



All information contained herein applies only to the above listed part number. Other versions of this part number with electrical or mechanical variations are available. Contact CUI Inc. for further assistance. 9615 SW Allen Blvd., Ste. 103, Beaverton OR 97005  
800-275-4899 • 503-643-4899 • Fax: 503-643-6129 • [www.cui.com](http://www.cui.com)

## 1. SPECIFICATION

### 1-0 INPUT REQUIREMENTS

#### 1-1 INPUT VOLTAGE

100 TO 240 10 Vac FULL RANGE

#### 1-2 INPUT FREQUENCY

47 TO 63 Hz

#### 1-3 INPUT CURRENT

1.) 1.2 A MAX., AT 115Vac FULL LOAD

2.) 0.6 A MAX., AT 230Vac FULL LOAD

#### 1-4 EFFICIENCY

78% TYP. AT FULL LOAD, (CV MODE), NOMINAL LINE

#### 1-5 INRUSH CURRENT

1.) 40A MAX. AT 115Vac COLD START

2.) 80A MAX. AT 230Vac COLD START

#### 1-6 HOLD UP TIME

8.3mS MIN. AT FULL LOAD, NOMINAL LINE

#### 1-7 CONFIGURATION

3-WIRE INPUT AC LINE(LINE ,NEUTRAL,FG)

#### 1-8 INPUT FUSE

THE HOT LINE SIDE OF THE INPUT SHALL HAVE A FUSE

#### 1-9 LINE REGULATION

THE MAXIMUM VOLTAGE CHANGE ON DC OUTPUT SHALL BE WITHIN TOLERANCE WHEN AC INPUT VOLTAGE VARIES WITHIN THE RANGE SPECIFIED IN 1-1

#### 1-10 INPUT PROTECTION DEVICE

AN ADEQUATE INTERNAL FUSE ON THE AC INPUT LINE SHALL BE PROVIDED

#### 1-11 POWER LINE NOISE

THE POWER SUPPLY WILL HAVE AN ON BOARD AC FILTER THAT WILL MEET CONDUCTED NOISE SPECIFICATIONS OF FCC AND CISPR

#### 1-12 HI-POT TESTS

PRIMARY-SECONDARY 1.5KVac FOR 1 MINUTE (LEAKAGE CURRENT 10mA)

#### 1-13 INSULATION RESISTANCE

INSULATION RESISTANCE SHALL BE MORE THAN 100Mohm AT 500Vdc BETWEEN PRIMARY LINE, NEUTRAL LINE AND SECONDARY



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## 2-0 OUTPUT REQUIREMENTS

### 2-1 DC OUTPUT

OUTPUT VOLTAGE	TOLERANCE	OUTPUT CURRENT	
	(ACCURACY)	MIN.	MAX.
+24 Vdc	+/-5 %	0	2.5 A

### 2-2 LOAD REGULATION

VOLTAGE	TOLERANCE	REGULATION
+24 Vdc	+/-5 %	22.8-25.2 Vdc

### 2-3 DYNAMIC LOAD REGULATION

+/-5% EXCURSION FOR 50% - 100% OR 100%-50% LOAD CHANGE OF DC OUTPUT AT ANY FREQUENCY UP TO 1KHz (DUTY 50%)

### 2-4 RIPPLE NOISE

THE POWER SUPPLY SHALL NOT EXCEED THE FOLLOWING LIMITS ON THE INDICATED VOLTAGES FOR 60Hz OR 50Hz RIPPLE , SWITCHING FREQUENCY RIPPLE AND NOISE AND DYNAMIC LOAD VARIATIONS MEASURED WITH A 20MHz BANDWIDTH

OUTPUT	RIPPLE/NOISE
+24 Vdc	150mV

OUTPUT: OUT VOLTAGE

RIPPLE/NOISE: 60Hz RIPPLE + SWITCHING RIPPLE AND NOISE

RIPPLE NOISE ARE MEASURED AT THE END OF OUTPUT CABLES WHICH ARE ADDED A 0.1uF CERAMIC CAPACITOR AND A 47uF ELECTROLYTIC CAPACITOR

### 2-5 OVER CURRENT PROTECTION (OVER POWER PROTECTION)

THE POWER SUPPLY SHALL NOT BE DAMAGED BY A OVER CURRENT FROM THE OUTPUT TO RETURN LINE

OUTPUT VOLTAGE	MIN.	MAX.
+24 Vdc	---	3.9 A

### 2-6 OVER VOLTAGE PROTECTION

27V MAX. (OUTPUT CLAMPED WITH ZENER DIODE, DO NOT TEST WITH EXTERNAL DC SOURCE)

### 2-7 SHORT-CIRCUIT PROTECTION

A SHORT CIRCUIT PLACE AT ANY OUTPUT WILL CAUSE NO DAMAGE TO THIS ADAPTER



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## 2-8 OPEN CIRCUIT PROTECTION

WHEN PRIMARY POWER IS SUPPLIED WITH NO LOAD ON ANY OUTPUT LEVEL, NO DAMAGES OR HAZARDOUS CONDITIONS SHOULD OCCUR

## 2-9 STABILITY

2% MAX. AT CONSTANT LOAD WITH CONSTANT INPUT (AFTER 30 MINUTES OF OPERATION)

## 2-10 DROP-OUT (POWER LINE DISTURBANCE)

OUTPUT VOLTAGES SHALL REMAIN WITHIN THE SPECIFIED REGULATION RANGE, THROUGH THE ABSENCE OF A LINE INPUT DURING 1/2 CYCLE, AT FULL LOAD AND MIN. AC LINE INPUT

## 2-11 VOLTAGE ISOLATION

THE DC GROUND WILL BE ISOLATED FROM THE AC NEUTRAL AND AC LINE

## 2-12 COOLING

COOLING SHALL BE NEUTRAL CONVECTION COOLING, THE POWER SUPPLY MUST BE CAPABLE OF OPERATION WHEN MOUNTED EITHER VERTICALLY OR HORIZONTALLY ACCORDING TO THE MECHANICAL DRAWING

## 2-13 CONTINUITY (GROUNDING)

100m OHM MAX. AT 25A

## 2-14 LEAKAGE CURRENT

0.75mA MAX.

## 2-15 LED DISPLAY

DESCRIPTION	GREEN
POWER ON	ON
POWER OFF	OFF

## 3-0 ENVIRONMENTAL REQUIREMENTS

### 3-1 TEMPERATURE

- 1.) OPERATION 0 TO 40
- 2.) STORAGE 20 TO 85

### 3-2 HUMIDITY

- 1.) OPERATION 8 90 RH
- 2.) STORAGE 5 90 RH

### 3-3 VIBRATION AND SHOCK

NO EVIDENCE OF ANY MECHANICAL OR FUNCTIONAL DAMAGE AFTER THE VIBRATION AND SHOCK TESTING

MODEL NO:

PART NO: **DTS240250U**



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#### 1.)SHIPPING VIBRATION

THIS AC ADAPTER MAY BE VIBRATED IN THE THREE MUTUALLY PERPENDICULAR AXES OF 0.5mm DISPLACEMENT PEAK TO PEAK AT 2 TO 55 TO 2Hz 7 MINUTES PER CYCLE FOR A DURATION OF 30 MINUTES

#### 2.)SHIPPING SHOCK

THIS AC ADAPTER IN THE SHIPPING PACKAGE MAY BE DROPPED 8 TIMES FROM A HEIGHT OF 900

#### 3-4 ALTITUDE

1.)OPERATION 10 000 FEET

2.)STORAGE 40 000 FEET

#### 4-0 EMI/EMC REQUIREMENTS

THE RADIATED AND CONDUCTED EMISSIONS OF THIS AC ADAPTER COMPLIES WITH THE REQUIREMENTS OF THE FCC PART 15 CLASS B EN 55022 CLASS B

#### 5-0 RELIABILITY

THE POWER SUPPLY SHALL BE DESIGNED AND PRODUCED TO HAVE A MEAN TIME BETWEEN FAILURES(MTBF) OF 30000 OPERATING HOURS AT 90% CONFIDENCE-LEVEL WHILE OPERATING UNDER THE FOLLOWING CONDITIONS  
TEST CONDITION INPUT VOL. 220Vac AND 40 PCS OF UNITS FOR 30 DAYS BURN-IN AT FULL LOAD AND 40 AMBIENT WITHOUT FAILURE

#### 6-0 MECHANICAL FEATURES

##### 6-1 MOUNTING CONNECTOR

CABLE 1200+/-30mm

##### 6-2 WEIGHT

POWER ASS'Y : 253 GRAMS

##### 6-3 DIMENSION

121L X 60W X 35H mm

## 2. SAFETY

### 1-0 APPROVAL

THIS AC ADAPTER IS DESIGNED TO MEET BY FOLLOWING STANDARDS

1-1 UL , CUL , TUV, CE, CB, FCC, BSMI, EK, PSE, NORDIC

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