

300W Single Output, Convection Cooled Power Supplies

Features

- ◆ Universal Input (85 - 265VAC)
- ◆ Power Factor Corrected
- ◆ Convection cooling (300W) or Forced Air (336-338W)
- ◆ Five year warranty
- ◆ Less than 0.5mA earth leakage current



Key Market Segments & Applications



| Specifications | | ZWS300BAF |
|------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Voltage | V | 85-265VAC (47-63Hz), 120-370VDC ⁽⁵⁾ |
| Input Current | A | 3.7 / 1.9 (Convection cooled rating) |
| Inrush Current ⁽¹⁾⁽²⁾ | A | 15 / 30 |
| Power Factor | - | 0.97 at 100VAC, 0.93 at 200VAC, Meets EN61000-3-2 |
| Leakage Current | mA | 0.5mA Max. Typically 0.2mA (100VAC), 0.4mA (230VAC) |
| Off Load Power Draw | W | Typically 0.1W at 100VAC, 0.5W at 200VAC, 0.8W at 265VAC when unit is in inhibit |
| Temperature Coefficient | %/°C | <0.02%/°C |
| Overcurrent Protection ⁽³⁾ | - | >116% of convection cooled rated output current (>105% for 12V model) |
| Overvoltage Protection | V | 12V: 13.8-16.2V, 15V: 17.3-20.3V, 24V: 28.8-33.6V, 36V: 41.4-48.6V, 48V: 55.2-64.8V |
| Hold Up Time (Typ) ⁽¹⁾ | ms | 18ms at 100VAC input (Convection cooled rating) |
| Efficiency ⁽¹⁾ | % | 12 & 15V models: 86 / 89%, 24V, 36V & 48V models: 88 / 91% (Convection cooled rating) |
| Remote On/Off | - | Optional, see instruction manual |
| Operating Temperature 12V & 15V Models | °C | Convection: -10°C to +70°C, derate linearly to 40% load from 40°C to 70°C 1.4m/s Airflow: -10°C to +70°C, derate linearly to 60% load from 50°C to 70°C |
| Operating Temperature 24V, 36V & 48V Models | °C | Convection: -10°C to +70°C, derate linearly to 40% load from 45°C to 70°C 0.7m/s Airflow: -10°C to +70°C, derate linearly to 60% load from 50°C to 70°C 1.4m/s Airflow: -10°C to +70°C, derate linearly to 70% load from 60°C to 70°C |
| Storage Temperature | °C | -30 to +75°C |
| Humidity (non condensing) | %RH | Operating: 30 - 90%RH, Storage: 10 - 90%RH |
| Cooling | - | Convection or forced air |
| Withstand Voltage | - | Input to Ground 2kVAC (20mA), Input to Output 3kVAC (20mA), Output to Ground 500VAC (20mA) for 1 min. |
| Isolation Resistance | - | >100M at 25°C & 70%RH, Output to Ground 500VDC |
| Vibration (non operating) | - | 10 - 55Hz (1 minute sweep), 19.6m/s ² constant X, Y, Z 1 hour each |
| Shock | - | < 196.1 m/s ² |
| Safety Agency Certifications | - | UL60950-1, CSA60950-1, EN60950-1, EN50178 OV II, CE Mark |
| Conducted & Radiated EMI ⁽⁴⁾ | - | EN55011/EN55022-B, FCC Class B, VCCI-B |
| Immunity | - | EN61000-4-2 (Ivl2, 3), -3 (Ivl 3), -4 (Ivl 3), -5 (Ivl 3, 4), -6 (Ivl 3), -8 (Ivl 4), -11; EN61000-6-2 |
| Weight (Typ) | g | 540g (open frame) |
| Size (WxHxD) | in (mm) | 3.31 x 1.65 x 7.09" (84 x 42 x 180) open frame |
| Warranty | yrs | Five Years |

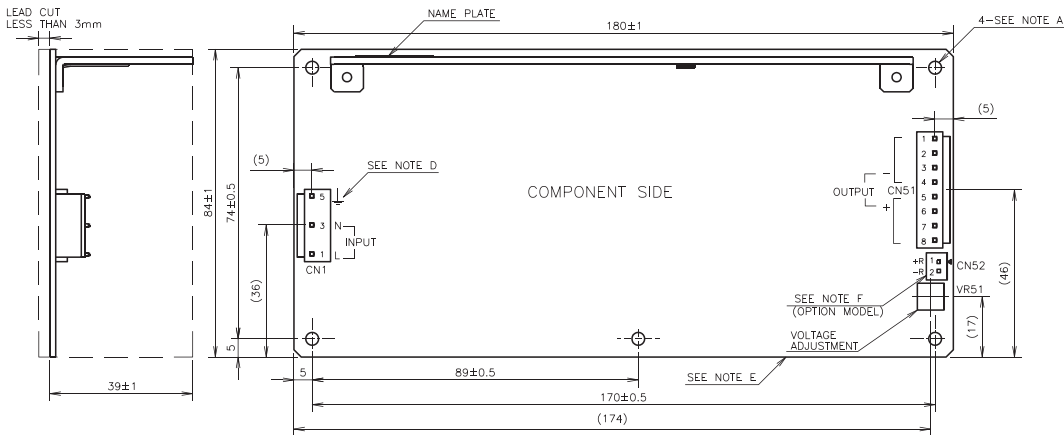
Notes:

- (1) 100 / 200VAC Input
- (2) 25°C ambient (cold start)
- (3) Avoid prolonged operation in overload
- (4) Forced air rating: Class A radiated
- (5) Safety certified for AC input only

Model Selector

| Model | Output Voltage | Adjustment Range | Max Current Convection | Max Current Forced Air | Line Reg (mV) | Load Reg (mV) | Ripple & Noise (mV) |
|-------------|----------------|------------------|------------------------|------------------------|---------------|---------------|---------------------|
| ZWS300BAF12 | 12V | 9.6 - 13.2V | 25A | 25A | 48 | 100 | 100 |
| ZWS300BAF15 | 15V | 13.5 - 20.3V | 20A | 22A | 60 | 120 | 120 |
| ZWS300BAF24 | 24V | 21.6 - 27.5V | 12.5A | 14A | 96 | 150 | 150 |
| ZWS300BAF36 | 36V | 32.4 - 39.6V | 8.4A | 9.4A | 144 | 240 | 250 |
| ZWS300BAF48 | 48V | 39.5 - 52.8V | 6.3A | 7A | 192 | 240 | 250 |

Outline Drawing



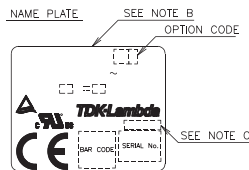
CONNECTORS USED:

| PART DESCRIPTION | PART NAME | MANUFACT. | QTY |
|-------------------------------|-----------|-----------|-----|
| PIN HEADER (INPUT SIDE CN1) | B3P5-VH | JST | 1 |
| PIN HEADER (OUTPUT SIDE CN51) | B8P-VH | JST | 1 |

*OUTPUT CURRENT OF EACH CONNECTOR PIN MUST BE LESS THAN 5A.

MATCHING HOUSINGS, PINS & TOOL (NOT INCLUDED WITH THE PRODUCT):

| PART DESCRIPTION | PART NAME | MANUFACT. | QTY |
|-----------------------|--------------|-----------|-----|
| SOCKET HOUSING (CN1) | VHR-5N | JST | 1 |
| SOCKET HOUSING (CN51) | VHR-8N | JST | 1 |
| TERMINAL PINS | SVH-21T-P1.1 | JST | 11 |
| | BVH-21T-P1.1 | JST | 11 |
| HAND CRIMPING TOOL | YC-160R | JST | - |



SCALE FOR NAME PLATE : 2/1

NOTES:

- A: 4- ϕ 3.5 HOLES ARE FOR CUSTOMER'S CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
- B: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, AND MAXIMUM OUTPUT CURRENT ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
- C: COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.
- D: \downarrow IS FOR SAFETY GROUND CONNECTION.
- E: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PCB EDGE AND CUSTOMER'S CHASSIS.
- F: OPTION MODEL(ZWS300BAF-*/R)
 REMOTE ON/OFF CONTROL CONNECTOR (CN52) : B2B-XH-AM (JST)
 MATCHING HOUSING : XHP-2 (JST)
 MATCHING TERMINAL : BXH-001T-P0.6 (JST) OR SXH-001T-P0.6 (JST)
 HAND CRIMPING TOOL : YC-110R (JST) OR YRS-110 (JST)
 MATCHING HOUSING AND TERMINAL --- NOT INCLUDED WITH THE PRODUCT

| (unit : mm) | |
|-------------------|-----------|
| MODEL NAME | ZWS300BAF |
| TDK-Lambda | |
| A254-02-01 | |

Options

| Suffix | Description |
|---------|-------------------|
| - | JST Connectors |
| /L | L Bracket |
| /A | Cover & L Bracket |
| /R | Remote On/Off |
| /T | Screw Terminals |
| /CO2 | PCB Coating |
| Example | ZWS300BAF24/TA* |

* please contact factory for other combinations of option codes

Similar Products

| | |
|------------------|-------------------------------------------|
| ZWS-B, -BAF, -BP | 10W to 240W Single output |
| HWS | 15W to 1800W Single Output, Enclosed |
| EFE | 300W to 400W Single Output, Medical & ITE |
| CFE400M | 300W to 400W Single Output, Medical & ITE |

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

