

## 10-30W Single Output, High Reliability Power Supplies

### Features

- ◆ Universal Input (85 - 265VAC)
- ◆ 5 year warranty
- ◆ Small Size
- ◆ <0.5W off load power draw
- ◆ 10 year E-cap lifetime



### Key Market Segments & Applications



ZWS15B Shown



Specifications		ZWS10B	ZWS15B	ZWS30B
Input Voltage range (1)	V	85 - 265VAC (47 - 63Hz), 120 - 370VDC*		
Input Current (100 / 200VAC)	A	0.25 / 0.13A	0.34 / 0.17A	0.65 / 0.35A
Inrush Current (100 / 200VAC)	A	15 / 30A		
No Load Power Draw	W	Typically 0.2W at 100/200VAC, 0.5W maximum		
Leakage Current (100 / 200VAC)	mA	< 150uA / 300uA		
Temperature Coefficient	°C	<0.02%/°C		
Overcurrent Protection	%	> 105% of maximum current rating		
Hold Up Time (Typ) @ 100VAC	ms	20ms		
Operating Temperature Convection Cooled	°C	ZWS10B: -10 to +70°C, derate linearly to 20% load from 50 to 70°C ZWS15B: -10 to +70°C, derate linearly to 40% load from 50 to 70°C ZWS30B: -10 to +70°C, derate linearly to 20% load from 50 to 70°C		
Operating Temperature Forced Air Cooled (0.7m/s)	°C	-10 to +70°C, derate linearly to 70% load from 60 to 70°C		
Storage Temperature	°C	-30 to +75°C		
E-cap Lifetime	-	10 year E-cap lifetime (80% load, 24 hours per day, 50°C ambient)		
Humidity (non condensing)	%RH	Operating 30 - 90%RH, Storage 10 - 90%RH		
Cooling	-	Convection or forced air		
Withstand Voltage	VAC	Input to Ground 2kVAC (10mA), Input to Output 3kVAC (10mA) Output to Ground 500VAC (20mA) for 1 minute		
Isolation Resistance	M	>100M at 25°C & 70%RH, Output to Ground 500VDC		
Vibration (non operating)	Hz	10 - 55Hz (1 minute sweep), 19.6m/s <sup>2</sup> constant. X, Y, Z for 1 hour each		
Shock	m/s <sup>2</sup>	< 196m/s <sup>2</sup>		
Safety Agency Certifications	-	IEC/EN/UL/CSA60950-1, IEC/EN/UL/CSA62368-1, EN50178 (OV II), CE Mark		
Conducted & Radiated EMI	-	EN55011 / EN55022-B, FCC-B, VCCI-B		
Immunity	-	IEC61000-4-2 (lv 4), -3 (lv 3), -4 (lv 4), -5 (lv 4), -6 (lv 3), -8 (lv 4), -11		
Weight (Typ)	g	45g	55g	105g
Size (WxHxD)	mm	50 x 22 x 73.5mm	50 x 22 x 87.5mm	50 x 26.5 x 105mm
Warranty	yrs	Five Years		

#### Notes:

- (1) Derate linearly to 90% load from 90VAC to 85VAC input  
Refer to detailed specifications and application notes on web page

\*Safety certified for AC input only

## Model Selector

Model	Voltage	Adjust Range	Max Current A	Load Reg mV	Line Reg mV	Ripple Noise mV	Efficiency %	OVP V
ZWS10B-3	3.3V	2.97-3.63	2	40	20	120	70 / 70	4 - 5.25
ZWS15B-3	3.3V	2.97-3.63	3	40	20	120	70 / 71	4 - 5.25
ZWS30B-3	3.3V	2.97-3.63	6	40	20	120	75 / 77	4 - 5.25
ZWS10B-5	5V	4.5-5.5	2	40	20	120	77 / 78	5.75 - 7
ZWS15B-5	5V	4.5-5.5	3	40	20	120	76 / 78	5.75 - 7
ZWS30B-5	5V	4.5-5.5	6	96	48	120	80 / 82	5.75 - 7
ZWS10B-12	12V	10.8-13.2	0.9	96	48	150	82 / 83	13.8 - 16.2
ZWS15B-12	12V	10.8-13.2	1.3	96	48	150	80 / 83	13.8 - 16.2
ZWS30B-12	12V	10.8-13.2	2.5	120	60	150	84 / 86	13.8 - 16.2
ZWS10B-15	15V	13.5-16.5	0.7	120	60	150	83 / 84	17.3 - 20.3
ZWS15B-15	15V	13.5-16.5	1	120	60	150	81 / 84	17.3 - 20.3
ZWS30B-15	15V	13.5-16.5	2	120	60	150	85 / 87	17.3 - 20.3
ZWS10B-24	24V	21.6-26.4	0.5	150	96	150	84 / 85	27.6 - 32.4
ZWS15B-24	24V	21.6-26.4	0.7	150	96	150	82 / 85	27.6 - 32.4
ZWS30B-24	24V	21.6-26.4	1.3	150	96	150	86 / 88	27.6 - 32.4

## ZWS30-B Outline Drawing (see website for ZWS10B & 15B outlines)



**CONNECTORS USED:**

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P5-VH	JST	1
PIN HEADER(OUTPUT SIDE C51)	B4P-VH	JST	1

**MATCHING HOUSINGS AND PINS(NOT INCLUDED WITH THE PRODUCT):**

SOCKET HOUSING (CN1)	VHR-5N	JST	1
SOCKET HOUSING (CN51)	VHR-4N	JST	1
TERMINAL PINS	SVH-21T-P1.1	JST	7

**NAME PLATE**



**NOTES**

- A: THE 4- $\phi$ 3.5 HOLE ARE CUSTOMER CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
- B: MODEL NAME, MAXIMUM OUTPUT POWER, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
- C: COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.
- D:  $\perp$  IS FOR SAFETY GROUND CONNECTION.
- E: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PC-BOARD EDGE AND CUSTOMER'S CHASSIS.

ZWS10B & 15B use 2Pin output connector

## Other Industrial Products

ZWS-BAF	50W to 150W Active PFC
ZWD/ZWQ	100W to 440W Single & multiple output
NV175	175W, 1-4 outputs 3 x 5"
HWS	15W to 1800W Single output enclosed

For Additional Information, please visit [us.tdk-lambda.com/lp/products/zws-b-series.htm](http://us.tdk-lambda.com/lp/products/zws-b-series.htm)