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TDK·Lambda

CUT75 Series

75W Dual or Triple Output Low Profile Power Supplies

https://product.tdk.com/en/power/cut
www.emea.lambda.tdk.com/cut



Medical Industrial Test Broadcast

The triple output CUT75 power supplies have two independent, isolated, converters, one for the main 5V output, and one for the auxiliary outputs. This topology provides several benefits - no minimum loading, enhanced load & line regulation and the ability to connect the auxiliary outputs in series to generate either a 24V or 30V output. The series is certified to both the IEC60601-1 and IEC62368-1 safety standards. Several mechanical configurations are available - open frame, an attached baseplate or with a baseplate and cover enclosure. Screw terminal blocks for the input and output connectors can also be selected.

Features	Benefits
• 3 x 5 Footprint With a Low 1.06" (27mm) Height	• Space Saving in End Equipment
• Output 1 Isolated From Outputs 2 & 3	• Flexible Utilization
• No Minimum Loading	• Reduced Load Regulation
• Open Frame, Baseplate or Enclosed Formats	• Versatile Mounting
• Three Year Warranty	• Low Cost of Ownership

Model Selector

Model		Voltage (V)	Adjustable Range (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV) (1)	Ripple Noise (mV)(1)
CUT75-522	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	+12	Fixed	3.0	36.0	600	240	150
	V3	-12	Fixed	1.0		600	240	150
CUT75-522	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	24	Fixed	1.0	24.0	750	300	150
	(Leave common terminal unconnected)							
CUT75-5FF	V1	5	5 - 5.25	8.0	40.0	100	50	120
	V2	+15	Fixed	2.5	37.5	750	300	150
	V3	-15	Fixed	1.0		750	300	150
CUT75-5FF	V1	5	5 - 5.25	8.0	40	100	50	120
	V2	30	Fixed	1.0	30	750	300	150
	(Leave common terminal unconnected)							

CUT75-	522	/	A

Output voltage see model selector

blank	Open frame with JST connectors
/A	Cover with JST connectors
/B	Baseplate with JST connectors
/T	Open frame with screw connections
/TA	Cover with screw connections
/TB	Baseplate with screw connections

Preferred model

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Specifications

Model		CUT75-522	CUT75-5FF
Input			
Input Voltage Range(1)	V	85 - 265Vac or 120 - 370Vdc*	
Input Frequency	Hz	47 - 63	
Input Current(100/200Vac)	A	2 / 1	
Inrush Current at 200Vac (typ) (Cold Start)	A	36	
Leakage Current (265Vac 50Hz)	mA	less than 0.3	
Hold Up Time(typ) at 110/220Vac Input	ms	20	
Efficiency (200Vac)	%	85	85
Conducted & Radiated EMI	-	EN55011/EN55032-B, FCC Class B	
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11	
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, IEC/EN/ES/CSA60601-1, CE Mark and UKCA Mark	

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	Air ±15kV and contact ±8kV	A	See IEC61000 immunity test report on website
Radiated Susceptibility	EN61000-4-3	80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	±4kV	A	
Surge	EN61000-4-5	Normal ±2kV Common ±4kV	A	
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11	30% 500ms 60% 10ms 100% 20ms 100% 5000ms	B B B B	

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Specifications

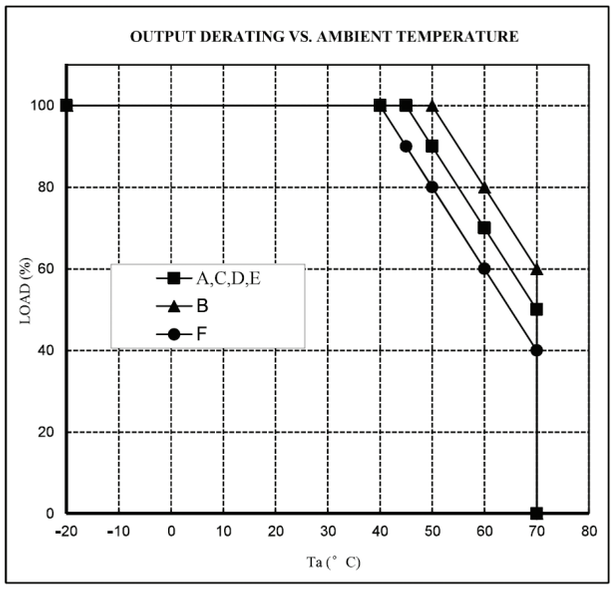
Model		CUT75-522	CUT75-5FF
Output			
Output Voltage Adjustment	-	See model selector table	
Switching Frequency	kHz	100	
Load Regulation	-	See model selector table	
Ripple & Noise	-	See model selector table	
Temperature Coefficient	%/°C	V1: <0.02, V2 & 3 <0.03 (-20 to +70°C)	
Minimum Load	-	No minimum load required	
Overcurrent Protection	%	>105. Hiccup with auto recovery	
Overvoltage Protection(2)	-	V1: 5.7-7.0, V2: 13.8 - 16.8	V1: 5.7-7.0, V2: 17.2 - 21.0
Remote Sense	-	-	
Remote On/Off	-	-	
Parallel Operation	-	Not possible	
Series Operation	-	Not possible	
Environmental			
Operating Temperature(3)	°C	-20 to +70 (See derating drawing for open frame model)(3)	
Operating Humidity	%RH	5 - 95 (Non Condensing)	
Storage Temperature	°C	-30 to +85	
Humidity (non condensing)	%RH	5 - 95	
Cooling	-	Convection cooling	
Altitude	m	3000	
Withstand Voltage (For 1 minute)	Vac	Input to Ground: 2,000, Input to Output: 3,000, Output to Ground: 500, CH1 - V2/V3: 500	
Vibration (Non operating)	-	10-55Hz (Sweep for 1min.) 19.6m/s^2 Constant X,Y,Z 1 hour each	
Shock (Non operating, in package)	-	Less than 196.1m/s^2, 11ms	
Other			
Weight (Typ)	g	Open Frame: 210, Enclosed (/A): 400	
Size (LxWxH)	mm	Open Frame: 127 x 76 x 27 Enclosed (/A): 130 x 82 x 38	
Size (LxWxH)	Inches	Open Frame: 5.0 x 3 x 1.06 Enclosed (/A): 5.12 x 3.23 x 1.5	
Connectors	-	JST or screw terminal blocks (/T suffix)	
MTBF - JEITA RCR-9102B(4)	Hours	169,333	
Warranty	yrs	3	

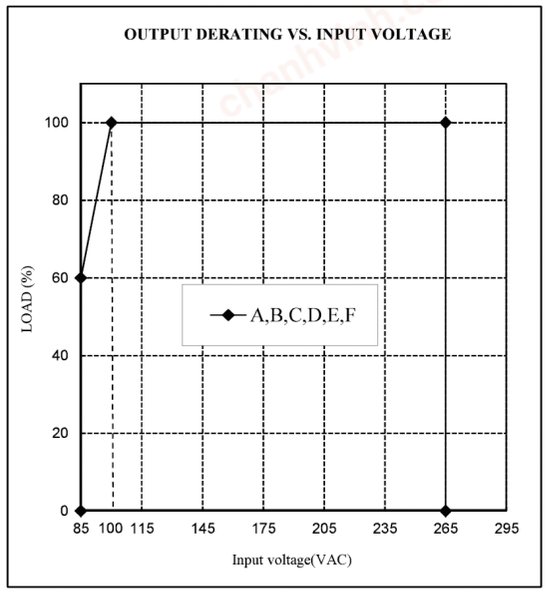
Notes
See website for detailed specifications, test methods and installation manual
* Safety certified for AC input only
(1) Derate linearly to 60% load from 100Vac to 85Vac input
(2) Cycle AC to reset
(3) See derating curves in installation manual for all mounting orientations and models
(4) Part count method, Ground Fixed

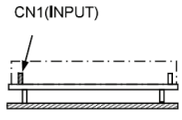
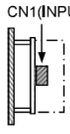
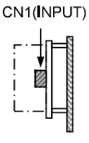
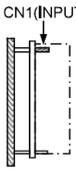
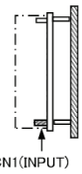
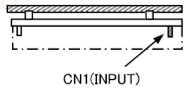
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CUT75 Open Frame Derating

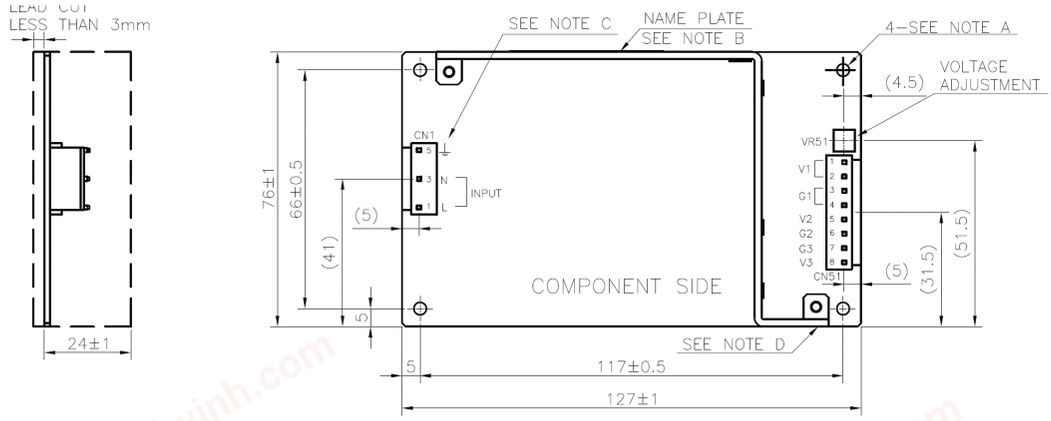
*COOLING: CONVECTION COOLING





(MOUNTING A)	(MOUNTING B) (STANDARD MOUNTING)	(MOUNTING C)	(MOUNTING D)	(MOUNTING E)	(MOUNTING F)
					

Outline Drawing CUT75 (Open Frame)



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 AND PINS(NOT INCLUDED WITH THE PRODUCT):

SOCKET HOUSING (CN1)	VHR-5N	JST	1
SOCKET HOUSING (CN51)	VHR-8N	JST	1
TERMINAL PINS	SVH-21T-P1.1	JST	11

HAND CRIMPING TOOL : YC-160R CN1,CN51 MANUFACTURER : JST

NOTES

A: THE 4-ø3.5 HOLE ARE CUSTOMER CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.

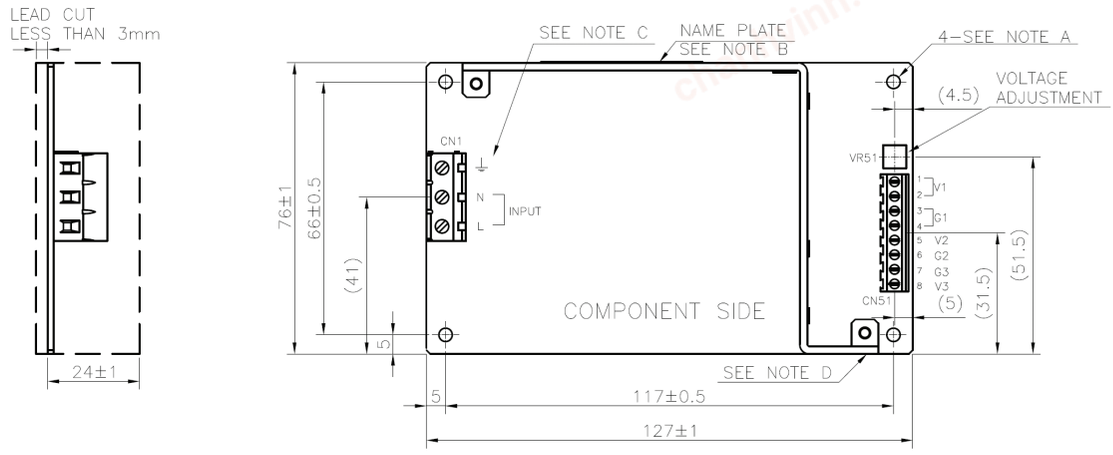
B: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, NOMINAL OUTPUT CURRENT, PEAK OUTPUT CURRENT AND SAFETY MARKING(FOR ONLY APPROVED PRODUCTS)ARE SHOWN ON THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS. COUNTRY OF MANUFACTURE WILL BE SHOWN ON THE NAME PLATE.

C: ⏚ IS FOR SAFETY GROUND CONNECTION.

D: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PC-BOARD EDGE AND CUSTOMER'S CHASSIS.

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Outline Drawing CUT75/T (Open Frame, Screw Terminals)



CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	TL402V-0754-03P-G12S	TIANLI	1
PIN HEADER(OUTPUT SIDE CN51)	TL100V-0755-08P-G12S	TIANLI	1

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

NOTES

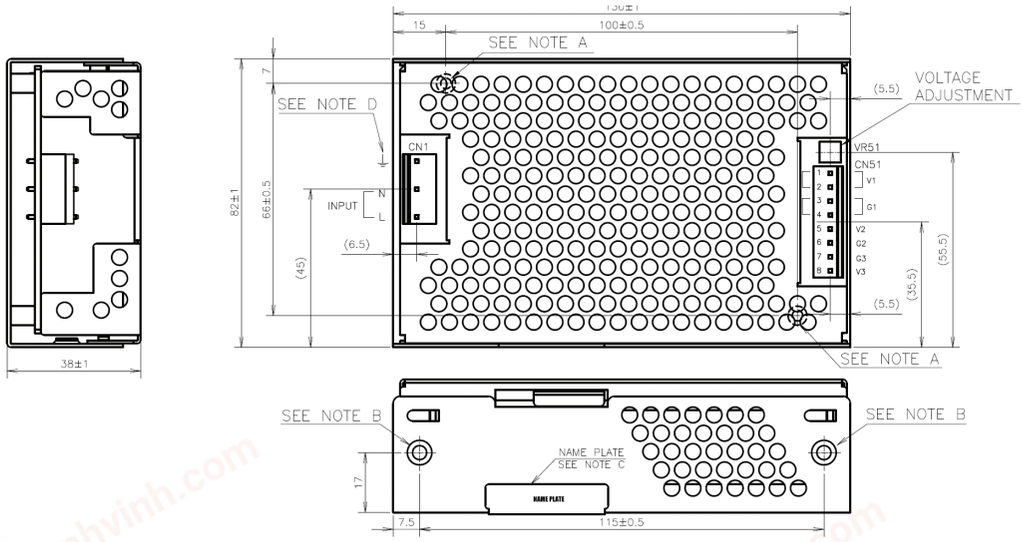
A: THE 4-ø3.5 HOLE ARE CUSTOMER CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.

B: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, NOMINAL OUTPUT CURRENT, PEAK OUTPUT CURRENT AND SAFETY MARKING(FOR ONLY APPROVED PRODUCTS)ARE SHOWN ON THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS. COUNTRY OF MANUFACTURE WILL BE SHOWN ON THE NAME PLATE.

C: ⏚ IS FOR SAFETY GROUND CONNECTION.

D: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PC-BOARD EDGE AND CUSTOMER'S CHASSIS.

Outline Drawing CUT75 /A (Enclosed)



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 AND PINS(NOT INCLUDED WITH THE PRODUCT):

SOCKET HOUSING (CN1)	VHR-5N	JST	1
SOCKET HOUSING (CN51)	VHR-8N	JST	1
TERMINAL PINS	SVH-21T-P1.1	JST	11

HAND CRIMPING TOOL : YC-160R CN1,CN51 MANUFACTURER : JST

NOTES

A: THE 2-M3 TAPPED & STANDOFF FOR CUSTOMER CHASSIS MOUNTING.SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 5mm.

B: THE 2-M4 EMBOSSED TAPPED & COUNTER-SUNK HOLES FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 8mm.

C: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, NOMINAL OUTPUT CURRENT, PEAK OUTPUT CURRENT AND SAFETY MARKING(FOR ONLY APPROVED PRODUCTS)ARE SHOWN ON THE NAME PLATE IN ACCORDANCE WITH THE SPECIFICATIONS. COUNTRY OF MANUFACTURE WILL BE SHOWN ON THE NAME PLATE

D: ⏚ IS FOR SAFETY GROUND CONNECTION.

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