

## ZWS-AF Series

50 - 150W

Single output power supplies

- Universal Input (85 - 265VAC)
- Power factor Corrected
- Input transient Corrected
- Peak Power capability
- 2 year warranty
- High quality design

### Key Market Segments & Applications

Factory Automation	Process Control, NC-Machining, Automotive, Packaging Equipment, Materials Handling, Chemical Processing, Robots
Test & Measurement	Burn-in & Test, Automated Test, Instrumentation, Measurement, Detection
Light Industrial	Gaming, Vending, Printers

### ZWS-AF Features and Benefits

#### Features

- Input Transient Protected
- 2 Year Warranty
- Power Factor Corrected
- Peak Power Capability

#### Benefits

- Withstands Harsh Environments
- Low Cost of Ownership
- Supports Global Use
- Can Drive High current Start Up Devices

### Specifications

MODELS		ZWS50AF	ZWS75AF	ZWS100AF	ZWS150AF
ITEMS					
AC Input Voltage range	VAC	85-265VAC (47-63Hz)			
DC Input Voltage range	VDC	120-370VDC			
Input Current (Typ)	(1) A	0.8/0.4	1.2/0.6	1.4/0.7	2.0/1.0
Inrush Current	A	14/28 25°C Ambient, Cold Start			
Power Factor	(1) -	Meets EN61000-3-2 (0.99/0.95)			
Maximum Ripple and Noise	mV	3.3V & 5V :120mV, 12V to 24V : 150mV, 36V & 48V : 200mV			
Temperature Coefficient	-	<0.02%/°C			
Overcurrent Protection	(4) -	>105% of Peak Current Capability			
Hold Up Time (Typ)	(1) ms	20			
Leakage Current	-	0.5mA max 0.1mA (Typ) at 100VAC 0.16mA (Typ) at 230VAC			
Remote On / Off	-	See installation manual (Not available with /A cover option)			
Operating Temperature	-	Convection cooling - See table on page 2			
Operating Temperature	-	0.7m/s air -10°C to +70°C, Derate linearly to 70% load from 60°C to 70°C (2)			
Storage Temperature	-	-30° to +85°C			
Humidity (non condensing)	-	Operating: 30 - 90% RH, storage 10-95% RH			
Withstand Voltage	-	I/P~Gnd 2kVAC (20mA), I/P~O/P 3kVAC (20mA), O/P~Gnd 500VAC (100mA) 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 <sup>2</sup> constant X, Y, Z 1 hour			
Shock (in packaging)	-	< 196.1 m/s <sup>2</sup>			
Safety Agency Approvals	-	UL/CSA60950-1, EN60950-1, EN50178, CE Mark			
Conducted & Radiated EMI	-	Designed to meet EN55011, EN55022-B, FCC Class B, VCCI-B			
Immunity	-	Designed to meet EN61000-4-2,-3,-4,-5,-6,-8,-11			
Weight (Typ)	g	210	290	380	500
Size (W x H x D)	mm	55 x 26 x 195	55 x 32 x 222	62 x 35 x 222	75 x 40 x 222
Warranty	yrs	2 Years			

#### Notes:

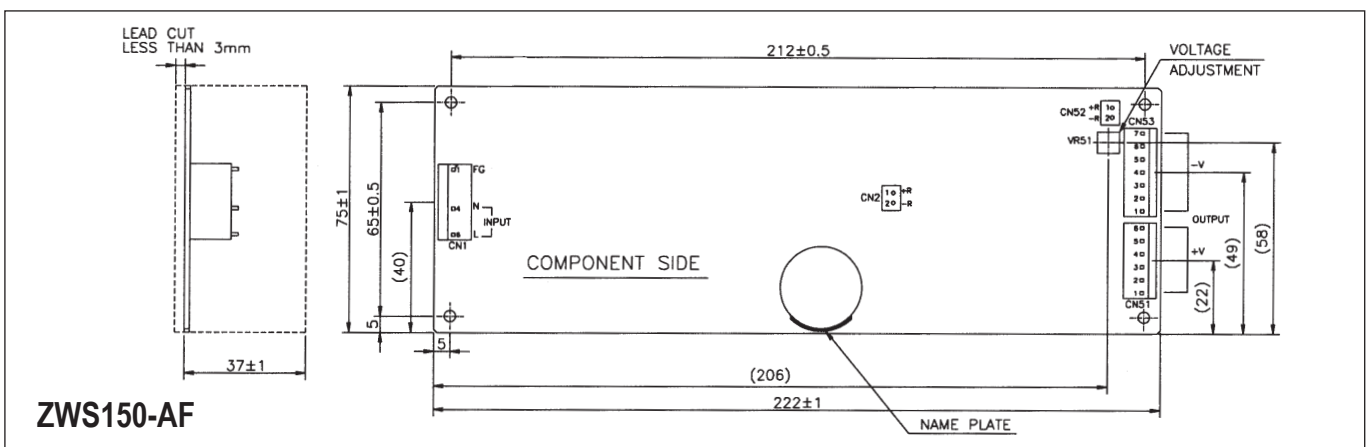
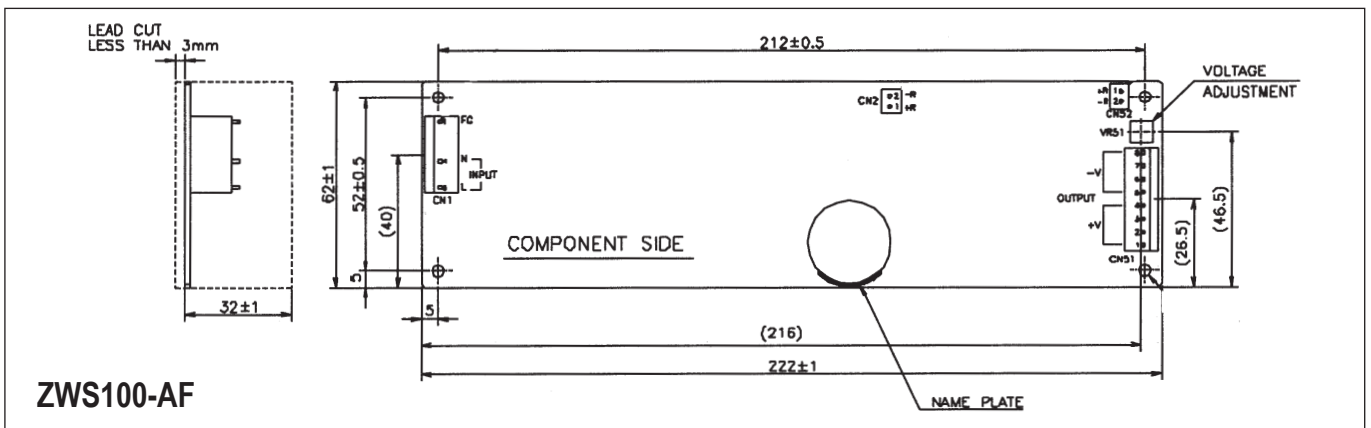
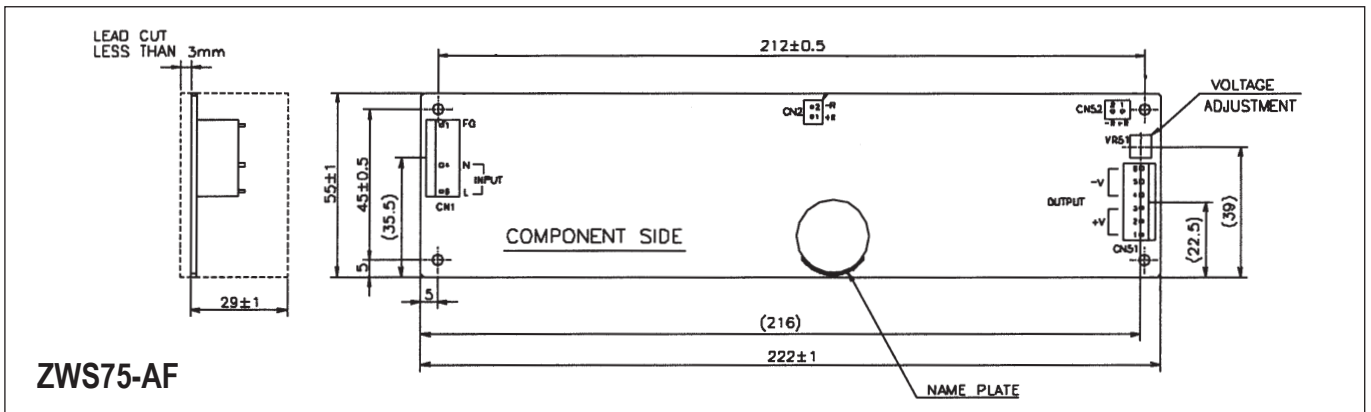
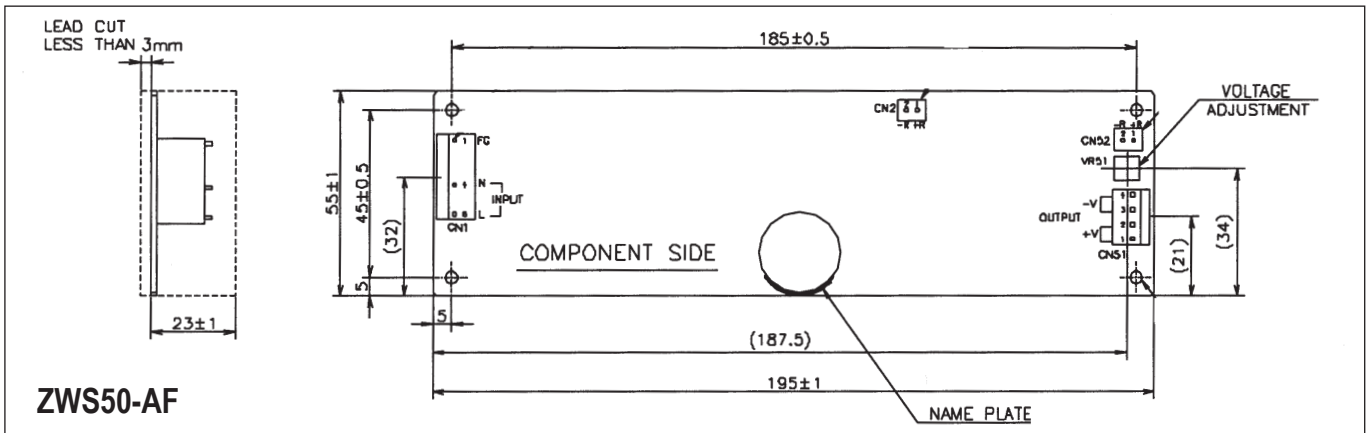
- (1) 100/200VAC (2) ZWS150AF -10 to 60°C, Derate linearly to 70% load from 50°C to 60°C
- (3) The peak current draw must not exceed a 10 second duration with a duty cycle of 35%
- (4) Constant current limit with automatic recovery. Do not operate in a over-load or shorted output condition for more than 30 seconds.
- (5) An overvoltage condition on the output will shut down the power supply. The power supply must be re-set by cycling the AC input.

Model Selector										
Model	Voltage	Output Adjust Range (V)	Max Curr. (A)	Max Peak Curr. (A) <sup>3</sup>	Max Output Power (W)	Peak Output Power <sup>3</sup> (W)	Efficiency (%)	Max Load Reg.(mV)	Max Line Reg.(mV)	OVP (V) <sup>5</sup>
ZWS75AF3	3.3V	2.85-3.63	15.0	-	49.5	-	67	40	20	3.79-4.95
ZWS150AF3	3.3V	2.85-3.63	30.0	-	99.0	-	74	40	20	3.79-4.95
ZWS50AF5	5V	4.5-5.5	10.0	-	50.0	-	75	40	20	5.75-7.00
ZWS75AF5	5V	4.5-5.5	15.0	-	75.0	-	75	40	20	5.75-7.00
ZWS100AF5	5V	4.5-5.5	20.0	-	100.0	-	75	40	20	5.75-7.00
ZWS150AF5	5V	4.5-5.5	30.0	-	150.0	-	77	40	20	5.75-7.0
ZWS50AF12	12V	10.8-13.2	4.3	5.2	51.6	62.4	78	96	48	13.8-16.2
ZWS75AF12	12V	10.8-13.2	6.3	7.5	75.6	90.0	78	96	48	13.8-16.2
ZWS100AF12	12V	10.8-13.2	8.5	10.0	102.0	120.0	79	96	48	13.8-16.2
ZWS150AF12	12V	10.8-13.2	12.5	15.0	150.0	180.0	79	96	48	13.8-16.2
ZWS50AF15	15V	13.5-16.5	3.5	4.2	52.5	63.0	79	120	60	17.3-20.3
ZWS75AF15	15V	13.5-16.5	5.0	6.0	75.0	90.0	79	120	60	17.3-20.3
ZWS100AF15	15V	13.5-16.5	6.7	8.0	100.5	120.0	79	120	60	17.3-20.3
ZWS150AF15	15V	13.5-16.5	10.0	12.0	150.0	180.0	81	120	60	17.3-20.3
ZWS50AF24	24V	21.6-26.4	2.1	2.6	50.4	62.4	81	150	96	27.6-32.4
ZWS75AF24	24V	21.6-26.4	3.2	3.8	76.8	91.2	82	150	96	27.6-32.4
ZWS100AF24	24V	21.6-26.4	4.3	5.0	103.2	120.0	81	150	96	27.6-32.4
ZWS150AF24	24V	21.6-26.4	6.3	7.5	151.2	180.0	82	150	96	27.6-32.4
ZWS75AF36	36V	32.4-39.6	2.1	2.5	75.6	90.0	82	200	144	41.4-48.6
ZWS100AF36	36V	32.4-39.6	2.8	3.4	100.8	122.4	82	200	144	41.4-48.6
ZWS150AF36	36V	32.4-39.6	4.2	5.0	151.2	180.0	82	200	144	41.4-48.6
ZWS75AF48	48V	43.2-52.8	1.6	1.9	76.8	91.2	82	240	192	55.2-64.8
ZWS100AF48	48V	43.2-52.8	2.1	2.5	100.8	120	82	240	192	55.2-64.8
ZWS150AF48	48V	43.2-52.8	3.2	3.8	153.6	182.4	82	240	192	55.2-64.8

Derating - Convection Cooling					
Model	40°C	45°C	50°C	55°C	60°C
ZWS50AF	100%	100%	100%	85%	70%
ZWS75AF	100%	100%	100%	85%	70%
ZWS100AF	100%	100%	100%	80%	60%
ZWS150AF	100%	87%	75%	62%	50%

Options	
Suffix	Description
-	Molex Input & Output Connectors
/A	With cover & L Bracket
/J	JST Input & Output Connectors
/JA	JST Connectors & Cover

## Outline Drawing ZWS-AF Series



**TDK-LAMBDA EMEA**

[www.emea.tdk-lambda.com](http://www.emea.tdk-lambda.com)



**TDK-Lambda France SAS**

Route de Grivery  
ZAC des Delaches  
CS 41077  
91978 Courtaboeuf Cedex  
France  
Tel: +33 1 60 12 71 65  
Fax: +33 1 60 12 71 66  
[france@fr.tdk-lambda.com](mailto:france@fr.tdk-lambda.com)  
[www.fr.tdk-lambda.com](http://www.fr.tdk-lambda.com)



**Italy Sales Office**  
Via dei Lavoratori 128/130  
20092 Cinisello Balsamo (MI)  
Italy  
Tel: +39 02 61 29 38 63  
Fax: +39 02 61 29 09 00  
[info.italia@it.tdk-lambda.com](mailto:info.italia@it.tdk-lambda.com)  
[www.it.tdk-lambda.com](http://www.it.tdk-lambda.com)



**TDK-Lambda Germany GmbH**

Karl-Bold-Strasse 40  
77855 Achern  
Germany  
Tel: +49 7841 666 0  
Fax: +49 7841 5000  
[info.germany@de.tdk-lambda.com](mailto:info.germany@de.tdk-lambda.com)  
[www.de.tdk-lambda.com](http://www.de.tdk-lambda.com)



**Austria Sales Office**  
Aredstrasse 22  
2544 Leobersdorf  
Austria  
Tel: +43 2256 655 84  
Fax: +43 2256 645 12  
[info.germany@de.tdk-lambda.com](mailto:info.germany@de.tdk-lambda.com)  
[www.de.tdk-lambda.com](http://www.de.tdk-lambda.com)



**TDK-Lambda UK Ltd.**

Kingsley Avenue  
Ilfracombe  
Devon EX34 8ES  
United Kingdom  
Tel: +44 (0) 12 71 85 66 66  
Fax: +44 (0) 12 71 86 48 94  
[powersolutions@uk.tdk-lambda.com](mailto:powersolutions@uk.tdk-lambda.com)  
[www.uk.tdk-lambda.com](http://www.uk.tdk-lambda.com)



**Nemic Lambda Ltd.**

Kibbutz  
Givat Hashlosha 48800  
Israel  
Tel: +9 723 902 4333  
Fax: +9 723 902 4777  
[info@nemic.co.il](mailto:info@nemic.co.il)  
[www.nemic.co.il](http://www.nemic.co.il)



**Russia**

Technical Support:  
St Petersburg  
Tel: +7 (812) 6580463  
Sales:  
Moscow  
Tel: +7 (499) 7557732  
[info@tdk-lambda.ru](mailto:info@tdk-lambda.ru)  
[www.tdk-lambda.ru](http://www.tdk-lambda.ru)

**LOCAL DISTRIBUTION**

