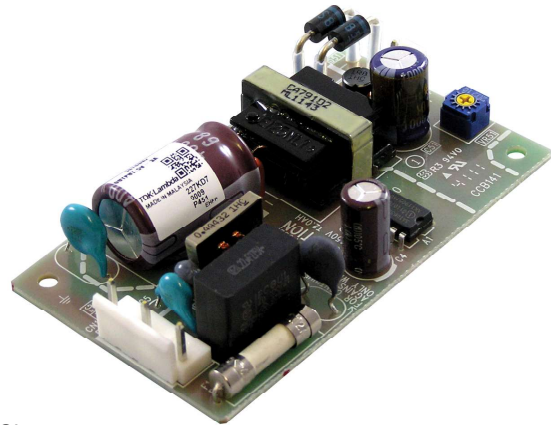


## 10-30W Single Output, High Reliability Power Supplies

### 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                                      |      |                                                                                                                                                                                                             |                  |                   |
|-----------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|
| Model                                               |      | 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<br>Convection Cooled          | °C   | ZWS10B: -10 to +70°C, derate linearly to 20% load from 50 to 70°C<br>ZWS15B: -10 to +70°C, derate linearly to 40% load from 50 to 70°C<br>ZWS30B: -10 to +70°C, derate linearly to 20% load from 50 to 70°C |                  |                   |
| Operating Temperature<br>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)<br>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/s² constant. X, Y, Z for 1 hour each                                                                                                                                      |                  |                   |
| Shock                                               | m/s² | < 196m/s²                                                                                                                                                                                                   |                  |                   |
| 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 (Iv 4), -3 (Iv 3), -4 (Iv 4), -5 (Iv 4), -6 (Iv 3), -8 (Iv 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:

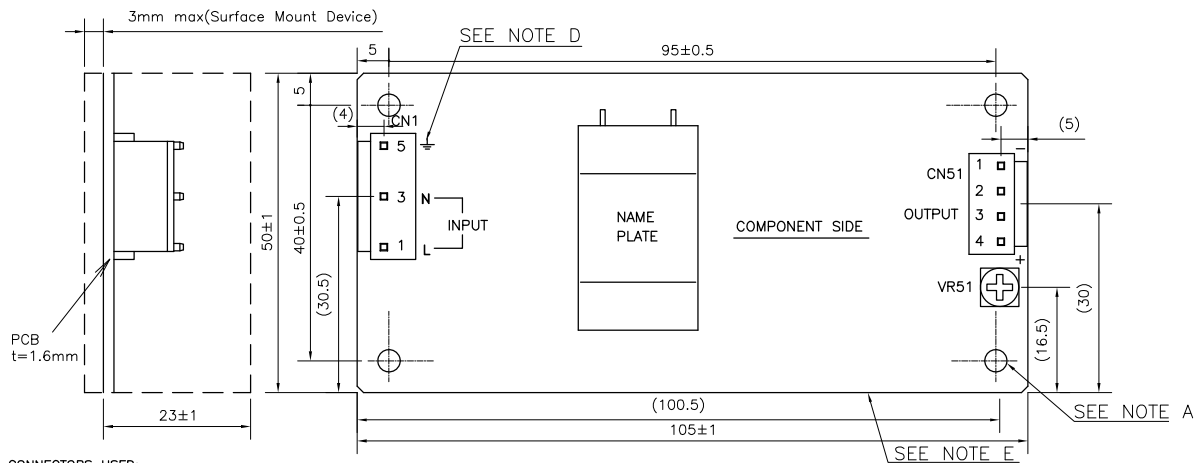
- (1) Derate linearly to 90% load from 90VAC to 85VAC input  
Refer to detailed specifications and application notes on web page

\*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)



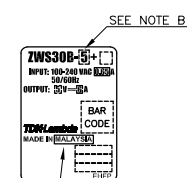
### CONNECTORS USED:

| PART DESCRIPTION             | PART NAME | MANUFACT. | QTY |
|------------------------------|-----------|-----------|-----|
| PIN HEADER (INPUT SIDE CN1)  | B3PS-VH   | JST       | 1   |
| PIN HEADER(OUTPUT SIDE CN51) | 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-Ø3.5 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: ⚡ 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)

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