

# Quality Engineering Test Report

**SERIES: DR-75     75W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY**

**SAMPLE: A. DR-75-12 12V / 6.3A  
 B. DR-75-24 24V / 3.2A  
 C. DR-75-48 48V / 1.6A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING     SPEC:85~264VAC O/P:FULL LOAD	A : 65.812VAC~264VAC	P
2	LINE REGULATION	I/P:85~264VAC     SPEC: A: ±0.5% O/P:FULL LOAD     B: ±0.5% C: ±0.5%	A: -0.049% +0.00% B: -0.049% +0.00% C: +0.012% +0.012%	P
3	LOAD REGULATION	I/P:230VAC     SPEC: A: ±1% O/P:MIN. TO FULL LOAD     B: ±1% C: ±1%	A: -0.148% +0.098% B: -0.024% +0.00% C: -0.09% +0.09%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC     SPEC: A: ±2% O/P:MIN TO FULL LOAD     B: ±1% C: ±1%	A: -0.049% -0.255% B: -0.024% +0.024% C: +0.012% +0.2%	P
5	RIPPLE&NOISE	I/P:230VAC     SPEC: A: 100mV O/P:FULL LOAD     B: 150mV C: 240mV	A:5mV B:.8mV C:49mV	P
6	AC INPUT CURRENT	I/P:230VAC     SPEC: 1.2A O/P:FULL LOAD	A :0.922A B :0.81A C :0.826 A	P
7	MAX. INRUSH CURREN	I/P:230VAC     SPEC: 60A O/P: FULL LOAD	A: 37.54A B: 34A C:33.289A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC     SPEC: A:12V~14V O/P:MIN. LOAD     B: 24V~28V C: 48V~53V	A:10.5V~14.9V B:20.021V~29.123V C:46.01V~60.03V	P
9	SET UP TIME	I/P:230VAC     SPEC:1000mS O/P:FULL LOAD	A: 596.7mS B: 598mS C: 613.6mS	P
10	HOLD UP TIME	I/P:230VAC     SPEC:50mS O/P:FULL LOAD	A: 73.218mS B: 78mS C: 75.86mS	P
11	EFFICIENCY	I/P:230VAC     SPEC: A:76% O/P:FULL LOAD     B:80% C:81%	A:77.39% B:81.823% C:83.006%	P
12	OVER LOAD PROTECTION	O/P:TESTING     SPEC: 105%~150%	A137% B:131% C:131%	P
13	GROUND LEAKAGE CURRENT	I/P:240VAC     SPEC: L-FG--<1mA N-FG--<1mA	A: L-FG:0.82mA N-FG:0.81mA	P
14	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100M Ohms MIN. I/P-FG : 500VDC/100M Ohms MIN. O/P-FG: 500VDC/100M Ohms MIN.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms B: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms C: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P
15	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVAC/ 1 min. I/P - FG: 1.5KVAC/ 1 min. O/P -FG: 0.5KVAC/ 1 min.	A: I/P-O/P :5.6mA I/P-FG :3.8mA O/P-FG :3.4mA B: I/P-O/P :5.6mA I/P-FG :3.8mA O/P-FG :3.4mA C: I/P-O/P :3.287mA I/P-FG :2.68mA O/P-FG :7.18mA	P
16	BURN-IN TEST	I/P: 230VAC     O/P: FULL LOAD TA:26.8°C     BURN-IN DURATION : 2 hrs	A : NON BREAK	P

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17	ENVIRONMENT TEST	1.LOW TEMPERATURE TEST I/P:230 VAC                    O/P:100% LOAD AMBIENT TEMPERATURE:-9.9°C	A: AFTER 14 hrs POWER ON OK	P																															
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230VAC                    O/P:FULL LOAD AMBIENT TEMPERATURE:50.1°C	A: AFTER 3 hrs NON BREAK																																
		3.HIGH HUMIDITY HIGH VOLTAGE ON/OFF TEST I/P:264VAC                    O/P:FULL LOAD AMBIENT TEMPERATURE : 25°C AMBIENT HUMIDITY : 95%	A : AFTER 18 hrs POWER ON/OFFNON BREAK																																
18	TEMPERATURE RISE TEST T rise OF PARTS	D: I/P :230VAC                    AFTER 2 hr BURN-IN O/P :FULL LOAD                    TA:26.8°C		P																															
		<table border="1"> <thead> <tr> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td>BD1</td> <td>BRIDGE DIODE</td> <td>56.6°C</td> <td>29.8°C</td> </tr> <tr> <td>U1</td> <td>MAIN TRANSISTOR</td> <td>64.7°C</td> <td>37.9°C</td> </tr> <tr> <td>T1</td> <td>MAIN TRANSFORMER WIRE</td> <td>75.7°C</td> <td>48.9°C</td> </tr> <tr> <td>D20</td> <td>O/P DIODE</td> <td>78.9°C</td> <td>52.1°C</td> </tr> <tr> <td>C25</td> <td>O/P FILTER CAPACITOR</td> <td>74.8°C</td> <td>48.0°C</td> </tr> <tr> <td>C5</td> <td>I/P FILTER CAPACITOR</td> <td>54.8°C</td> <td>28.0°C</td> </tr> <tr> <td>LF1</td> <td>LINE FILTER TRANSFORMER</td> <td>61.0°C</td> <td>34.2°C</td> </tr> </tbody> </table>	POSITION		P/N	TEMP	T rise	BD1	BRIDGE DIODE	56.6°C	29.8°C	U1	MAIN TRANSISTOR	64.7°C	37.9°C	T1	MAIN TRANSFORMER WIRE	75.7°C	48.9°C	D20	O/P DIODE	78.9°C	52.1°C	C25	O/P FILTER CAPACITOR	74.8°C	48.0°C	C5	I/P FILTER CAPACITOR	54.8°C	28.0°C	LF1	LINE FILTER TRANSFORMER	61.0°C	34.2°C
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19	LIFE CYCLE	D: SUPPOSE C25 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C Tc25:74.8°C Life: 32615.3 hrs I/P:230VAC O/P:FULL LOAD Ta:45°C Tc45:92.2°C Life:12279.5 hrs		P																															
20	CRITICAL COMPONENT RECORD ( FOR QC INSPECTION REFERENCE ONLY )	D: FUSE : 3AL/250V BRIDGE DIODE : D3SB60 4A/800V LINE FILTER : TF-484 TRANSFOMER : TF659 POWER SWITCHER : TOP-227 OUTPUT DIODE : BYQ-28X-200 OUTPUT CAPACITOR : 330uF/35V(v) 105°C ELNA LXJ INPUT CAPACITOR : RUBYCON 100uF/400V 105°C P.C.B : DR-75-R2 CEM-3 20 OZ SS																																	
DATE	SAMPLE	TEST RESULT		TEST	APPROVAL																														
20020304	RD SAMPLE 12V,24V,48V	PASS		VINCENT	MAX.LIN																														
20020531	PRODUCT SAMPLE A202B01 12V,24V,48V	PASS		VINCENT	MAX.LIN																														
20020827	PRODUCT SAMPLE A205D01 12V,24V	PASS		VINCENT	MAX.LIN																														