

Input voltage	Output voltage	Output current	Output power	Efficiency	Size
50-90V DC	12V DC	8 Amps	96 Watts	92%	110*70*20mm



The WGI08-72S12L is an isolated DC-DC converter that uses a synchronous rectification technology, and features high efficiency and power density. It has the dimensions of 110mm x 70mm x 20mm and provides the rated output voltage of 12 V and the maximum output current of 8 A.

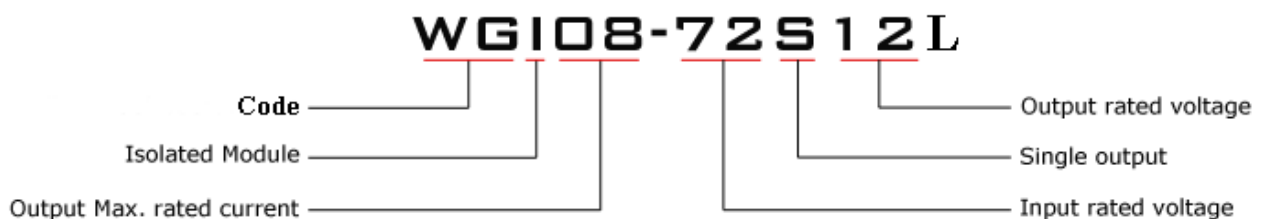
### Features

- Design meeting RoHS / CE
- High efficiency: 92% ( @ 72Vin, 25°C )
- Isolated between input and output
- Internal capacitor: NCC & NICHICON (high reliability)
- 100% full load burn-in test
- Short circuit, Over load, Over temperature protections
- Waterproof level IP68
- 2 Years warranty

### Applications

- Industrial
- Alternative Energy
- Golf Cart & Forklift
- Military
- Electromotor
- Telecommunications
- Boat & Yacht
- Medical and so on.

### Model naming method



### Electrical Specifications

Conditions: TA = 25° C (77° F), Airflow = 1.0 m/s (200 LFM), Vin = 72 V, Vout = 12 V , unless otherwise specified.

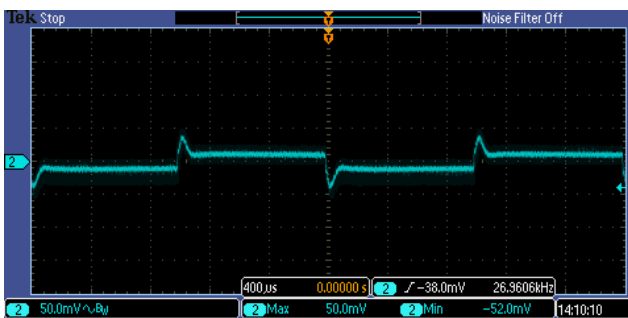
Parameter	Min.	Typ.	Max.	Units	Remarks
<b>Absolute maximum ratings</b>					
Operating ambient temperature	-40	-	+50	° C	
Shell ambient temperature	-40	-	80	° C	
Storage temperature	-55	-	100	° C	
Operating humidity	5	-	95	%	Non-condensing
Atmospheric pressure	62	-	106	Kpa	
Altitude	-	-	4000	m	
Cooling way	-	-	-		Natural cooling
<b>Input characteristics</b>					
Input voltage	50	72	90	V	-
Max. input voltage	-	-	93	V	Continuous
Undervoltage shutdown	45	46	48	V	Automatic recovery
Undervoltage recovery	46	49	50	V	Automatic recovery
Max. input current	-	-	3	A	Vin = 72V; Vout = 8A
No load current	-	80	300	mA	Vin = 72V
Positive electrode cable	-	M3	-		Screw terminal
Negative electrode cable	-	M3	-		Screw terminal
Fuse	-	7.5	-	A	
<b>Output characteristics</b>					
Efficiency	-	92	-	%	Vin = 72V; Vout = 8A
Output voltage	11.65	12	12.35	V	Vin = 72V; Vout = 8A
Regulator accuracy	-	±2	-	%	
Voltage regulation	-	±2	-	%	
Load Regulation	-	±2	-	%	
Overvoltage protection	13.8	14.3	15	V	Hiccup mode
Output current	0	-	8	A	
Overcurrent protection	8.5	10	12	A	
External capacitance	0	1000	2000	µF	
Output ripple and noise	-	50	200	mVp-p	Vin = 50-90 V; Oscilloscope bandwidth: 20 MHz;
Output voltage rise time	-	8	50	mS	
Boot delay time	-	30	100	mS	
Out voltage overshoot	-	-	5	%	
Over temperature protection	-	-	85	° C	Shell temperature, @ 80° C Restore working
Short circuit protection	-	-	-		Long-term (4 hours) short circuit is not damaged, Hiccup mode
Positive electrode cable	-	M3	-		Screw terminal
Negative electrode cable	-	M3	-		Screw terminal

Safety and EMC features				
Anti-electric Strength	Input to Output	≥1500	V	Leakage current ≤ 3.5mA, 1min, no breakdown, no arcing
	Input to Shell	≥1500	V	
	Output to Shell	≥500	V	
Insulation resistance	Input to Output	≥50	V	Test voltage = 500V
	Input to Shell			
	Output to Output			
Other characteristics				
Weight	≤320		g	
Package	White box			
MTBF	≥200,000		H	Vin = 72V; Vout = 8A
Switching frequency	250±30		KHz	

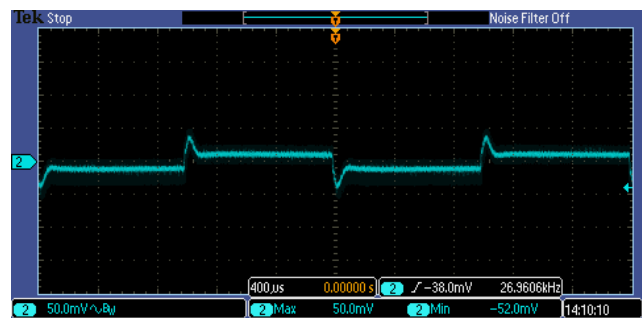
### Typical Waveforms

Conditions: TA = 25° C (77° F), Vin = 72 V, unless otherwise specified.

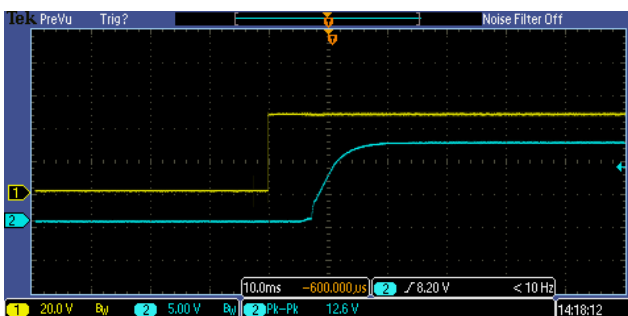
**Figure 4, 25% - 50% load dynamic**



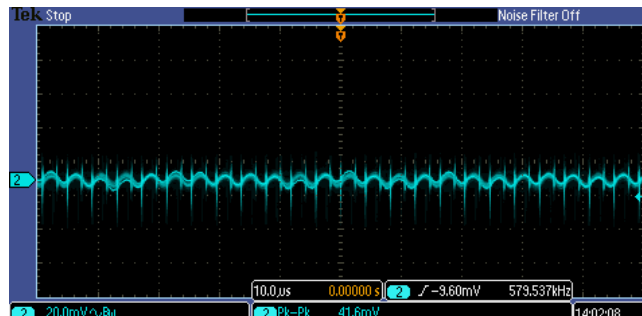
**Figure 5, 50% - 75% load dynamic**



**Figure 6, Output voltage established (Aout = 8A)**



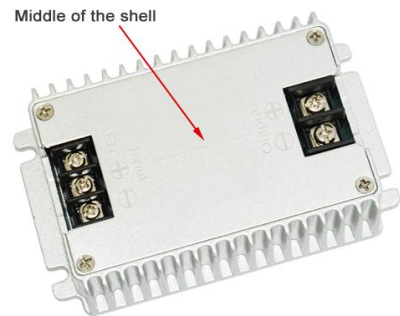
**Figure 7, Output ripple & noise (Aout = 8A)**



### Thermal Consideration

Sufficient airflow should be provided to help ensure reliable operating of the WGI08-72S12L.

Therefore, thermal components are mounted on the top surface of the WGI08-72S12L to dissipate heat to the surrounding environment by conduction, convection and radiation. Proper airflow can be verified by measuring the temperature at the middle of the base plate.



### Dimension

unit: mm

