltage from 8-40Vdc
4. 100% waterproof & anti-shock protection, Ultra compact size, light weight
5. Industry grade step-down converter, efficiency up to 91%
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, Short-circuit, and Over-temperature
Auto-recovery when device is back to normal operating
10. Non-Isolated Module
11. 1 year warranty



WG8-40S12 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 $-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$. It widely used in industrial, automotive, instruments, telecommunication and civil applications.

Input Specifications

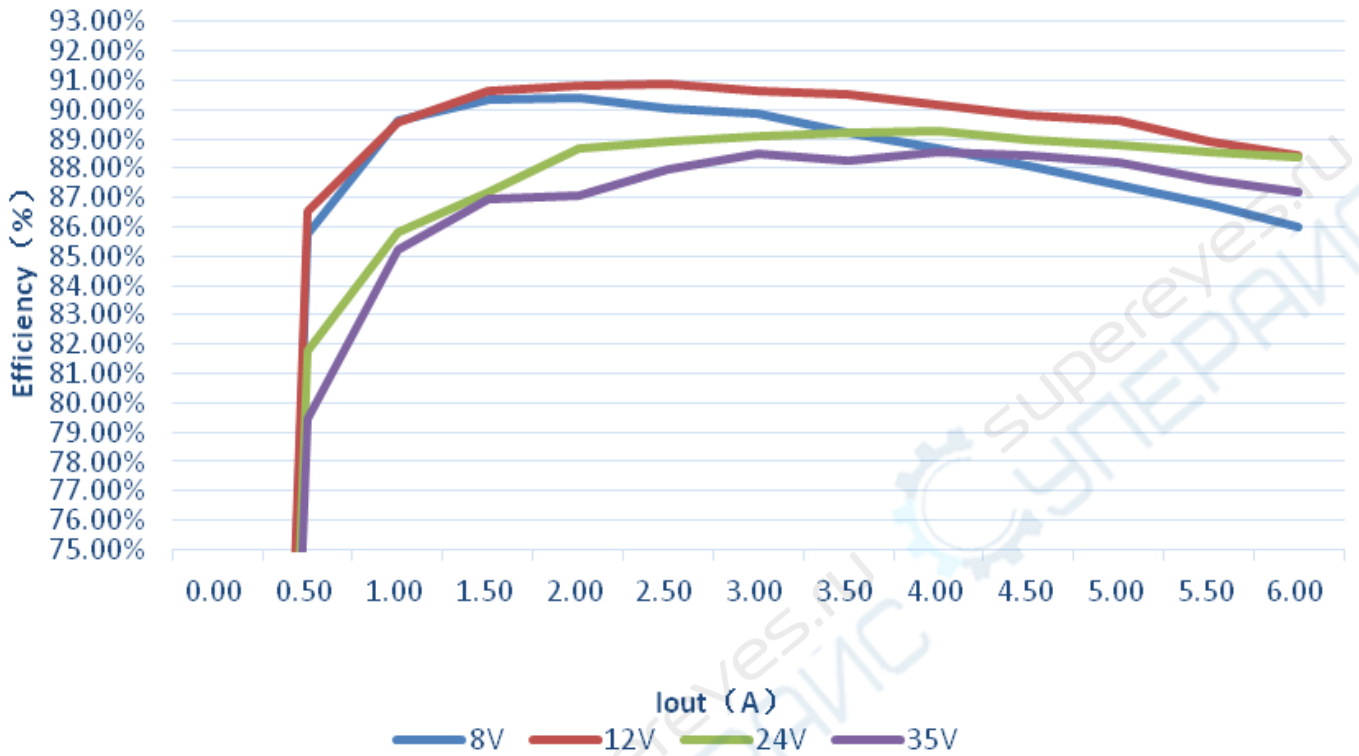
Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input voltage range	--	8	12	35	VDC
Input current	--	9.81	6.81	2.39	A
No-load loss	--	0.35	0.37	0.7	W
Input filter	--	Without capacitances			
Hot plug	--	Unavailable			
Recommended input fuse	--	External connect 6A fuse			

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	Check the images blow			mVp-p
Temperature coefficient	$-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$	--	--	± 0.03	%/ $^{\circ}\text{C}$
Over temperature protection	Chip (built-in protection)	--	130	--	$^{\circ}\text{C}$
Short-circuit protection	--	Self-recovery, when device is back to normal operating			
Over current protection	--	8A $\pm 2\%$ @ 12Vin, 10A $\pm 2\%$ @ 24Vin, self-recovery			
Transient response deviation	Input 12V, 25-50% load step	--	160	--	mV
Transient recovery time	Input 12V, 25-50% load step	--	0.2	--	mS
Thermal impedance	--	--	5	--	$^{\circ}\text{C}/\text{W}$



Efficiency

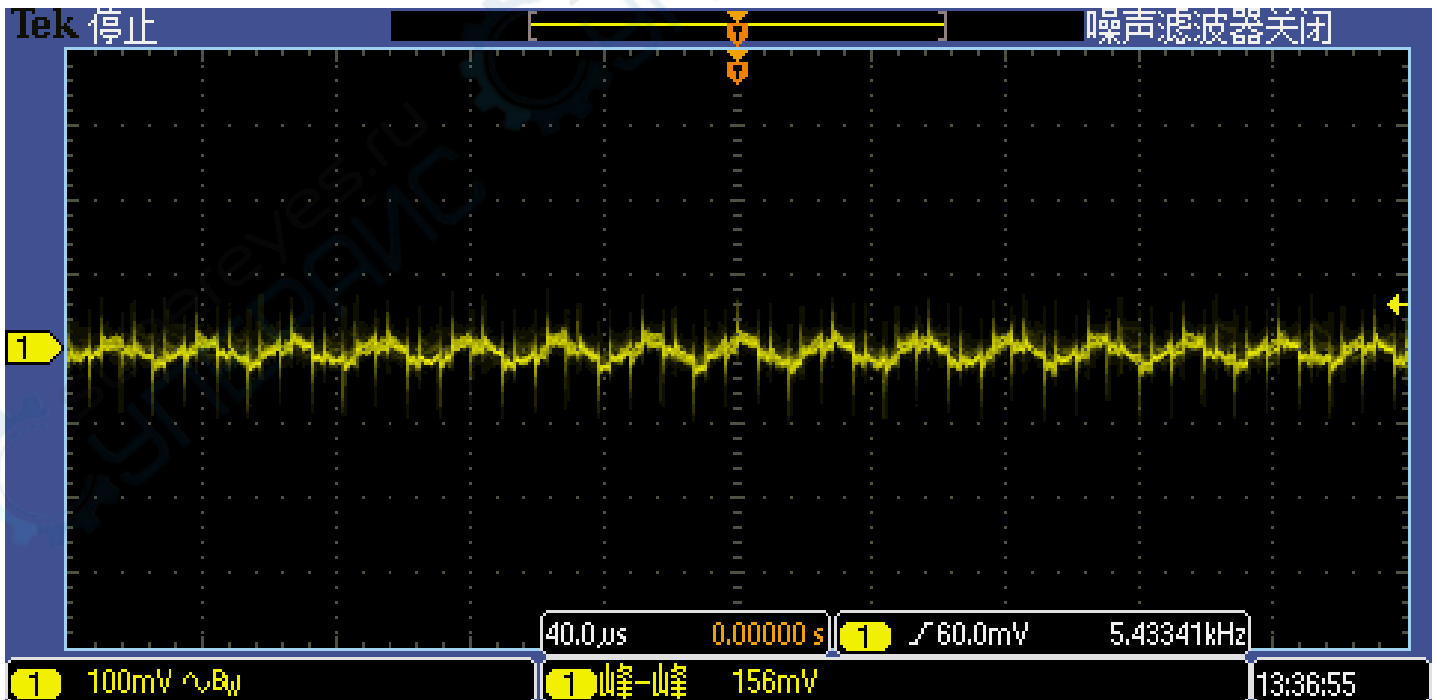


Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)	Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)
8.72	0.04	0.00	12.31	0.00	0.35	0.00%	12.23	0.03	0.00	12.31	0.00	0.37	0.00%
8.71	0.82	0.50	12.25	6.13	1.02	85.76%	12.21	0.58	0.50	12.26	6.13	0.95	86.56%
8.69	1.57	1.00	12.23	12.23	1.41	89.64%	12.20	1.12	1.00	12.24	12.24	1.42	89.58%
8.67	2.34	1.50	12.22	18.33	1.96	90.35%	12.19	1.66	1.50	12.23	18.35	1.89	90.66%
8.66	3.12	2.00	12.21	24.42	2.60	90.38%	12.18	2.21	2.00	12.22	24.44	2.48	90.79%
8.64	3.92	2.50	12.2	30.50	3.37	90.05%	12.17	2.76	2.50	12.21	30.53	3.06	90.88%
8.62	4.72	3.00	12.19	36.57	4.12	89.88%	12.16	3.32	3.00	12.2	36.60	3.77	90.66%
8.61	5.55	3.50	12.18	42.63	5.16	89.21%	12.15	3.88	3.50	12.19	42.67	4.48	90.50%
8.59	6.39	4.00	12.17	48.68	6.21	88.69%	12.14	4.45	4.00	12.18	48.72	5.30	90.18%
8.57	7.25	4.50	12.16	54.72	7.41	88.07%	12.12	5.03	4.50	12.17	54.77	6.20	89.83%
8.55	8.12	5.00	12.14	60.70	8.73	87.43%	12.11	5.60	5.00	12.16	60.80	7.02	89.65%
8.53	8.99	5.50	12.1	66.55	10.13	86.78%	12.10	6.21	5.50	12.15	66.83	8.32	88.93%
8.51	9.81	6.00	11.97	71.82	11.66	86.03%	12.09	6.81	6.00	12.14	72.84	9.49	88.47%

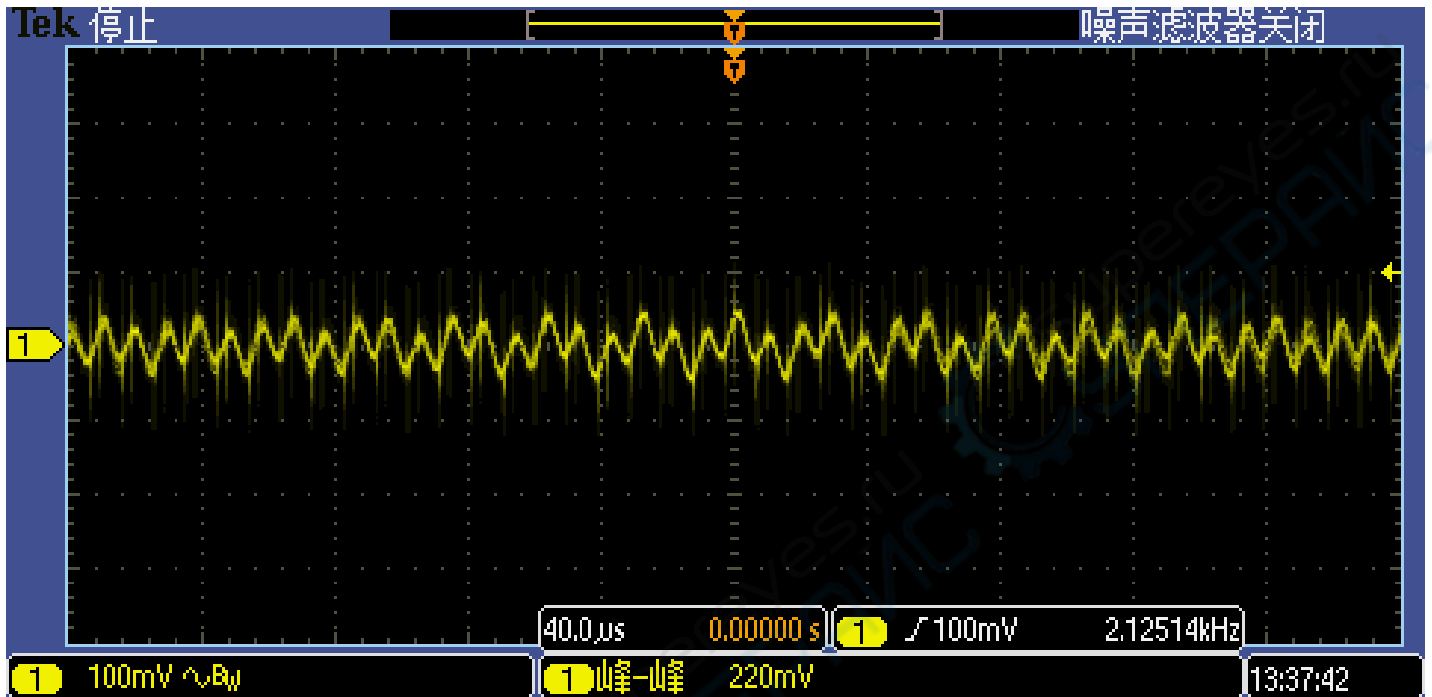
Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)	Vin (V)	Iin (A)	Iout (A)	Vout (V)	Pout (W)	Losses (W)	Efficiency (%)
24.18	0.02	0.00	12.28	0.00	0.48	0.00%	35.02	0.02	0.00	12.26	0.00	0.70	0.00%
24.18	0.31	0.50	12.26	6.13	1.37	81.78%	35.01	0.22	0.50	12.24	6.12	1.58	79.46%
24.17	0.59	1.00	12.24	12.24	2.02	85.83%	35.01	0.41	1.00	12.23	12.23	2.12	85.20%
24.17	0.87	1.50	12.22	18.33	2.70	87.17%	35.10	0.60	1.50	12.21	18.32	2.75	86.97%
24.16	1.14	2.00	12.21	24.42	3.12	88.66%	35.01	0.80	2.00	12.19	24.38	3.63	87.05%
24.16	1.42	2.50	12.2	30.50	3.81	88.90%	35.00	0.99	2.50	12.19	30.48	4.18	87.95%
24.15	1.70	3.00	12.19	36.57	4.49	89.08%	35.00	1.18	3.00	12.18	36.54	4.76	88.47%
24.15	1.98	3.50	12.19	42.67	5.15	89.23%	35.00	1.38	3.50	12.18	42.63	5.67	88.26%
24.14	2.26	4.00	12.18	48.72	5.84	89.30%	35.00	1.57	4.00	12.17	48.68	6.27	88.59%
24.14	2.55	4.50	12.17	54.77	6.79	88.97%	34.99	1.77	4.50	12.17	54.77	7.17	88.43%
24.13	2.84	5.00	12.17	60.85	7.68	88.79%	34.99	1.97	5.00	12.16	60.80	8.13	88.21%
24.13	3.13	5.50	12.16	66.88	8.65	88.55%	34.99	2.18	5.50	12.15	66.83	9.45	87.61%
24.12	3.42	6.00	12.15	72.90	9.59	88.37%	34.98	2.39	6.00	12.15	72.90	10.70	87.20%

Ripple & Noise

Input voltage 8Vdc @ 6Amps full load test



Input voltage 35Vdc @ 6Amps full load test



General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Working temperature	--	-40	--	80	°C
Storage temperature	--	-55	--	125	°C
Storage humidity	--	--	--	95	%RH
Switching frequency	100% load, input voltage range	--	97	--	KHz
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	270g
Cooling method	Free convection
Packing	White box

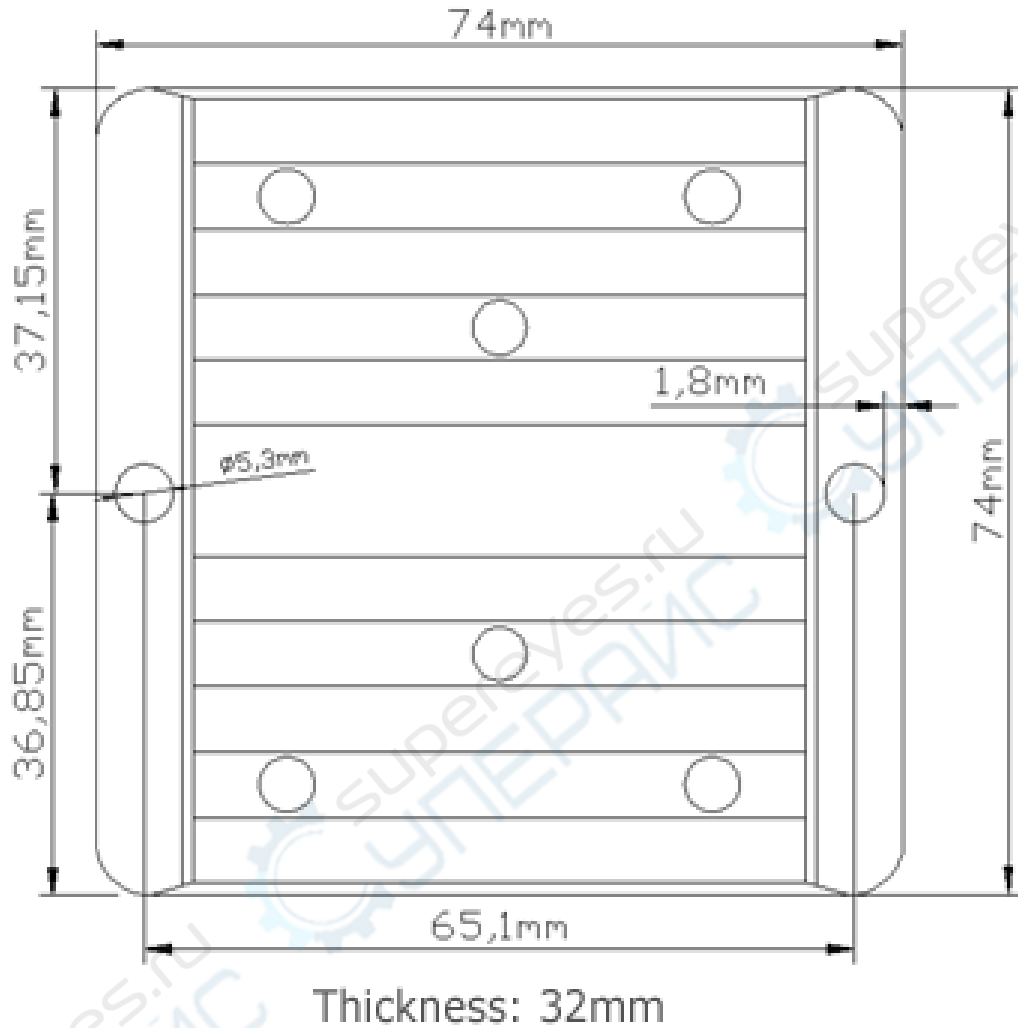


szwengao

DC-DC Converter Specification

Model No.:WG8-40S1206

Dimensions (74*74*32mm)



Shenzhen Wengao Electronic Co., Ltd

A: 4/F, Bldg B, Zhuangbian Ind. Zone, Hangkong Rd., Baoan Dist., Shenzhen, China 518126

T: +86 755 29418061

F: +86 755 29418061

E: info@wengaoelec.com

W: www.wengaoelec.com