

# GLSV-050 series

50W Constant Voltage Power Supply

## Features:

- Constant voltage design
- Built-in active PFC function
- Universal AC input / Full range up to 305VAC
- Protections: Short Circuit / Over Voltage / Over Current
- Surge immunity: Differential Mode – 5kV, Common Mode - 10kV
- Cooling by free air convection
- IP67 design for indoor and outdoor applications

## Application:

- Landscape lighting
  - Linear lighting
- Industrial lighting



## © MODEL INFORMATION

Model Number	Output Power [W]	Output Voltage [V]	Output Current [A]	Efficiency typ. [%]	Power Factor typ.
GLSV-050B012	50.04	12	4.17	85%	0.96
GLSV-050B024	49.92	24	2.08	88%	0.96
GLSV-050B036	50.04	36	1.39	88%	0.96
GLSV-050B048	49.92	48	1.04	89%	0.96

## © APPROVAL MARKS and SYMBOLS

GLSV-050B012	      <b>IP67 SELV</b> tc: 85°C ta: 60°C	
GLSV-050B024	      <b>IP67 SELV</b> tc: 85°C ta: 60°C	
GLSV-050B036	      <b>IP67 SELV</b> tc: 85°C ta: 60°C	
GLSV-050B048	      <b>IP67 SELV</b> tc: 85°C ta: 60°C	

## © MODEL ENCODING

GLSV	-	050	B	xxx
Series name		Rated Output Power [W]	Option name	<b>012</b> - rated output voltage is 12V <b>024</b> - rated output voltage is 24V <b>036</b> - rated output voltage is 36V <b>048</b> - rated output voltage is 48V

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## © ELECTRICAL SPECIFICATION

MODEL	GLSV-050B012	GLSV-050B024	GLSV-050B036	GLSV-050B048
<b>OUTPUT</b>				
OUTPUT VOLTAGE	12VDC	24VDC	36VDC	48VDC
NO LOAD VOLTAGE (MAX.)	14VDC	26VDC	38VDC	50VDC
LOAD CURRENT RANGE	0 ÷ 4.17A	0 ÷ 2.08A	0 ÷ 1.39A	0 ÷ 1.04A
RATED POWER	50.05W	49.92W	50.05W	49.92W
OUTPUT VOLTAGE PRECISION	± 5.0%			
LINE REGULATION (FROM 115VAC TO 305VAC)	± 3.0%			
LOAD REGULATION (FROM 50% TO 100% LOAD)	± 3.0%			
OUTPUT VOLTAGE RIPPLE	< 3% V <sub>OUT</sub>		< 2% V <sub>OUT</sub>	
TURN-ON DELAY TIME	3s for 100% load			

<b>INPUT</b>				
VOLTAGE RANGE	90 ÷ 305VAC			
FREQUENCY RANGE	47 ÷ 63Hz			
EFFICIENCY AT 100% LOAD (TYP.)	85%	88%	89%	89%
	Refer to Efficiency vs. Output Load Curve			
AC CURRENT (MAX.)	0.8A			
INRUSH CURRENT (MAX.)	75A / 230VAC			
LEAKAGE CURRENT (MAX.)	0.75mA/230VAC			
POWER FACTOR (TYP.)	0.96 / 230VAC at 100% load (Refer to Power Factor vs. Output Load Curve)			
THD	< 15% / 230VAC at 70-100% load (Refer to THD vs. Load Curve)			

<b>PROTECTIONS</b>				
SHORT CIRCUIT	Type: decrease of input power, auto-recovery.			
OVER VOLTAGE	13.2 ± 18VDC	26.4 ± 36VDC	39.6 ± 54VDC	52.8 ± 72VDC
	Type: shut off output voltage, restart on to recovery.			
OVER CURRENT	100-160% rated output current			
	Type: hiccup mode, auto-recovery.			

<b>WORKING ENVIRONMENT</b>				
WORKING TEMPERATURE	-40°C ÷ 70°C (Refer to Derating Curve)			
WORKING HUMIDITY	20 ÷ 95% RH non-condensing			
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 85°C, 20 ÷ 95% RH non-condensing			
VIBRATION	10 to 500Hz sweep at constant acceleration 1G (depth 3.5mm) for 1 hour for each X, Y, Z axes			
DEGREE OF PROTECTION	[2]	IP67		

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## SAFETY AND EMC REGULATIONS

<b>SAFETY STANDARDS</b>	CB	IEC61347-1; IEC61347-2-13
	CE	EN61347-1; EN61347-2-13
<b>EMC STANDARDS</b>	CE	EN55015; IEC61000-3-2; IEC61000-3-3; IEC61547
<b>WITHSTAND VOLTAGE</b>	IN/OUT: 3.75kVAC; IN/GND: 1.6kVAC; OUT/GND: 1.6kVAC; 60s, current < 10mA	
<b>GROUNDING RESISTANCE</b>	< 0.1Ω (60S/25A)	
<b>INSULATION RESISTANCE</b>	IN/OUT, IN/GND, OUT/GND > 100MΩ (500VDC/60s)	

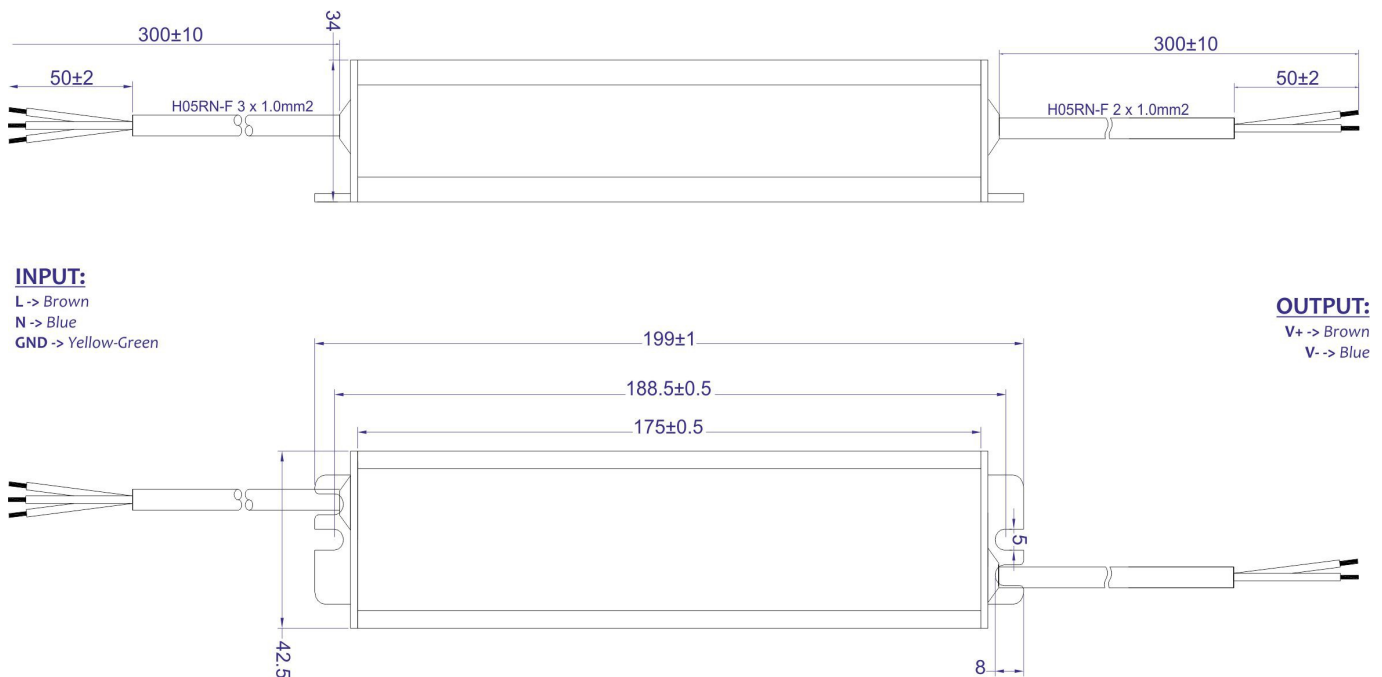
## OTHERS

<b>Input Wire</b>	H05RN-F 3 x 1.0mm <sup>2</sup> , length = 300 ± 10mm
<b>Output Wire</b>	H05RN-F 2 x 1.0mm <sup>2</sup> , length = 300 ± 10mm
<b>MTBF</b>	200 000h at 230VAC / 80% load and ta < 25°C
<b>Life Time (min.)</b>	50 000h at 230VAC / 100% load and tc < 70°C (Refer to Life Time vs. T <sub>c</sub> Curve)
<b>Dimensions (Length * Width x Height)</b>	199 * 42.5 * 34mm
<b>Weight</b>	510 ± 50g

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Suitable for indoor or outdoor use. Please avoid direct exposure to sunlight and immersion in water for over 30 minutes.
3. Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC and LVD Directives.

## © MECHANICAL SPECIFICATION

### GLSV-050 series



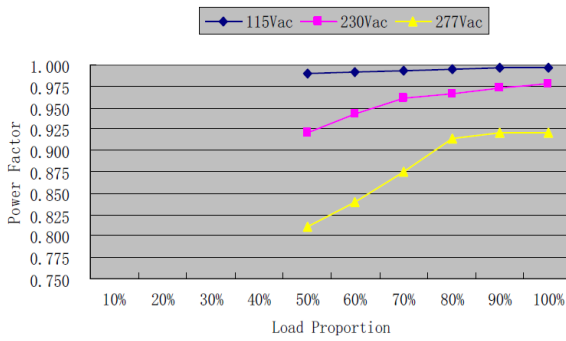
# GLSV-050 series

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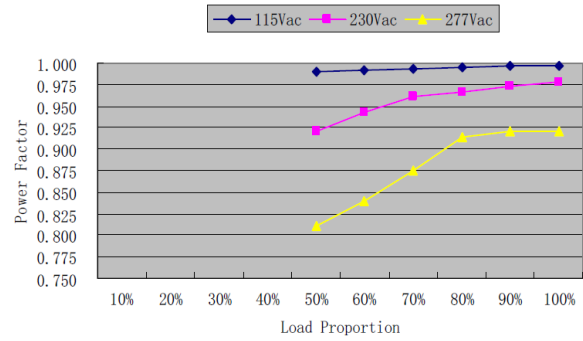


## © Power Factor vs. Load Curve

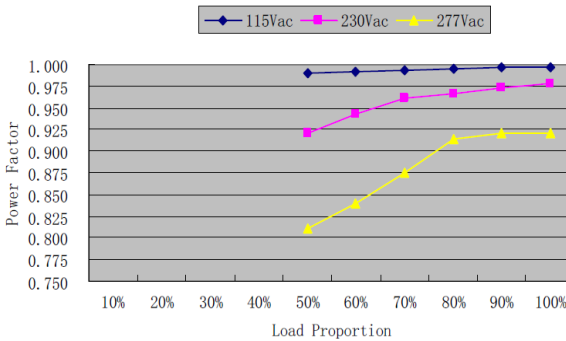
**GLSV-050B012**



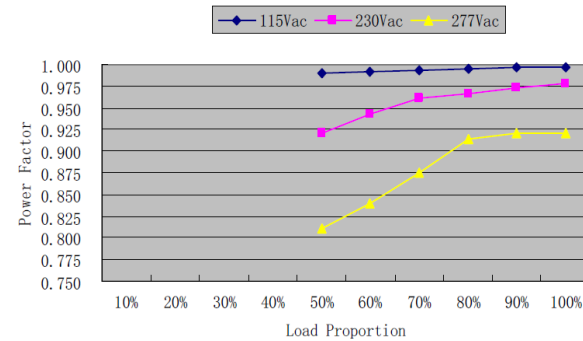
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**GLSV-050B036**

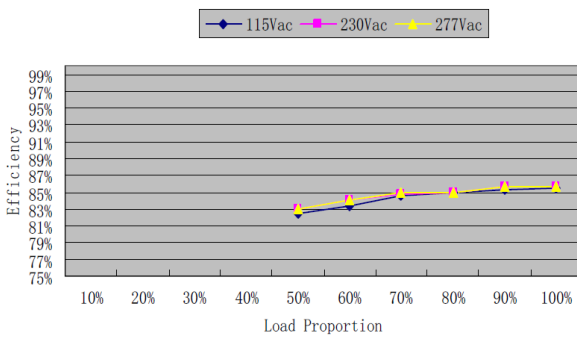


**GLSV-050B048**

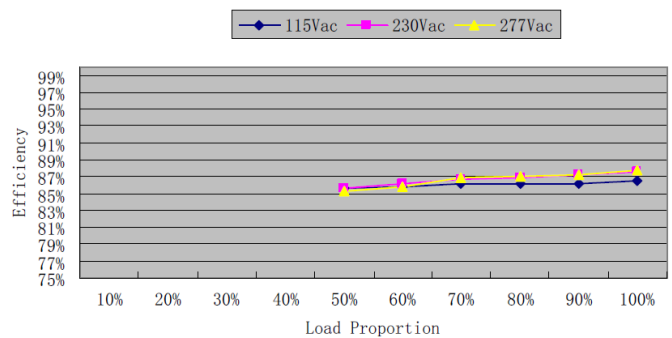


## © Efficiency vs. Load Curve

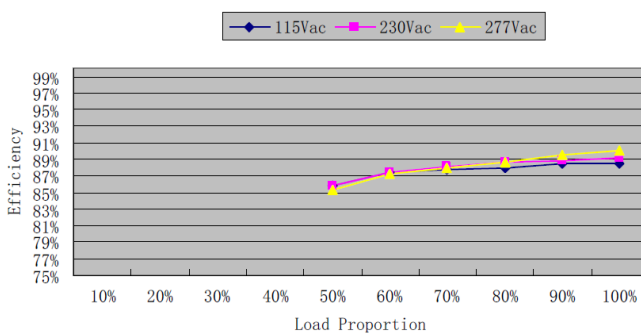
**GLSV-050B012**



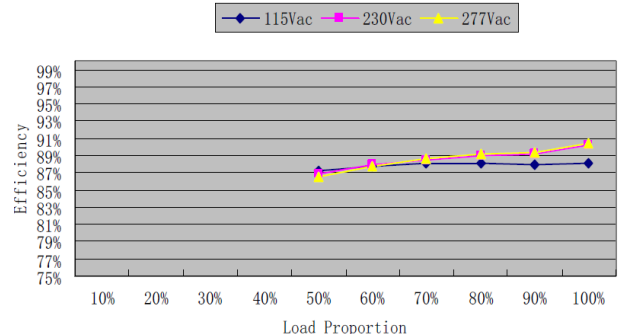
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**GLSV-050B036**



**GLSV-050B048**

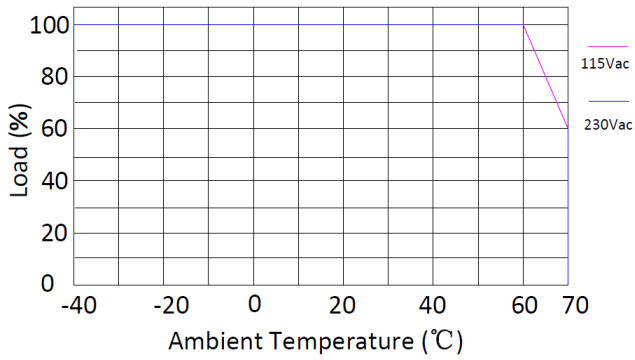


# GLSV-050 series

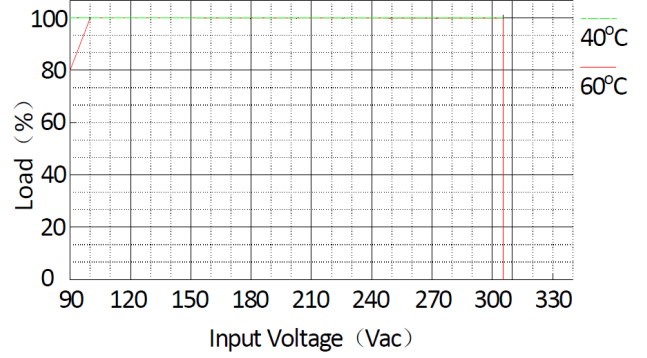
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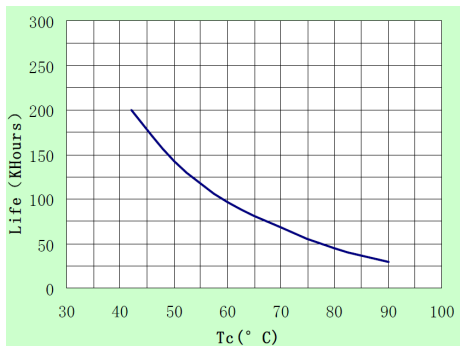
© Derating Curve



© Input Voltage vs. Load Curve



© Life time vs.  $T_c$  curve



© Inrush Current Waveform

