

<b>PART NUMBER</b>	HDP-O-20 Series
<b>DESCRIPTION</b>	20 Watt Open Frame Power Supply

## HDP-O-20 Series 20 Watt Open Frame Power Supply

### Features

- Universal AC input / Full range
- High efficiency and high reliability
- Ultra-miniature size, low profile
- Output protections: OLP/OVP/SCP
- Wide operating ambient temperature (-20°C ~ 70°C)
- All using 105°C long life electrolytic capacitors
- 100% full load burn-in test
- 3 year warranty



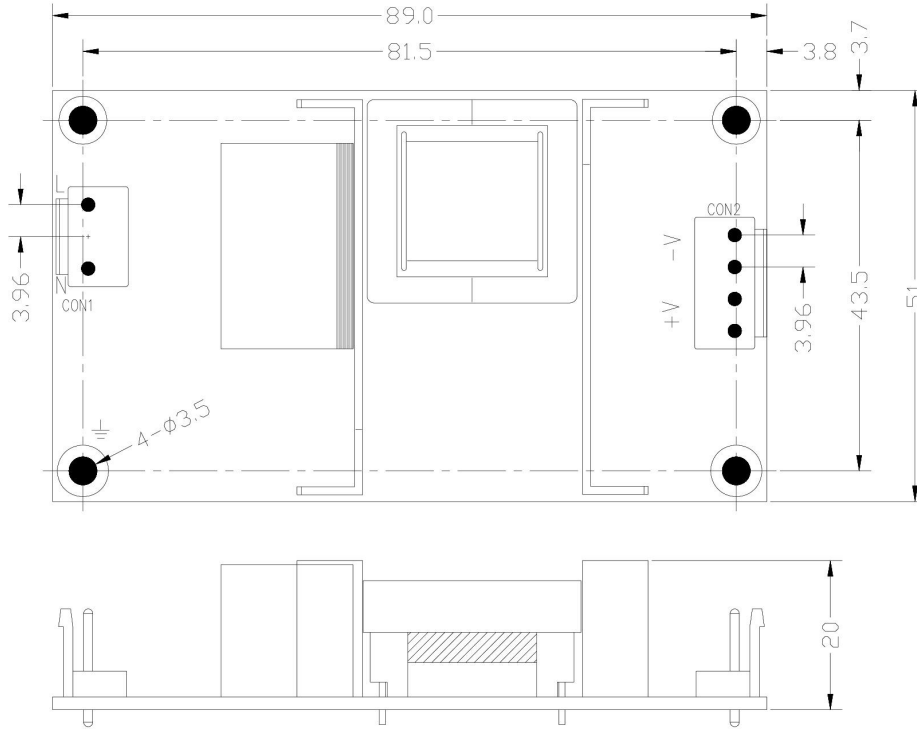
### Specifications

		HDP-O-20-3.3	HDP-O-20-5	HDP-O-20-12	HDP-O-20-15	HDP-O-20-24	HDP-O-20-48	
OUTPUT	DC Output	3.3V	5V	12V	15V	24V	48V	
	Rated Current	4A	4A	1.67A	1.34A	0.84A	0.42A	
	Current Range (NOTE 1)	0 ~ 4A	0 ~ 4A	0 ~ 1.67A	0 ~ 1.34A	0 ~ 0.84A	0 ~ 0.42A	
	Ripple and Noise (NOTE 2)	0 ~ 60°C	< 50mV	< 50mV	< 50mV	< 50mV	< 50mV	< 100mV
		-20°C ~ 0°C	< 75mV	< 75mV	< 75mV	< 75mV	< 75mV	< 100mV
	Voltage ADJ. Range	3.1 ~ 3.6V	4.4 ~ 5.6V	11.1 ~ 13.1V	13.7 ~ 16.1V	22.0 ~ 25.4V	45.6 ~ 50.4V	
	Voltage Accuracy	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	Load Regulation	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	Set-up Time	< 2.0S (115Vac input, Full load); < 1.0S (230Vac input, Full load)						
	Hold-up Time	> 10mS (115Vac input, Full load); > 20mS(230Vac input, Full load)						
	Temperature Coefficient	±0.03%/°C						
Overshoot and Undershoot	< 5.0%							
INPUT	Voltage Range	85Vac ~ 264Vac, 120Vdc ~ 370Vdc						
	Frequency Range	47Hz ~ 63Hz						
	Efficiency (Typical)	115Vac input	69%	76%	79%	80%	80%	80%
		230Vac input	68%	75%	78%	79%	79%	79%
	AC Current (Max.)	0.4A	0.5A	0.5A	0.5A	0.5A	0.5A	
	Inrush Current (Typical)	Cold Start 20A@115Vac		40A@230Vac				
Leakage Current	Input – output: ≤ 0.35mA		Input – PG: ≤ 0.75mA					
PROTECTION	Over Load	105% ~ 150% of rated output power, hiccup mode, auto recovery						
	Over Voltage	110% ~ 140% of rated output voltage, constant voltage						
	Shorted Circuit	Long-term mode, auto recovery						
ENVIRONMENT	Operating amb. Temp. & Hum.	-25°C ~ 70°C; 20% ~ 90%RH		No Condensing (refer to the derating curve)				
	Storage Temp. & Hum.	-40°C ~ 85°C; 10% ~ 95%RH		No Condensing				
SAFETY & EMC (NOTE 3)	Safety Standards	UL60950-1; EN60950-1:2006						
	Withstand Voltage	Primary – Secondary: 3.0KVac; ≤10mA Primary – PG: 1.5KVac; ≤10mA Secondary – PG: 0.5KVDC; ≤10mA						
	Isolation Resistance	≥100M ohms						
	EMI Condition & Radiation	Compliance to EN55022 (CISPR22) Class B						
	Harmonic Current	Compliance to EN61000-3-2, 17625.1-2003						
OTHERS	EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light industry level, criteria A						
	MTBF (MIL-HDBK-217F)	More than 200,000Hrs (25°C, Full load)						
	Dimension (L*W*H)	89 x 51 x 20 mm						
	Packing	60PCS/CTN, 7.6KGS, 0.017CBM						
	Cooling Method	Cooling by free air convection						
NOTE	<p>1. All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature</p> <p>2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF &amp; 47uF parallel capacitor</p> <p>3. The SPS is considered a component which will be installed into final equipment. The equipment must be re-confirmed that it still meets EMC directives</p>							

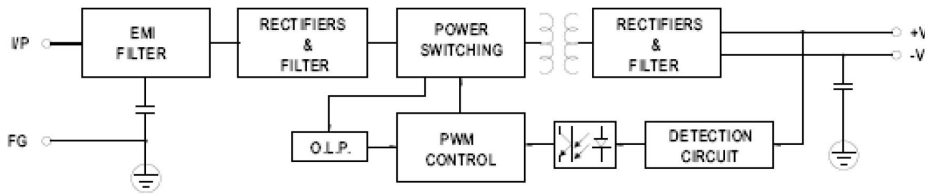
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### Mechanical Specification

Unit: mm (Tolerance is ±1mm)



### Block Diagram



### Derating Curve

