

HiTRON

20-34VDC Input DC-DC Converter 3U Triple output 320 Watts VPX switching power supplies HDV320-24B-T120DE



Features

- VITA 62 Compliant 3U x 8HP VPX Power
- Wide operating temperature -40°C to 85 °C
- N+1 redundancy
- Active current sharing
- EMI meet EN 55032 / Class A
- Using 125°C Long Life Solid Capacitors



Specification

Input

Input Voltage	20-34VDC, nominal 24VDC
Input Current	(F-L) Typical 15.15A at 24VDC
	(N-L) Typical 0.55A at 24VDC

Soft Start	Installed
Inrush Current	Peak 15A at 34VDC
Input Connector	Tyco 6450849-7

Output

Output Connector	Tyco 6450849-7
Line Regulation	Typical 0.2%
Load Regulation	V1/V2/V3 typical $\pm 1\%$
Total Regulation	V1/V2/V3 typical $\pm 2\%$
Noise & Ripple	Typical 1% peak to peak
Remote Sense	Available at V1/V2/V3
Adjustability	Available at V1/V2/V3
Current Sharing	Available at V1/V2/V3

Protection

Over Voltage	Built-in at all outputs
Over Current	Built-in
Over Load	Typical 130% max. load at 24VDC fully protected against output overload or short circuit
Over Temperature	Installed NTC and thermostat
I/P-UVP & I/P-OVP	Installed
Input reverse volt.	Installed

General

Efficiency	Typical 88% at 24VDC(320W)
Switching Frequency	100, 135, 400, 400KHz
Dielectric Withstand	I/P-O/P: 2000VDC I/P-GND:1500VDC O/P-GND:1000VDC
Circuit Topology	Fix-flyback circuit
Transient Response	Peak transient < 300mV & recovers within 3mS for 25% load-change
Remote ON/OFF	Available
Power Fail Signal	Available
Power OK Signal	Available
DC OK	Available
N+1 Redundancy	Internal OR-ing devices
Power Density	7.93 Watts/Cubic Inch

Environmental

Operating Temperature	-40°C to +85°C with air flow and (note 3 & derating Chart) derating
Storage Temperature	-45°C to +90°C
Cooling	600LFM moving air

Safety/EMC

Emissions (conducted)	CISPR EN55032 Class A
Safety Standard	IEC60950-1 Class I
CE Standard	Meet Level 2 Criteria A

Notes:

- (1)All measurement are at nominal input, full load and +25°C unless otherwise specifications.
- (2)Due to requests in market and advances in technology, specifications subject to change without notification.
- (3)A warm-up time 10 minutes is required after cold start at temperature from -40°C to +0°C.
- (4)Tantalum capacitors connected to system is suggested for bettering Ripple & Noise against operating temperature from -40°C to +0°C.
- (5)125°C OS-CON Long-life Solid capacitors are installed in secondary circuits.

Output voltage & current rating chart

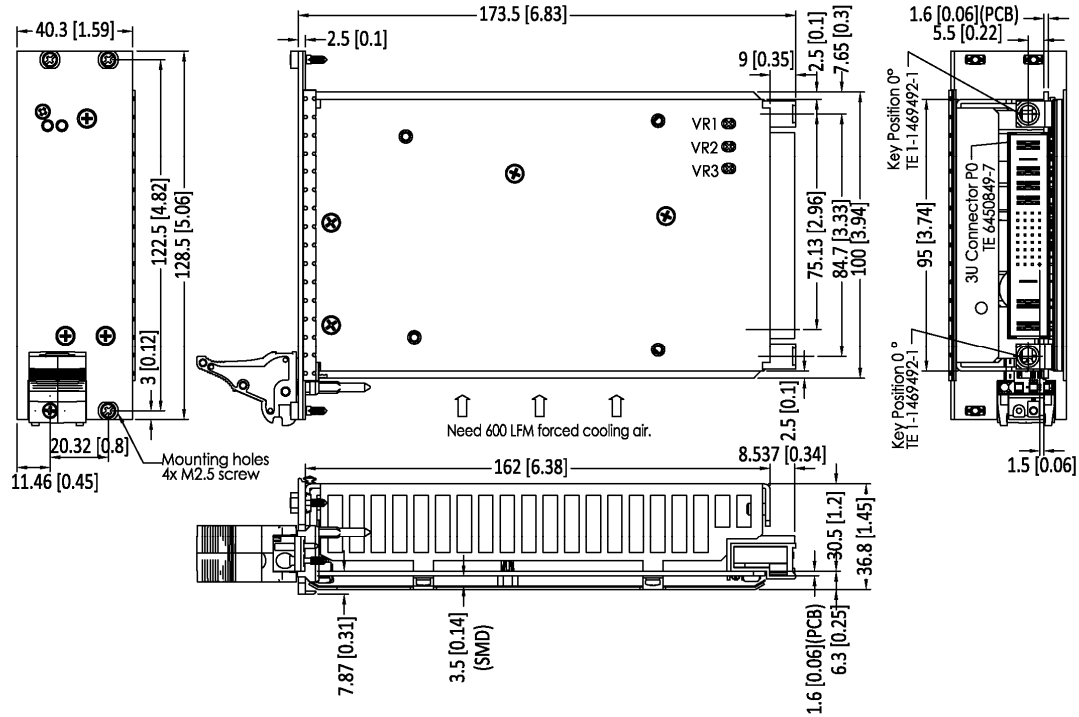
Triple Output

Model No.	V1★@#≡					V2★@#≡					V3★#≡				
	Min.	Typ.	Volt.	Max.	Peak	Min.	Typ.	Volt.	Max.	Peak	Min.	Typ.	Volt.	Max.	Peak
HDV320-24B-T120DE	0A/1A	23A	+12V	25A	28A	0A/1A	6A	+3.3V	8A	10A	0A/1A	6A	+5V	8A	10A

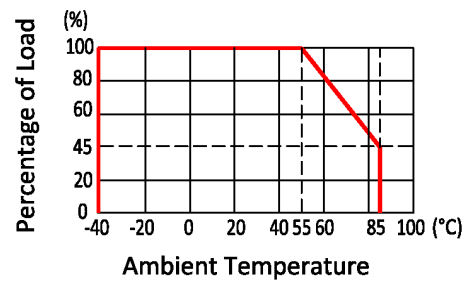
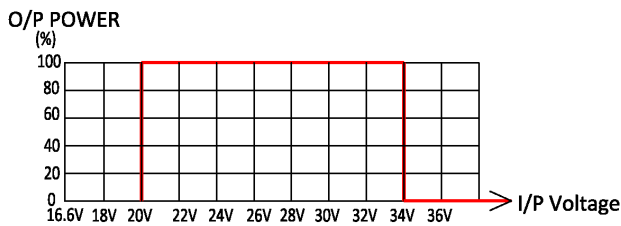
Symbol: "★" OVP built-in. "@#" Adjustable. "#" Remote sensing. "≡" Active Load Sharing.

Notes: (1) The minimum load is required when PSUs do run in parallel.

Mechanical Dimensions (All dimensions are in mm[inch])



Derating Chart



Pin assignment

P1	P2	LP1	D1	D2	D3	D4	D5	D6	D7	D8	P3	O4	O5	LP2	P6
DC IN-	DC IN+	PE	N/A	EN	PS Present	N/A	SDA	SYS RST	COM	Sense_Return	V3 PO3 +5V	COM	COM	V2 PO2 +3.3V	V1 PO1 +12V
			C1	C2	C3	C4	C5	C6	C7	C8					
			N/A	INH	Alert	N/A	SCL	N/A	VO3 Share	VO3 Sense					
			N/A	FAIL	N/A	N/A	GA1	N/A	VO2 Share	VO2 Sense					
			A1	A2	A3	A4	A5	A6	A7	A8					
			N/A	IP OK	N/A	N/A	GA0	DEG	VO1 Share	VO1 Sense					