

TDEK-HV-3000 SERIES
3000 WATT SINGLE OUTPUT
PROGRAMMABLE SWITCHING POWER SUPPLIES
11" x 6.7" x 2.5"
UNIVERSAL AC INPUT, RS232 CONTROL

APPLICATIONS

The TDEK-HV-3000 Series of Programmable Switching Power Supplies provides up to 3000 Watts of output power. Output Voltage and Current are adjustable from 0 to 105% making this Programmable Switching Power Supply ideal for Flexible, Reliable, Power Systems in OEM, Industrial and Laboratory applications. Available in stand alone or Rack Mount versions. Easily Customized or Modified to fit your exact needs.

STANDARD FEATURES

- Universal AC input / Full range (PFC)
- Programmable output Voltage (0% ~ 105%)
- Programmable output Current (0% ~ 105%)
- Forced Current Sharing
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A aux. O/P
- Global control via RS232
- Power OK Signal
- Remote ON/OFF, Remote Sense Function
- Protection: OVP, OLP, OTP, SCP, Fan Failure
- Parallel Operation

AVAILABLE OPTIONS

- Redundant Operation
- Rack / Panel Mount
- Ruggedized for Shock & Vibration
- 400Hz Operation
- Conformal Coating

SAFETY AND EMISSIONS

- Designed to meet UL/cUL60950-1; EN 60950-1
- Designed to meet EN55022; EN61204-3; EN6
- Designed to meet EN61000-3-2; EN61000-3-3
- Designed to meet EN55024; EN61204-3
- Designed to meet EN61000-6-1;
IEC 61000-4-2, 3, 4, 5, 6, 8, 11



SPECIFICATIONS

INPUT SPECIFICATIONS:

Input: AC Input Range 90-264VAC Single Phase

Note: 50% Load @ 90 VAC, 65% @ 115 VAC, 100% @ 180 - 264 VAC

Power Factor: 0.95 / 230VAC, 0.98 / 115VAC (Full Load)

Input Frequency: 47-63Hz

Inrush Current: 33A / 115VAC, 65 A / 230 VAC

Input Current: 20A / 115VAC, 15A / 230VAC

Efficiency: 88-93% typical (depending on output model)

Hold-up time: 14ms at full load (minimum)

Leakage Current: <1.0 mA maximum @ 240 VAC

OUTPUT SPECIFICATIONS

Adjustment Range: $\pm 5\%$ (minimum)

Minimum Load: none

Regulation: Line $\pm 1\%$ Load $\pm 1\%$

Ripple/Noise: 150 mV peak to peak maximum (20 MHz)

Overcurrent Protection: 105% of rated output power constant current limit.

Overvoltage Protection: 120% Vout

Overtemperature Protection: Heatsink Temp 85°C $\pm 5^\circ\text{C}$ Auto Recovery.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: - 20°C to + 50°C. (Full Output Power)

Storage Temperature: -40°C to + 85°C max

Cooling: Internal ball bearing DC fan

Humidity: 20-90% RH non condensing

Vibration: 10 - 500Hz, 2G 10 min / 1cycle for 60 min (3 axes)

Shock: 20 G Peak Acceleration

Weight: Approx.: 7.5 lbs

Size: 11" x 6.7" x 2.5"

MODEL SELECTION

MODEL NUMBER	VOLTAGE	CURRENT
TDEK-HV-3000-150	150V	0 - 20A
TDEK-HV-3000-200	200V	0 - 15A

MODEL NUMBER	VOLTAGE	CURRENT
TDEK-HV-3000-250	250V	0 - 12A
TDEK-HV-3000-300	300V	0 - 10A
TDEK-HV-3000-400	400V	0 - 7A

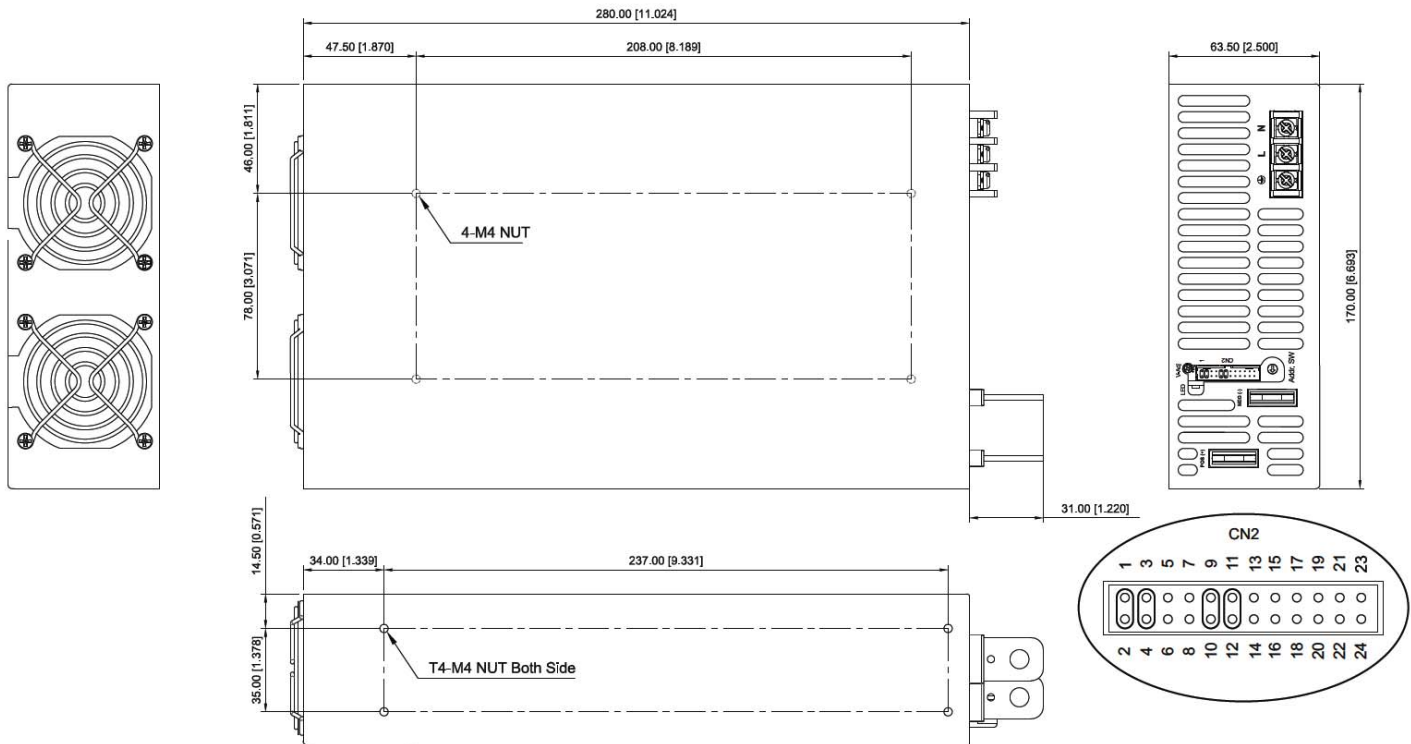
NOTE: OTHER VOLTAGES & CURRENTS AVAILABLE. CONSULT THE FACTORY.

OPTION DESIGNATIONS

- ORD	Redundant Operation
- CC	Conformal Coating
- MIL	Ruggedized/Militarized

- PNL	Panel Mount
- RK	Rack Mount
- 400Hz	400 Hz Operation

MECHANICAL OUTLINE



AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	ACL
2	ACN
3	⊥

Control pin number assignment (CN2): JST S24B-PHDS5 or equivalent

Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Mating Housing / Contact
1	VS+	9	EN-	17	AUX	JST PHDR-24VS or equivalent JST SPHD-002T-P0.5 or equivalent
2	VO+	10	GND	18	GND	
3	VS-	11	EN+	19	SCL	
4	VO-	12	AUX	20	SDA	
5	POK	13	ACI	21	AUX	
6	GND	14	GND	22	GND	
7	PAR	15	VCI	23	NC.	
8	VSET	16	GND	24	NC.	

CN2 Function Description

Pin No.	Function	Description	Pin No.	Function	Description	Mating Housing / Contact
1	VS+	Remote sense (+)	13	ACI	I Program	JST PHDR-24VS or equivalent JST SPHD-002T-P0.5 or equivalent
2	VO+	Positive output voltage	14	GND	Ground	
3	VS-	Remote sense (-)	15	VCI	V Program	
4	VO-	Negative output voltage	16	GND	Ground	
5	POK	Power OK	17	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	
6	GND	Ground	18	GND	Ground	
7	PAR	Parallel operation current share	19	SCL	Serial Clock used in the I ² C interface	
8	VSET	Aux output setting	20	SDA	Serial Data used in the I ² C interface	
9	EN-	Inhibit ON/OFF (-)	21	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	
10	GND	Ground	22	GND	Ground	
11	EN+	Inhibit ON/OFF (+)	23	NC.	For RS232 Receiver function	
12	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	24	NC.	For RS232 Transmission function	