

## 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



| Specifications                     |     | 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 <sup>2</sup> constant X, Y, Z 1 hour                |                   |   |                    |
| Shock                              | -   | < 196.1 m/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 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 operation 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 |



### 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                       |

### 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      | -                     |

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



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