

# GPV-20 series

20W Constant Voltage Switching Power Supply



## ■ Features:

- Constant voltage design
- Universal AC input range
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Isolation class II
- Fully encapsulated with IP67 level [5]
- TUV certificate (only for 12V and 24V)



tc: 80°C

ta: 50°C CONSTANT VOLTAGE

SELV



## ELECTRICAL SPECIFICATION

MODEL	GPV-20-5	GPV-20-12	GPV-20-15	GPV-20-24	GPV-20-36	
<b>OUTPUT</b>						
<b>RATED VOLTAGE</b>	5V	12V	15V	24V	36V	
<b>RATED CURRENT</b>	3A	2A	1.6A	1A	0.66A	
<b>CURRENT RANGE</b>	0 ÷ 3A	0 ÷ 2A	0 ÷ 1.6A	0 ÷ 1A	0 ÷ 0.66A	
<b>RATED POWER</b>	15W	24W	24W	24W	23.76W	
<b>LINE REGULATION</b>	± 1%					
<b>LOAD REGULATION</b>	± 2%					
<b>TOLERANCE [3]</b>	± 3%					
<b>RIPPLE &amp; NOISE (max.) [2]</b>	200mV <sub>p-p</sub>	200mV <sub>p-p</sub>	200mV <sub>p-p</sub>	300mV <sub>p-p</sub>	300mV <sub>p-p</sub>	
<b>SETUP, RISE TIME [4]</b>	800ms, 50ms / 230VAC at full load					
<b>HOLD UP TIME (typ.)</b>	30ms / 230VAC at full load					
<b>INPUT</b>						
<b>VOLTAGE RANGE</b>	90 ÷ 264VAC					
<b>FREQUENCY RANGE</b>	47 ÷ 63Hz					
<b>EFFICIENCY (typ.)</b>	70%	83%	83%	84%	85%	
<b>AC CURRENT (typ.)</b>	0.55A / 115VAC, 0.3A / 230VAC					
<b>INRUSH CURRENT (typ.)</b>	15A / 230VAC; T <sub>WIDTH</sub> = 390µs					
<b>Max. No. of PSU on Circuit Breaker</b>	B10	B16	C10	C16	D10	D16
	14	21	18	28	20	32
<b>LEAKAGE CURRENT (max.)</b>	0.25mA / 240VAC					

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## PROTECTIONS

<b>OVER CURRENT</b>	Range: 150% ÷ 200% rated current				
	Type: hiccup mode, auto-recovery.				
<b>SHORT CIRCUIT</b>	Type: hiccup mode, auto-recovery.				
<b>OVER VOLTAGE</b>	Max. 10V	Max. 24V	Max. 30V	Max. 36V	Max. 48V
	Type: hiccup mode, auto-recovery.				
<b>OVER TEMPERATURE</b>	140°C±10°C(detect on main control IC)				
	Type: shut down output voltage. After temperature goes down re-power on to recovery.				

## WORKING ENVIRONMENT

<b>WORKING TEMPERATURE</b>	-30°C ÷ 70°C (Refer to Derating Curve), ta: 50°C; tc: 80°C
<b>WORKING HUMIDITY</b>	20 ÷ 90% RH non-condensing
<b>STORAGE TEMPERATURE AND HUMIDITY</b>	-40°C ÷ 80°C, 10 ÷ 95% RH non-condensing
<b>TEMPERATURE COEFFICIENT</b>	± 0.03% / °C (0°C ÷ 50°C)
<b>VIBRATION</b>	10 ÷ 500Hz, 2G, 10min / cycle, period for 60min. each along X, Y, Z axes

## SAFETY AND EMC REGULATIONS

<b>SAFETY STANDARDS</b>	Compliance to TUV EN61347-1, EN61347-2-13, IP67
<b>WITHSTAND VOLTAGE</b>	I-P/O-P: 3kVAC
<b>ISOLATION RESISTANCE</b>	I-P/O-P: 100MΩ/500VDC/25°C/70%
<b>EMC EMISSION</b>	Compliance to EN55015
<b>EMC IMMUNITY</b>	Compliance to EN61547; EN55024; EN61000-4-2, -3, -4, -5, -6, -8, -11
<b>HARMONIC CURRENT</b>	Compliance to EN61000-3-3; EN61000-3-2

## OTHERS

<b>Lifetime</b>	70 000 hours at 230VAC input, ambient temperature 25°C, full load
<b>DIMENSIONS</b>	140 x 32 x 25mm (L x W x H)
<b>WEIGHT AND PACKING</b>	0.19kg; 100pcs./ctn; ctn weight and dimensions: 20kg; 34.5 x 29 x 23.5cm

<b>EAN Code</b>	   	N/D
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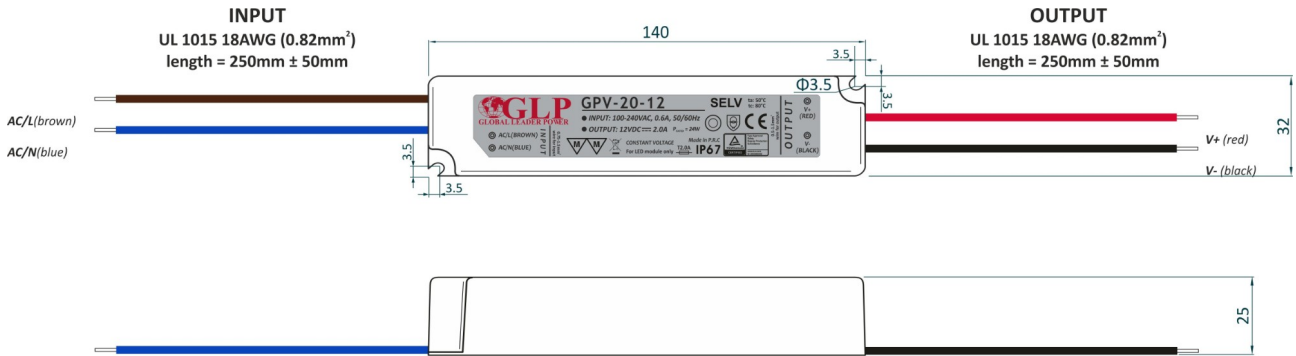
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
3. Tolerance includes set up tolerance, line regulation and load regulation.
4. Setup and rise time is measured from 0 to 90% rated output voltage.
5. Suitable for indoor or outdoor use. Please avoid direct exposure to sunlight and immersion in water for over 30 minutes.
6. 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 Directives.

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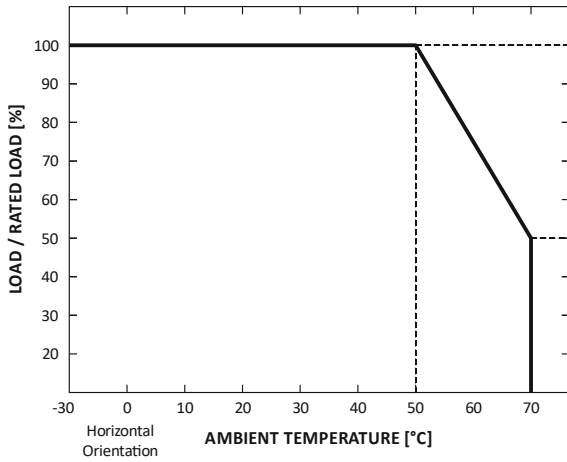
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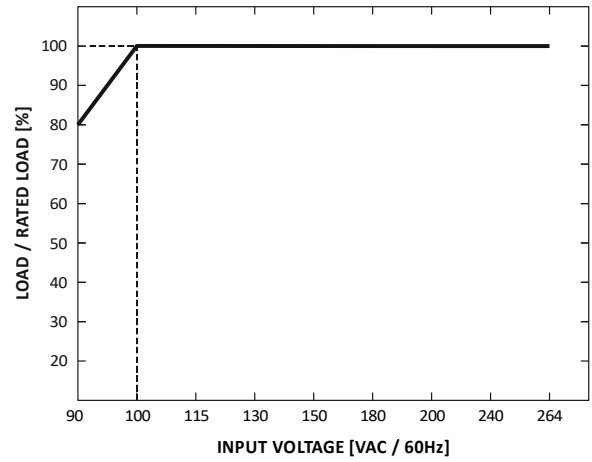
## MECHANICAL SPECIFICATION



### DERATING CURVE



### STATIC CHARACTERISTIC



### LIFETIME vs. AMBIENT TEMPERATURE CURVE

