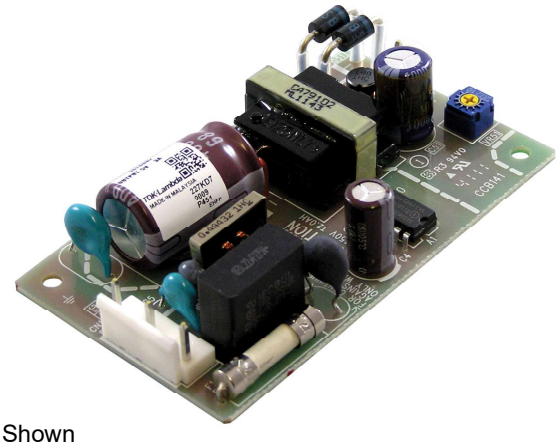
## 10-30W Single Output, High Reliability Power Supplies

### Features

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



ZWS15B Shown

### Key Market Segments & Applications

Industrial Test COMM Broadcast

RoHS

## 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 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 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 (lv 4), -3 (lvl 3), -4 (lvl 4), -5 (lvl 4), -6 (lvl 3), -8 (lvl 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:

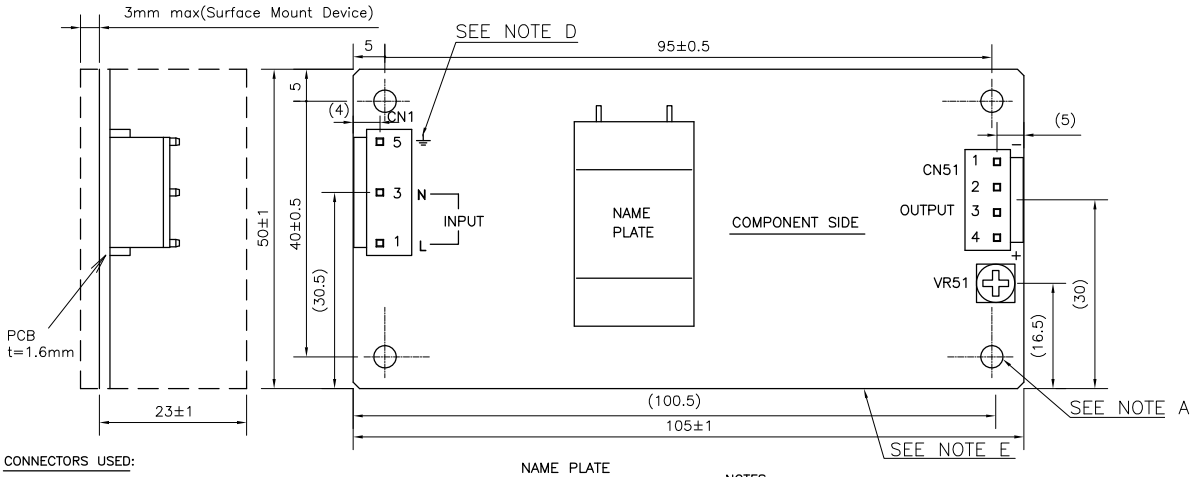
(1) Derate linearly to 90% load from 90VAC to 85VAC input
Refer to detailed specifications and application notes on web page

*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)



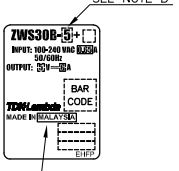

CONNECTORS USED:

| 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-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

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