



TEST REPORT

MODEL NAME : UP150S24WQ

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1. DESIGN VERIFY TEST

1-1. INPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE RANGE	90~277VAC	I/P: testing O/P:full load Ta:25 °C	test ok	P
FREQUENCY RANGE	47~63Hz no damage osc	I/P:90~277VAC O/P:full~min. load Ta:25 °C	test ok	P
EFFICIENCY	87% typ.	I/P:220VAC O/P:full load Ta:25 °C	87.7%	P
AC CURRENT	2.7A/115VAC typ. 1.8A/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	2.6A/115VAC 1.73A/230VAC	P
INRUSH CURRENT	30A typ. cold start	I/P:230VAC O/P:full load Ta:25 °C	25A	P
LEAKAGE CURRENT	2.5mA max.	I/P:230VAC O/P:min. load Ta:25 °C	0.4mA	P

1-2. OUTPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	170mVp-p max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	135mV p-p/115VAC 55mV p-p/230VAC	P
VOLTAGE TOLERANCE	24V± 3%	I/P:200VAC/240VAC O/P:full/min. load Ta:25 °C	±0.33%	P
LINE REGULATION	24V± 1%	I/P:200~240VAC O/P:full load Ta:25 °C	±0%	P
LOAD REGULATION	24V± 2%	I/P:220VAC O/P:full~min. load Ta:25 °C	± 0.33%	P

SETUP TIME	3000ms/115VAC max. 3000ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	720ms/115VAC 800ms/230VAC	P
RISE TIME	100ms/115VAC max. 100ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	92ms/115VAC 94ms/230VAC	P
HOLD UP TIME	10ms/115VAC typ. 60ms/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	13ms/115VAC 63ms/230VAC	P

1-3. PROTECTION FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
SHORT PROTECTION	short every output 1 hour no damage	I/P:277VAC O/P:full load Ta:25 °C	no damage, recovers automatically after fault removed	P
OVER LOAD PROTECTION	110% min.	I/P:115VAC I/P:230VAC O/P:testing Ta:25 °C	127%/115VAC 142%/230VAC recovers automatically after fault removed	P
OVER VOLTAGE PROTECTION	115~140%	I/P:115VAC I/P:230VAC O/P:min. load Ta:25 °C	118%/115VAC 119%/230VAC recovers automatically after fault removed	P
OVER TEMP. PROTECTION	temp. sensor:105±10 °C no damage	I/P:100VAC O/P:full load	O.T.P active, recovers automatically after fault removed	P

2. SAFETY TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
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WITHSTAND VOLTAGE	I/P-O/P:3KVAC/1min<10mA I/P-F/G:1.5KVAC/1min<10mA O/P-F/G:0.5KVAC/1min<10mA	I/P-O/P:3KVAC/1min I/P-F/G:1.5KVAC/1min O/P-F/G:0.5KVAC/1min Ta:25℃	I/P-O/P:3.7mA I/P-F/G:2.8mA O/P-F/G:1.9mA no damage	P
ISOLATION RESISTANCE	I/O-O/P:500VDC>100MΩ I/O-F/G:500VDC>100MΩ O/P-F/G:500VDC>100MΩ	I/P-O/P:500VDC I/P-F/G:500VDC O/P-F/G:500VDC Ta:25℃	I/P-O/P:∞ I/P-F/G:∞ O/P-F/G:∞ no damage	P

3. RELIABILITY TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
LOW TEMP. TURN ON TEST	turn on after 2hour	I/P:220VAC O/P:full load Ta:-40℃	test ok	P
STORAGE TEMP. TEST	no damage	1.thermal shock temp.: -40~+75℃ 2.test time low & high temp.:30min/each 3.total cycle:5cycle 4.input/output condition:static	test ok	P
THERMAL SHOCK TEST	no damage	1.thermal shock temp.: -20~+50℃ 2.test time low & high temp.:30min/each 3.total cycle:10cycle 4.input/output condition: 220VAC 75% load, AC on/off test (turn on 58sec,turn off 2sec)	test ok	P
VIBRATION TEST	no damage	1.CATON&1SET 1.wave form:sine wave 2.frequency:10~500Hz 3.sweep time:10min./sweep cycle 4.acceleration:2G 5.test time:60min. in each(X,Y,Z) 6.Ta:25℃	test ok	P