



### Features :

- 4 x 2 x 1.16 Inches Form factor
- 200 Watts with Forced Air Cooling & 130 Watts Convection Cooling
- No Load Power < 0.5W
- -40°C to +70°C Operating Temperature
- 12V/0.5A Fan Output, Thermal Shut-Down feature
- Efficiencies up to 93 %
- Designed to meet IEC/ UL 62368-1 and IEC/ EN 60601-1

### SPECIFICATIONS:

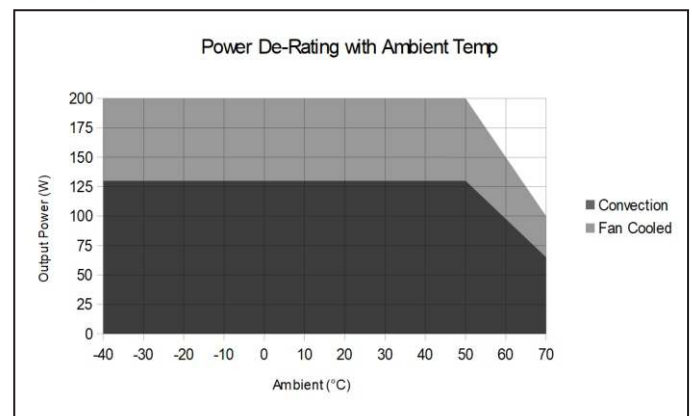
MODEL	OPS2x4-200-12	OPS2x4-200-15	OPS2x4-200-24	OPS2x4-200-48	
OUTPUT	NOMINAL DC VOLTAGE	12V	15V	24V	48V
	RATED CURRENT (CONVECTION)	10.83A	8.67A	5.42A	2.71A
	RATED CURRENT (FORCED AIR)	16.67A	13.33A	8.33A	4.17A
	RATED POWER (CONVECTION)	130W	130W	130W	130W
	RATED POWER (FORCED AIR)	200W	200W	200W	200W
	RIPPLE & NOISE (max)	<1% of Vout	<1% of Vout	<1% of Vout	<1% of Vout
	VOLTAGE ADJ. RANGE	12 to 14 V	15 to 17.5 V	24 to 28 V	48 to 56 V
	VOLTAGE TOLERANCE	± 1 %			
	LINE REGULATION	<1% of Vout			
	LOAD REGULATION	± 1 %			
	TURN ON TIME	<2 sec; at full load			
	HOLD UP TIME	>20 mSec at Vom in & >10 mSec at Vomax @ 115/230 VAC, Full Load			
	RISE TIME	<100 ms			
	FAN OUTPUT	A 12V, 0.5A output is available on a 2 pin connector header			
INPUT	VOLTAGE RANGE	90 - 264V AC (127 - 370V DC), Note : Can work up to 305 V AC			
	FREQUENCY RANGE	50/60 Hz			
	EFFICIENCY @ 230V AC	Up to 91 %	Up to 91 %	Up to 93 %	Up to 93 %
	AC CURRENT	2.0A @ 115V AC; 1.1A @ 230V AC			
	POWER FACTOR	> 0.95 at Full Load over entire input AC voltage range			
	INRUSH CURRENT	<60 Amps; Measured at 264V AC, 25°C Ambient, Cold start			
	LEAKAGE CURRENT	< 300 uA; 264Vac input			
	TOUCH CURRENT	< 100 uA; 264Vac input			
	NO LOAD POWER CONSUMPTION	< 0.5W			
PROTECTION	OVERLOAD	110% to 140% of rated output current; Hiccup type; Autorecovery			
	OVERVOLTAGE	17V DC ±1V DC	20V DC ±1V DC	31.5V DC ±1V DC	61V DC ±2V DC
	OUTPUT SHORT CIRCUIT	Latched type; Input AC power to be recycled to recover the power supply			
	OVER TEMPERATURE	Hiccup mode when output is shorted; Autorecovery type.			
SIGNALS	REMOTE INHIBIT	Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C; Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.			
ENVIRONMENT	OPERATING TEMP	Not Available			
	STORAGE TEMP	-40°C to +70°C; De-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C. Note : Only start up guaranteed at -40°C with spec deterioration.			
	COOLING	-40°C to +85°C			
	HUMIDITY	Natural convection cooled or Forced Air cooled as per power requirements.			
	ALTITUDE	5 to 95% RH, Non condensing			
	VIBRATION	2000m			
Component : 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					

MODEL		OPS2x4-200-12	OPS2x4-200-15	OPS2x4-200-24	OPS2x4-200-48
SAFETY & EMC	SAFETY STANDARDS	Designed to meet IEC/ UL 62368-1 and IEC/ EN 60601-1.			
	CLASS II OPTION (NO EARTH)	Available			
	DIELECTRIC WITHSTAND VOLTAGE	I/P to Earth : 1500V AC, I/P to O/P : 4000V AC, O/P to Earth : 1500V AC			
	CONDUCTED EMISSION	CISPR22; Class B			
	RADIATED EMISSION	CISPR22; Class A			
MECHANICAL	DIMENSION	Overall : 4" x 2" x 1.16" (LxWxH) ; Height above PCB : 1"			
	WEIGHT	<180 gms			
	MOUNTING	Open Frame			

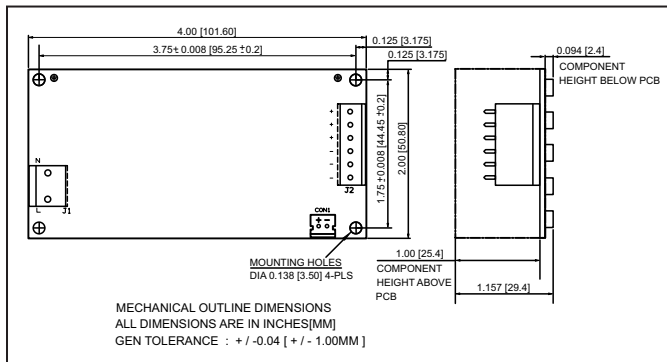
### Connectors details

Ref Des	Description	Type	Pin number	Function
J1	Input AC connector	Tyco : 640445-3;	1	AC Neutral
		Mates with 647402-3;	2	Not connected
		Pin : 3-647409-1	3	AC Live
J2	Output DC connector (option 1)	Tyco : 640445-6;	1,2,3	V1 positive
		Mates with 647402-6;		V1 negative
		Pin : 3-647409-1	4,5,6	V1 negative
J3	Fan connector	AMP : 640456-2	1	V2 positive
		Mates with 640440-2	2	V2 negative
-	Earth	Mounting holes marked with Earth Symbol	-	Earth

### De-rating curve



### Mechanical dimensions



**Note :** This open frame power supply should preferably be mounted horizontally on 4 metal stand-offs having diameter not more than 6mm and height not less than 5mm

### Ordering information

Product Code	Description	Certification
OPS2x4-200-12-A-1-CU	Open Frame Power Supply with 4 x 2 x 1.16" Form factor, 12V, 16.67A, 200 Watts with Forced Air Cooling & 12V, 10.83A, 130 Watts Convection Cooling	c(UL) US In Process
OPS2x4-200-15-A-1-CU	Open Frame Power Supply with 4 x 2 x 1.16" Form factor, 15V, 13.33A, 200 Watts with Forced Air Cooling & 15V, 8.67A, 130 Watts Convection Cooling	c(UL) US In Process
OPS2x4-200-24-A-1-CU	Open Frame Power Supply with 4 x 2 x 1.16" Form factor, 24V, 8.33A, 200 Watts with Forced Air Cooling & 24V, 5.42A, 130 Watts Convection Cooling	c(UL) US In Process
OPS2x4-200-48-A-1-CU	Open Frame Power Supply with 4 x 2 x 1.16" Form factor, 48V, 4.17A, 200 Watts with Forced Air Cooling & 48V, 2.71A, 130 Watts Convection Cooling	c(UL) US In Process