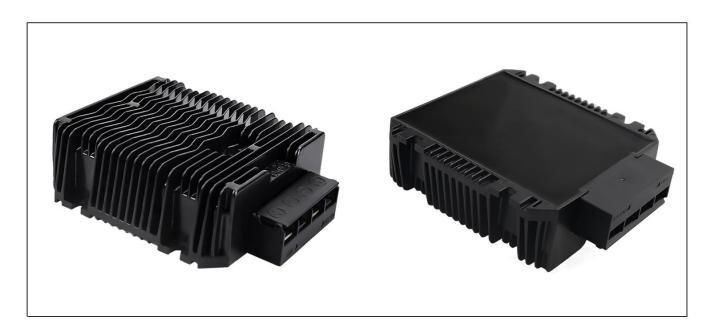


Input voltage	Output voltage	Output current	Output power	Efficiency	Size
10-20V DC	36V DC	30 Amps	1080 Watts	95.9%	140*120*42.5mm



The WG-12S3630M is a Non-isolated DC-DC converter that uses a synchronous rectification technology, and features high efficiency and power density. It has the dimensions of  $140 \text{mm} \times 120 \text{mm} \times 42.5 \text{mm}$  (5.51 in.  $\times 4.72$  in.  $\times 1.67$  in) and provides the rated output voltage of 36V and the maximum output current of 30A.

## Features

- Design meeting RoHS / CE
- $\bullet$  High efficiency: 95.9% (@12Vin, 25°C)
- Non-isolated between input and output
- 100% full stable current output
- Support -30 °C environment
- 100% full load burn-in test
- OT, OL, LV protections
- Waterproof level IP67
- 2 Years warranty



WG-12S3630M

### **Applications**

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

WG: "szwengao" company name

12 : Input rated voltageS : Single output type36 : Output voltage

**30**: Output current **M**: Type of shell



## **Electrical Specifications**

Conditions: TA = 25 °C (77°F), Airflow = 1 m/s (200LFM), Vin =12V, Vout =36V, unless otherwise specified.

Operating ambient temperature	Parameter	Min.	Тур.	Max.	Units	Remarks	
temperature         -30         -         +55         °C           Shell ambient temperature         -30         -         80         °C           Storage temperature         -55         -         100         °C           Operating humidity         5         -         95         % Non-condensing           Altitude         -         -         4000         m           Cooling way         -         -         -         Natural cooling           Imput characteristics           Input voltage         10         12         20         V         -           Max. Input voltage         10         12         20         V         -           Max. Input voltage         -         -         23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Max. Input current         -         -         23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Max. Input current         -         -         AWG         If the wire length is greater than 50cm, it is	Absolute maximum rati	ngs					
temperature         30         -         80         °C           Storage temperature         -55         -         100         °C           Storage temperature         -55         -         100         °C           Operating humidity         5         -         95         %         Non-condensing           Atmospheric pressure         62         -         106         Kpa         Atmospheric pressure         62         -         4000         m           Cooling way         -         -         -         4000         m         -         Cooling         - <td>Operating ambient</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Operating ambient						
temperature         -30         - 80         °C           Storage temperature         -55         - 100         °C           Operating humidity         5         - 95         % Non-condensing           Atmospheric pressure         62         - 106         Kpa           Altitude         4000         m           Cooling way         9         Natural cooling           Input characteristics           Input voltage         10         12         20         V           Max. input voltage         - 23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         - 10         118         A         Vin =102V         VI           Max. input current         - 2         118         A         Vin =102V         VI           Max. input current         - 4         - 4         AWG         If the wire length is greater than 50cm, it is recovery <t< td=""><td>temperature</td><td>-30</td><td>-</td><td>+55</td><td>°C</td><td></td></t<>	temperature	-30	-	+55	°C		
temperature	Shell ambient						
Operating humidity         5         -         95         %         Non-condensing           Atmospheric pressure         62         -         106         Kpa           Altitude         -         -         4000         m           Cooling way         -         -         -         Natural cooling           Input Voltage         10         12         20         V         -           Max. Input voltage         -         -         23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. Input current         -         -         118         A         Vin =10V; Jout =30A           No load current         -         -         18         200         mA         Vin =12V           Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Fuse         120         -         NA         -         AWG         If the product has this feature           Fuse	temperature	-30	-	- 80			
Attitude         62         -         106         Kpa           Altitude         -         -         4000         m           Cooling way         -         -         -         Natural cooling           Input voltage         10         12         20         V         -           Max. input voltage         -         -         23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         -         -         23         V         Continuous           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         -         -         118         A         Vin = 12V           Max. input current         -         -         118         A         Vin = 12V           Max. input voltage recovery         10         10.3         11         V         Automatic recovery           Max. input voltage recovery         10         8         200         mA         Vin =	Storage temperature	-55	-	100	°C		
Altitude	Operating humidity	5	-	95	%	Non-condensing	
Description   Cooling way   Cooling   Coolin	Atmospheric pressure	62	-	106	Кра		
Input characteristics	Altitude	-	-	4000	m		
Input voltage	Cooling way	-	-	-		Natural cooling	
Max. Input voltage         -         -         23         V         Continuous           Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         -         -         118         A         Vin =10V; fout =30A           No load current         -         -         88         200         mA         Vin =12V           Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Regative electrode cable         4         -         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Fuse         120         -         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Fuse         120         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Fuse         120         -         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Fuse         120	Input characteristics		1				
Undervoltage shutdown         9         9.6         10         V         Automatic recovery           Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         -         -         118         A         Vin =10V; Iout =30A           No load current         -         88         200         mA         Vin =12V           Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Enable PIN cable         -         NA         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         Vin =12V; Tout =30A           Output voltage regulation         -         ±3 <t< td=""><td>Input voltage</td><td>10</td><td>12</td><td>20</td><td>V</td><td>-</td></t<>	Input voltage	10	12	20	V	-	
Undervoltage recovery         10         10.3         11         V         Automatic recovery           Max. input current         -         -         118         A         Vin = 10V; Iout = 30A           No load current         -         88         200         mA         Vin = 12V           Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Enable PIN cable         -         NA         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Fuse         120         -         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Fuse         120         -         -         AWG         If the product has this feature recommended to use a thicker wire diameter.           Enable PIN cable         -         NA         -         AWG         If the product has this feature           Enable PIN cable         -         NA         -         AWG         If the product has this feature           Enable PIN cable         -         95.9%         -         %         Vin = 12V; Iout = 30A           Output voltage         -         143         -	Max. input voltage	-	-	23	V	Continuous	
Max. input current         -         -         118         A         Vin =10V; Iout =30A           No load current         -         88         200         mA         Vin =12V           Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Enable PIN cable         -         NA         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Output voltage         35.8         36.0         36.6         V         Vin =12V; Jout =30A           Output voltage protection         -         NA	Undervoltage shutdown	9	9.6	10	V	Automatic recovery	
No load current   -   88   200   mA   Vin = 12V	Undervoltage recovery	10	10.3	11	V	Automatic recovery	
Positive electrode cable         4         -         -         AWG         If the wire length is greater than 50cm, it is recommended to use a thicker wire diameter.           Enable PIN cable         -         NA         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Fuse         120         -         -         AWG         If the product has this feature           Input continue of the product has this feature           Until the product has this feature           Input positive has built-in fuse           Vin =12V; Tout =30A           Vin =12V; Iout =30A           Vin =12V; Iout =30A           Vin =10-20V	Max. input current	-	-	118	Α	Vin =10V; Iout =30A	
Negative electrode cable   4	No load current	-	88	200	mA	Vin =12V	
Enable PIN cable         -         NA         -         AWG         If the product has this feature           Fuse         120         -         -         A         Input positive has built-in fuse           Output characteristics         Efficiency         -         95.9%         -         %         Vin = 12V; Iout = 30A           Output voltage         35.8         36.0         36.6         V         Vin = 12V; Iout = 30A           Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Overourrent protection         40         43         46         A         Vin=10-20V           Overcurrent protection         -         NA         -         μF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102	Positive electrode cable	4	-	-	AWG	If the wire length is greater than 50cm, it is	
Fuse         120         -         A         Input positive has built-in fuse           Output characteristics         Ffficiency         -         95.9%         -         %         Vin =12V; fout =30A           Output voltage         35.8         36.0         36.6         V         Vin =12V; fout =30A           Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin =10-20V           Overcurrent protection         40         43         46         A         Vin =12V           External capacitance         -         NA         -         µF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS	Negative electrode cable	4	-	-	AWG	recommended to use a thicker wire diameter.	
Output characteristics           Efficiency         -         95.9%         -         %         Vin =12V; Iout =30A           Output voltage         35.8         36.0         36.6         V         Vin =12V; Iout =30A           Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin =10-20V           Overcurrent protection         40         43         46         A         Vin=12V           External capacitance         -         NA         -         µF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102         300         mS           Out voltage overshoot         -         -         5         % <t< td=""><td>Enable PIN cable</td><td>-</td><td>NA</td><td>-</td><td>AWG</td><td>If the product has this feature</td></t<>	Enable PIN cable	-	NA	-	AWG	If the product has this feature	
Efficiency         -         95.9%         -         %         Vin =12V; Iout =30A           Output voltage         35.8         36.0         36.6         V         Vin =12V; Iout =30A           Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin =10-20V           Overcurrent protection         40         43         46         A         Vin=12V           External capacitance         -         NA         -         μF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102         300         mS           Over temperature protection         -         -         5         %         Vin =12V, 50%-75% Load step <td< td=""><td>Fuse</td><td>120</td><td>-</td><td>-</td><td>Α</td><td>Input positive has built-in fuse</td></td<>	Fuse	120	-	-	Α	Input positive has built-in fuse	
Output voltage         35.8         36.0         36.6         V         Vin =12V; Iout =30A           Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin =10-20V           Overcurrent protection         40         43         46         A         Vin=12V           External capacitance         -         NA         -         μF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102         300         mS           Out voltage overshoot         -         -         5         %         Vin =12V, 50%-75% Load step           Over temperature protection         -         -         102         °C         Shell temperature	Output characteristics						
Regulator accuracy         -         ±3         -         %           Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin = 10-20V           Overcurrent protection         40         43         46         A         Vin=12V           External capacitance         -         NA         -         μF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin = 10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102         300         mS           Out voltage overshoot         -         -         5         %         Vin = 12V, 50%-75% Load step           Over temperature protection         -         -         102         °C         Shell temperature           Short circuit protection         -         NO         -         Boost converter can't short circuit for output	Efficiency	-	95.9%	-	%	Vin =12V; Iout =30A	
Voltage regulation         -         ±3         -         %           Load Regulation         -         ±2         -         %           Overvoltage protection         -         NA         -         V           Output current         0         -         30         A         Vin =10-20V           Overcurrent protection         40         43         46         A         Vin=12V           External capacitance         -         NA         -         μF         Don't need           Output ripple and noise         -         110         800         mVp-p         Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz           Output voltage rise time         -         94         300         mS           Boot delay time         -         102         300         mS           Out voltage overshoot         -         -         5         %         Vin =12V, 50%-75% Load step           Over temperature protection         -         -         102         °C         Shell temperature           Short circuit protection         -         NO         -         Boost converter can't short circuit for output           Positive electrode cable         12         -         -         AWG	Output voltage	35.8	36.0	36.6	V	Vin =12V; Iout =30A	
Load Regulation       -       ±2       -       %         Overvoltage protection       -       NA       -       V         Output current       0       -       30       A       Vin =10-20V         Overcurrent protection       40       43       46       A       Vin=12V         External capacitance       -       NA       -       μF       Don't need         Output ripple and noise       -       110       800       mVp-p       Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz         Output voltage rise time       -       94       300       mS         Boot delay time       -       102       300       mS         Out voltage overshoot       -       -       5       %       Vin =12V, 50%-75% Load step         Over temperature protection       -       -       102       °C       Shell temperature         Short circuit protection       -       NO       -       Boost converter can't short circuit for output         Positive electrode cable       12       -       -       AWG       If the wire length is greater than 50cm, it is	Regulator accuracy	-	±3	-	%		
Overvoltage protection       -       NA       -       V         Output current       0       -       30       A       Vin = 10-20V         Overcurrent protection       40       43       46       A       Vin = 12V         External capacitance       -       NA       -       μF       Don't need         Output ripple and noise       -       110       800       mVp-p       Vin = 10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz         Output voltage rise time       -       94       300       mS         Boot delay time       -       102       300       mS         Out voltage overshoot       -       -       5       %       Vin = 12V, 50%-75% Load step         Over temperature protection       -       -       102       °C       Shell temperature         Short circuit protection       -       NO       -       Boost converter can't short circuit for output         Positive electrode cable       12       -       -       AWG       If the wire length is greater than 50cm, it is	Voltage regulation	-	±3	-	%		
Output current 0 - 30 A Vin =10-20V  Overcurrent protection 40 43 46 A Vin=12V  External capacitance - NA - µF Don't need  Output ripple and noise - 110 800 mVp-p Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz  Output voltage rise time - 94 300 mS  Boot delay time - 102 300 mS  Out voltage overshoot 5 % Vin =12V, 50%-75% Load step  Over temperature protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	Load Regulation	-	±2	-	%		
Overcurrent protection       40       43       46       A       Vin=12V         External capacitance       -       NA       -       μF       Don't need         Output ripple and noise       -       110       800       mVp-p       Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz         Output voltage rise time       -       94       300       mS         Boot delay time       -       102       300       mS         Out voltage overshoot       -       -       5       %       Vin =12V, 50%-75% Load step         Over temperature protection       -       -       102       °C       Shell temperature         Short circuit protection       -       NO       -       Boost converter can't short circuit for output         Positive electrode cable       12       -       -       AWG       If the wire length is greater than 50cm, it is	Overvoltage protection	-	NA	-	V		
External capacitance - NA - μF Don't need  Output ripple and noise - 110 800 mVp-p Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz  Output voltage rise time - 94 300 mS  Boot delay time - 102 300 mS  Out voltage overshoot - 5 % Vin =12V, 50%-75% Load step  Over temperature protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	Output current	0	-	30	Α	Vin =10-20V	
Output ripple and noise  - 110 800 mVp-p  Vin =10-20V; Iout=30A, Oscilloscope bandwidth: 20 MHz  Output voltage rise time  - 94 300 mS  Boot delay time  - 102 300 mS  Out voltage overshoot  - 5 % Vin =12V, 50%-75% Load step  Over temperature protection  - 102 °C Shell temperature  Short circuit protection  - NO  - Boost converter can't short circuit for output  Positive electrode cable  12 - AWG  If the wire length is greater than 50cm, it is	Overcurrent protection	40	43	46	Α	Vin=12V	
Output ripple and noise  - 110 800 mVp-p Oscilloscope bandwidth: 20 MHz  Output voltage rise time - 94 300 mS  Boot delay time - 102 300 mS  Out voltage overshoot - 5 % Vin =12V, 50%-75% Load step  Over temperature protection - 102 °C Shell temperature Short circuit protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	External capacitance	-	NA	-	μF	Don't need	
Output voltage rise time - 94 300 mS  Boot delay time - 102 300 mS  Out voltage overshoot - 5 % Vin =12V, 50%-75% Load step  Over temperature protection - 102 °C Shell temperature  Short circuit protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	Output ripple and poice	_	110	800	m\/n₋n	Vin =10-20V; Iout=30A,	
Boot delay time - 102 300 mS  Out voltage overshoot 5 % Vin =12V, 50%-75% Load step  Over temperature protection - 102 °C Shell temperature  Short circuit protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 AWG If the wire length is greater than 50cm, it is	Output ripple and noise	_	110	800	πινρ-ρ	Oscilloscope bandwidth: 20 MHz	
Out voltage overshoot 5 % Vin =12V, 50%-75% Load step  Over temperature	Output voltage rise time	-	94	300	mS		
Over temperature rotection - 102 °C Shell temperature  Short circuit protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	Boot delay time	-	102	300	mS		
Positive electrode cable  - 102 °C Shell temperature  - NO - Boost converter can't short circuit for output  - AWG If the wire length is greater than 50cm, it is	Out voltage overshoot	-	-	5	%	Vin =12V, 50%-75% Load step	
Short circuit protection - NO - Boost converter can't short circuit for output  Positive electrode cable 12 - AWG If the wire length is greater than 50cm, it is	Over temperature	_	_	102	٥C	Shell temperature	
Positive electrode cable 12 AWG If the wire length is greater than 50cm, it is	protection			102		ones comperature	
	Short circuit protection	-	NO	-		Boost converter can't short circuit for output	
Negative electrode cable 12 AWG recommended to use a thicker wire diameter.	Positive electrode cable	12	-	-	AWG	If the wire length is greater than 50cm, it is	
	Negative electrode cable	12	-	-	AWG	recommended to use a thicker wire diameter.	



Safety and EMC features						
	Input to Output	-	V	Laska as assessed a 2 East Austra		
Anti-electric Strength	Input to Shell	≥500	V	Leakage current ≤ 3.5mA, 1min,		
	Output to Shell	≥500	V	no breakdown, no arcing		
	Input to Output		МΩ			
Insulation resistance	Input to Shell	≥10		Test voltage = 500V		
	Output to Shell					
Other characteristics						
Weight	≤ 1.2		kg			
Package	White box					
MTBF	≥200,000		Н	Vin= 12V; Iout= 30A		
Switching frequency	80±10		KHz			

## **Characteristic Curves**

Conditions: TA = 25°C (77°F), Vin = 12V, Vout = 36V, unless otherwise specified.

Figure 1, Efficiency

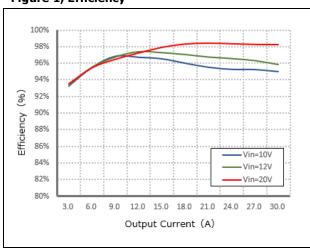


Figure 2, Power dissipation

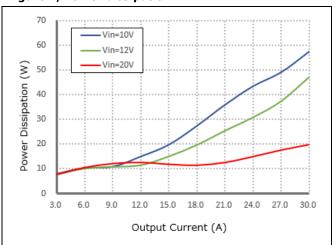
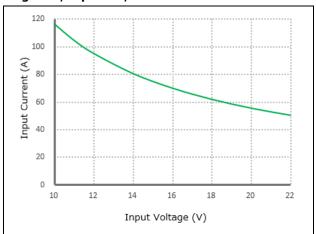


Figure 3, Input V-I, Iout=30A





### **Typical Waveforms**

Conditions: TA =  $25^{\circ}$  C ( $77^{\circ}$  F), Vin = 12V, unless otherwise specified.

Figure 4, 25% - 50% load dynamic



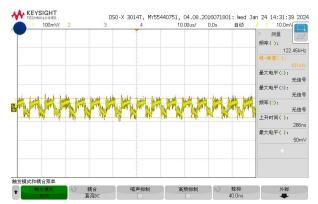
Figure 5, 50% - 75% load dynamic



Figure 6, Output voltage established (Iout = 30A)



Figure 7, Output ripple & noise (Iout = 30A)



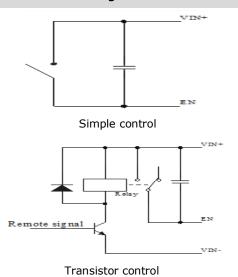


#### **Feature Description**

#### Remote On/Off (EN) (Optional)

Logic	Low level	High level	Left open
Enable	(0 - 10Vdc)	(10-20Vdc)	
Positive logic	Off	On	Off

### Various circuits for driving the EN



#### **Input Undervoltage Protection**

The converter will shut down after the input voltage drops below the under-voltage protection threshold for shutdown. The converter will start to work again after the input voltage reaches the input under voltage protection threshold for startup. For the Hysteresis, see the Protection characteristics.

## **Output Overcurrent Protection**

The converter equipped with current limiting circuitry can provide protection from an output overload or short circuit condition. If the output current exceeds the output overcurrent protection set point, the converter enters hiccup mode. When the fault condition is removed, the converter will automatically restart.

#### **Overtemperature Protection**

A temperature sensor on the converter senses the average temperature of the module. It protects the converter from being damaged at high temperatures. When the temperature exceeds the over temperature protection threshold, the output will shut down. It will allow the converter to turn on again when the temperature of the sensed location falls by the value of Over temperature Protection Hysteresis

#### **Wiring Instructions**

The input and output of this product is terminals. The user should ensure that the input and output wires and terminals are connected reliably, and pay attention to the wire diameter to meet the requirements of the power supply current. If the cable to be used is long, it needs Considering the voltage drop of the wire, if the voltage drop is too large, the voltage output at the load end may not meet the load demand. In this case, consider using a thicker wire diameter or reducing the length of the wire. Generally, if long wiring is required. Long line should be used on the side where the current is relatively small. For example, this product is a step-down product, so long lines should be used on the input side.

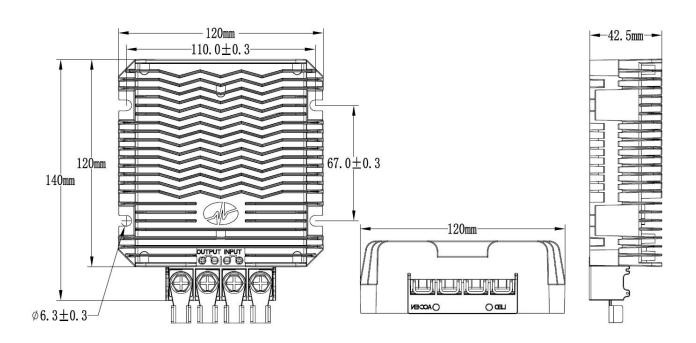
### **Thermal Consideration**

Sufficient airflow should be provided to help ensure reliable operating of the WG-12S3630M

Therefore, thermal components are mounted on the top surface of the WG-12S3630M 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.







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