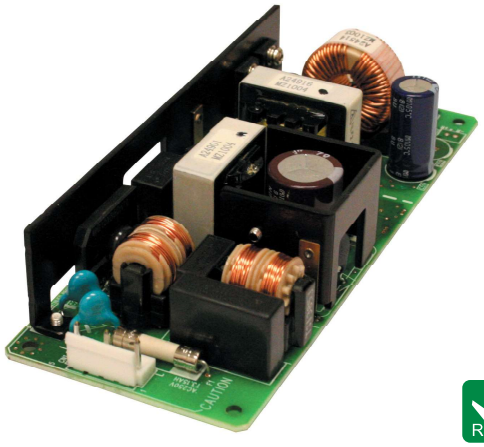
TDK·Lambda ZWS50-150BAF Series

33-150W Single Output, High Reliability AC-DC Power Supplies

Features

- 33W to 150W
- Universal Input (85 - 265VAC)
- Power factor Corrected
- Convection Cooled
- 5 year warranty
- Compact Design



Key Market Segments & Applications

Industrial Test COMM LED Broadcast

RoHS

Specifications

Model		ZWS50BAF	ZWS75BAF	ZWS100BAF	ZWS150BAF
AC Input Voltage range	-	85-265VAC (47-63Hz)			
DC Input Voltage range	-	120 - 370VDC*			
Input Current (Typical)	A	0.65 / 0.35	0.95 / 0.5	1.3 / 0.65	1.9 / 0.95
Inrush Current	A	14 / 28 25°C ambient, cold start			
Power Factor (Active)	-	Meets EN61000-3-2 (Typically 0.97/0.91)			
Maximum Ripple and Noise	mV	3.3 & 5V: 120mV, 12 to 24V: 150mV, 48V: 200mV			
Temperature Coefficient	-	<0.02%/°C			
Overcurrent Protection (1)	-	>105% of maximum output current			
Hold Up Time (Typ) at 100VAC	ms	20ms			
Leakage Current	-	0.5mA max, 0.4mA typ at 230VAC			
Remote On / Off	-	None		Optional	
Operating Temperature (Convection)	°C	-10 to +70°C, derate linearly to 50% load from 50 to 70°C			
Operating Temperature (Forced Air)	°C	N/A		-10 ~+70°C, derate linearly to 75% load from 60 ~70°C	
Storage Temperature	°C	-30 to +75°C			
Humidity (non condensing)	-	Operating: 30 - 90%RH, storage: 10 - 90%RH			
Withstand Voltage	-	I/P to Grnd 2kVAC (10mA), I/P to O/P 3kVAC (10mA), O/P to Grnd 500VAC (20mA) for 1 min.			
Isolation Resistance	-	>100M at 25C & 70%RH, Output to Ground 500VDC			
Vibration (non operating)	-	10 - 55Hz (1 minute sweep), 19.6m/s^2 constant X, Y, Z 1 hour			
Shock	-	< 196.1 m/s^2			
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 2,3), -3 (lv3), -4 (lv 3), -5 (lv 3,4), -6 (lv 3), -8 (lv 4), -11			
Weight (Typ)	g	165	230	290	390
Size (W x H x D)	in	1.97 x 1.02 x 5.2”	1.97 x 1.3 x 5.9”	2.44 x 1.3 x 6.1”	2.95 x 1.46 x 6.3”
Warranty	yrs	Five Years			

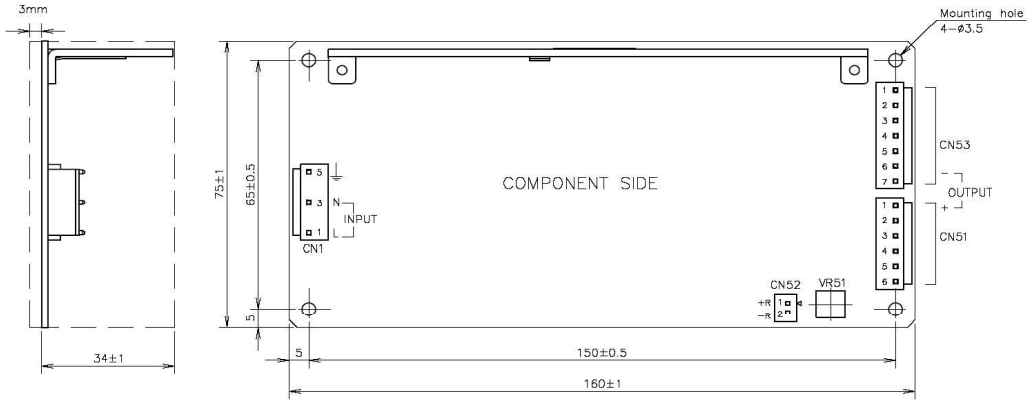
Notes:
(1) Avoid prolonged operartion in overload
(2) 100 / 200VAC Input
(3) 60°C: 70% load

*Safety certified for AC input only

Model Selector

Model	Adjust Voltage	Max Range	Current	Efficiency (typ) %	Load Reg (mV)	Line Reg (mV)	OVP (V)
ZWS50BAF-3	3.3V	2.97-3.63V	10A	76 / 78	40	20	3.79-4.95
ZWS75BAF-3	3.3V	2.97-3.63V	15A	76 / 78	40	20	3.79-4.95
ZWS100BAF-3	3.3V	2.97-3.63V	20A	82 / 84	40	20	3.79-4.95
ZWS150BAF-3	3.3V	2.97-3.63V	30A	82 / 84	40	20	3.79-4.95
ZWS50BAF-5	5V	4.5-5.5V	10A	82 / 84	40	20	5.75-7.0
ZWS75BAF-5	5V	4.5-5.5V	15A	82 / 84	40	20	5.75-7.0
ZWS100BAF-5	5V	4.5-5.5V	20A	84 / 86	40	20	5.75-7.0
ZWS150BAF-5	5V	4.5-5.5V	30A	85 / 87	40	20	5.75-7.0
ZWS50BAF-12	12V	10.8-13.2V	4.3A	83 / 85	96	48	13.8-16.2
ZWS75BAF-12	12V	10.8-13.2V	6.3A	83 / 85	96	48	13.8-16.2
ZWS100BAF-12	12V	10.8-13.2V	8.5A	86 / 88	96	48	13.8-16.2
ZWS150BAF-12	12V	10.8-13.2V	12.5A	85 / 88	96	48	13.8-16.2
ZWS50BAF-15	15V	13.5-16.5V	3.5A	83 / 86	120	60	17.3-20.3
ZWS75BAF-15	15V	13.5-16.5V	5A	84 / 86	120	60	17.3-20.3
ZWS100BAF-15	15V	13.5-16.5V	6.7A	86 / 88	120	60	17.3-20.3
ZWS150BAF-15	15V	13.5-16.5V	10A	86 / 89	120	60	17.3-20.3
ZWS50BAF-24	24V	21.6-26.4V	2.1A	84 / 87	150	96	27.6-32.4
ZWS75BAF-24	24V	21.6-26.4V	3.2A	84 / 87	150	96	27.6-32.4
ZWS100BAF-24	24V	21.6-26.4V	4.3A	87 / 89	150	96	27.6-32.4
ZWS150BAF-24	24V	21.6-26.4V	6.3A	88 / 90	150	96	27.6-32.4
ZWS50BAF-48	48V	39.5-52.8V	1.1A	84 / 86	240	192	55.2-64.8
ZWS75BAF-48	48V	39.5-52.8V	1.6A	85 / 88	240	192	55.2-64.8
ZWS100BAF-48	48V	39.5-52.8V	2.1A	88 / 90	240	192	55.2-64.8
ZWS150BAF-48	48V	39.5-52.8V	3.2A	89 / 91	240	192	55.2-64.8

Outline Drawing ZWS150BAF



Other Industrial Products

HWS	15W to 1800W Single output
ZPSA	20W to 60W Single, Dual & Triple output
NV	175W to 300W Single, Dual, Triple & Quad output
CSS	40W to 150W Single output

For Additional Information, please visit
us.tdk-lambda.com/lp/products/zws-series.htm

Options

Suffix	Description	Notes
-	Open Frame	-
/L	With L bracket case	-
/A	With L bracket & Cover	-
/R	Remote On/Off	Not on ZWS50 or 75BAF
/CO2	Conformal Coating	-