## VS75E/FV

### SPECIFICATIONS

A240-01-01/FV-C

| | MODEL<br>ITEMS | | | VS75E-12/FV | VS75E-24/FV | VS75E-48/FV |
|---|---|---|---|---|---|---|
| 1 | Nominal Output Voltage | | V | 12 | 24 | 48 |
| 2 | Maximum Output Current | | A | 6.3 | 3.2 | 1.6 |
| 3 | Maximum Output Power | | W | 75.6 | 76.8 | 76.8 |
| 4 | Efficiency (Typ) | (*1) | % | 85 | 86 | 87 |
| 5 | Input Voltage Range | (*2) | - | 85 - 132VAC (47 - 63Hz) | | |
| 6 | Input Current (Typ) | (*1) | A | 1.6 | | |
| 7 | Inrush Current (Typ) | (*1) | - | 30A at Cold Start | | |
| 8 | Output voltage range | | - | Fixed | | |
| 9 | Output Voltage Accuracy | | V | 11.5 - 12.5 | 23.0 - 25.0 | 46.0 - 50.0 |
| 10 | Maximum Ripple & Noise | 0≤Ta≤70°C | mV | 150 | 150 | 200 |
| | (*3)(*4) | -10≤Ta<0°C | mV | 180 | 180 | 240 |
| 11 | Maximum Line Regulation | (*3)(*5) | mV | 48 | 96 | 192 |
| 12 | Maximum Load Regulation | (*3)(*6) | mV | 96 | 150 | 240 |
| 13 | Temperature Coefficient | (*3) | - | Less than 0.02% / °C | | |
| 14 | Over Current Protection | (*7) | A | 6.61 < | 3.36 ≤ | 1.68 < |
| 15 | Over Voltage Protection | (*8) | V | 13.8 - 16.2 | 27.6 - 32.4 | 55.2 - 64.8 |
| 16 | Hold-up Time (Typ) | (*1) | - | 20ms | | |
| 17 | Leakage Current | (*9) | - | Less than 0.5mA | | |
| 18 | Parallel Operation | | - | - | | |
| 19 | Series Operation | | - | Possible | | |
| 20 | Operating Temperature | (*10) | - | Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:20%) | | |
| 21 | Operating Humidity | | - | 30 to 90%RH (No Condensing) | | |
| 22 | Storage Temperature | | - | -30 to +85°C | | |
| 23 | Storage Humidity | | - | 10 to 95%RH (No Condensing) | | |
| 24 | Cooling | | - | Convection Cooling | | |
| 25 | Withstand Voltage | | - | Input - FG : 2kVAC (10mA), Input - Output : 2kVAC (10mA)<br>Output - FG : 500VAC (20mA) for 1min | | |
| 26 | Isolation Resistance | | - | More than 100MΩ at 25°C and 70%RH  Output - FG : 500VDC | | |
| 27 | Vibration | | - | At no operating, 10 - 55Hz (Sweep for 1min)<br>19.6m/s² Constant,  X,Y,Z 1hour each. | | |
| 28 | Shock | | - | Less than 196.1m/s² | | |
| 29 | Safety | (*12) | - | Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1,<br>EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178(OV II),<br>Designed to meet Den-an Appendix12 (J60950-1) | | |
| 30 | Conducted Emission | | - | Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B | | |
| 31 | Radiated Emission | | - | Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B | | |
| 32 | Immunity | | - | Designed to meet IEC61000-4-2(Level 2,3), -3(Level 3), -4(Level 3),<br>-5(Level 2,3), -6(Level 3), -8(Level 4), -11 | | |
| 33 | Weight (Typ) | | g | 200 | | |
| 34 | Size (W x H x D) | (*11) | mm | 50 x 29 x 150 ( Refer to Outline Drawing ) | | |

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

*1. At 100VAC, Ta=25°C, nominal output voltage and maximum output power.

*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 120VAC(50/60Hz).

*3. Please refer to Fig. A for measurement of line & load regulation and ripple voltage.

*4. For start up at low ambient temperature and low input voltage, output ripple noise might not meet specification.
However, there is no overshoot at start up and output ripple noise specification can be met after one second.

*5. 85 - 132VAC, constant load.

*6. No load-Full load, constant input voltage.

*7. Constant current limit  with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.

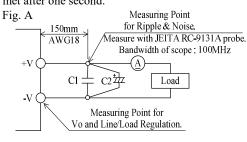*8. OVP circuit will  shut the output down, manual reset (Re power on).

*9. Measured by the each measuring method of UL, CSA, EN and
DENAN(at 60Hz), Ta=25°C.

*10. Ratings
- Derating at standard mounting. Refer to output derating curve(A240-01-02_).
- When forced air cooling, refer to derating curve(A240-01-03_).
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.

*11. Not include lead length on solder side.

*12. Requesting approval for safety standards should be  made with VS75E-**.

Fig. A



Measuring Point
for Ripple & Noise.
Measure with JEITA RC-9131A probe.
Bandwidth of scope : 100MHz

150mm
AWG18

Measuring Point for
Vo and Line/Load Regulation.

C1 : Film Cap. 0.1 μF
C2 : Elec. Cap. 100 μF