# TDK·Lambda

## 14-22W, 2 x 3.5" AC-DC Power Supplies

### Features

- ♦ Wide Range AC Input
- ◆ Low profile, Industry Standard Footprint
- Global Safety Agency Compliance
- Class B conducted EMI

### **Key Market Segments & Applications**



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**ZPSA20** Series



Specifications					
Model		ZPSA20			
Input Voltage range (1)	-	85 - 264VAC (47 - 63Hz) or 120 - 370VDC*			
Inrush Current	Α	40A maximum at 240VAC input, 25°C ambient cold start			
Input Current (115/230VAC)	Α	0.4 / 0.25			
Leakage Current	mA	0.6mA maximum (264VAC, 60Hz)			
Hold Up Time (Typ)	ms	12ms at 115VAC input			
Temperature Coefficient	-	±0.05%/°C			
Voltage Accuracy	-	±1%			
Adjustment Range	-	None			
Minimum Load	Α	None			
Load Regulation	-	±1% (10 - 100% load change)			
Line Regulation	-	±0.5% (100 - 240VAC line change)			
Ripple & Noise (2)	mV	1% or 50mV whichever is greater			
Short Circuit Protection	-	Continuous - hiccup mode			
Overvoltage Protection	V	110 - 130% of nominal (Zener clamp)			
Efficiency	%	82% typical			
LED Indicator	-	Green LED = OK			
Operating Temperature	°C	0 to +70°C derate linearly to 37.5% load from 45 to 70°C			
Storage Temperature	°C	-20 to +85°C			
Humidity (non condensing)	-	10 - 95% RH			
Cooling	-	Convection			
Withstand Voltage	-	Input to Ground 1.5kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min.			
Isolation Resistance	-	>100M at 25C & 70%RH, Output to Ground 500VDC			
Vibration (non operating)	-	23.52m/s <sup>2</sup> (10 - 55Hz: constant sweep 1 min X, Y, Z for 1 hour)			
Shock	-	< 196.1 m/s <sup>2</sup> (20G)			
Safety Agency Certification	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark			
Conducted & Radiated EMI	-	EN55022-B, FCC Class B			
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8			
Weight (Typ)	g	100g			
Size (WxLxH)	mm	2 x 3.5 x 0.79 (including underside components)			
Warranty	yrs	Two Years			

\*Safety certified for AC input only.

Notes:

(1) Safety certified for 47 - 63Hz input only

(2) Measured with 0.1uF ceramic & 10uF electrolytic at 20MHz BW

# **ZPSA20 Series**

#### **Outline Drawings (ZPSA20xx/P) Outline Drawings (ZPSA20)** 0.24 [6.20] 0.24 [6.20] 0.1381350114PU 0.620 [15.75] 0.312[7.92] 0 0.240[6.10] 0.240[6.10] 0 0 ACL LED 00 Vo ACL 1.70 [43.20] 2.00 [50.8D] C ACN +Vo ACN ) A 2.000 [50.80] ¢ $\subset$ Vo 1.700[43.18] $\sim$ ΠΠΠ 1.203 [30.56] 0.150[3.81] -Vc ÎĤĤ O Oĩ 6 Ò⊕ 0 ٦ F O 1 nh; D.15 [3.80] VR [3.80] 3.20 (81.32) 0.150[3.81] 3.200[81.28] 3.500[88.90] 3.50 (88.92) 0.15 Þ 최 📐 7492 1 0.173[4.40] 22 0.063 [1.60] 0.079[2.00] max. Ø 0.039[1.00] 103.11 20.0 .xomC00.021 0.79 Ø 0.071 [ 1.80] 3.020[76.70] 0.09 [2:40]mox. All Dimensions are in inches[mm] Tolerances Inches X.XXX +/-0.02 Millimeters X.XX +/-0.5

Model Selector					
Model	Output (V)	Maximum Output (A)	Peak Load(A) (3)	Output Power (W)	
ZPSA20-3R3	3.3	4.4	6.0	14.5	
ZPSA20-5	5	4.4	6.6	22	
ZPSA20-9	9	2.45	4.0	22	
ZPSA20-12	12	1.8	2.7	22	
ZPSA20-15	15	1.4	2.1	21	
ZPSA20-24	24	0.92	1.4	22	

(3) Average not to exceed max power, <30s, 10% duty cycle (220-240VAC).

Options	
Suffix	Description
Blank	Molex connectors
/P	PCB mount pins

#### **Other Industrial Products**

KPSA	5 - 15W pcb mount
KM	15 - 40W pcb mount medical
ZPSA/ZPD/ZPT	40 - 60W, single, dual and triple output
ZWS	5 - 240W single output

For additional information, please visit https://product.tdk.com/en/power/



0.156[3.96]

0.906[23.00]max

0.156[3.96]