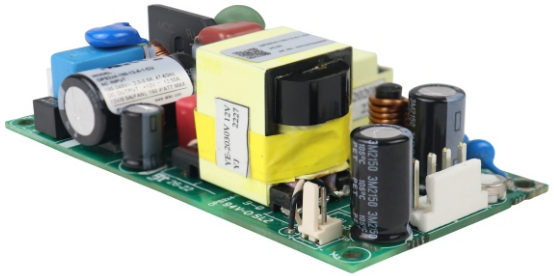
OP2038-V01

selec

OPS2x4-150-12-A-1-CU
Operating Instruction



FEATURES

- 4 x 2 x 1.34 Inches Form factor.
- 150 Watts with Forced Air Cooling & 110 Watts Convection Cooling.
- No Load Power < 0.5 W.
- Medical (BF) Safety Approvals.
- Approved to Household, ITAV and Medical standards.
- Dual Fusing.

INTENDED USE

This device is designed for the general professional use such as in instrumentation equipment, office, industrial control and communication as well as for medical equipments.
Do not use this power supply in equipment where malfunction may cause severe personal injury or threaten human life.

INPUT SPECIFICATIONS

INPUT VOLTAGE RANGE	100 - 240 VAC ± 10 %
FREQUENCY RANGE	47 - 63 Hz
EFFICIENCY (TYP.)	91 % @ 230 VAC
AC CURRENT (TYP.)	1.6 A @ 115 VAC; 0.8 A @ 230 VAC
INRUSH CURRENT (TYP.)	< 60 Amps; Measured at 264 VAC, 25°C Ambient, Cold Start
POWER FACTOR	> 0.93 @ Full Load Over entire input range

OUTPUT SPECIFICATIONS

OUTPUT VOLTAGE	12 - 13 VDC
OUTPUT CURRENT	Convection: 9.17 A Forced air (13 CFM): 12.50 A
RIPPLE AND NOISE	< 1 % of Vout *
LINE AND LOAD REGULATION	< ± 1 %
START UP TIME	< 2 sec @ Full Load Over entire input range
HOLD UP TIME	> 20 msec at convection load & > 10 msec at full load for nominal Vout

* Ripple & Noise measured at 20 MHz of bandwidth by using 0.1 uF & 10 uF parallel capacitor.

PROTECTIONS

OUTPUT OVER LOAD	110 % to 140 % of rated output current Protection type: Hiccup mode; Recovers automatically after fault condition is removed.
OUTPUT SHORT CIRCUIT	Hiccup mode when output is shorted; Recovers automatically after fault condition is removed.
OUTPUT OVER VOLTAGE	14.5 VDC ± 1 VDC Protection type: Latched; Input AC power has to be recycled to recover the power supply.
OVER TEMPERATURE	Power supply shuts down when the temperature of PCB below Transformer reaches typically 120°C; Turns ON only after the temperature falls to below 90°C typically and AC power is recycled there after.

ENVIRONMENT

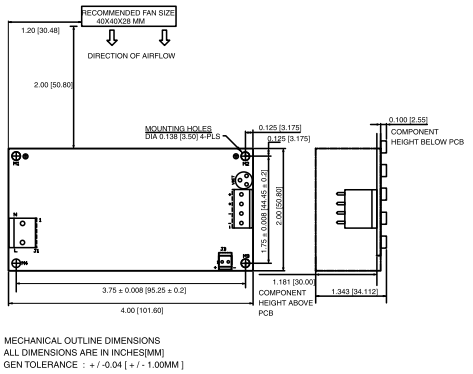
OPERATING TEMPERATURE	- 40°C to + 70°C (Refer datasheet for temperature de-rating)
STORAGE TEMPERATURE	- 40°C to + 85°C
HUMIDITY	5 to 95 % RH, Non Condensing
ALTITUDE	2000 m

SAFETY & EMC

SAFETY STANDARDS	Designed to meet IEC / EN / UL 62368-1; IEC / EN 60601-1; IEC / EN 61558
DIELECTRIC WITHSTAND VOLTAGE	I/P to Earth : 1500 VAC I/P to O/P : 4000 VAC O/P to Earth : 1500 VAC
INSULATION RESISTANCE	100 MΩ min. (between all outputs and all inputs / PE terminals) at 500 VDC
CONDUCTED EMISSION	CISPR32; Class B
RADIATED EMISSION	CISPR32; Class A
CURRENT HARMONICS	Class D
EMS IMMUNITY	Compliance to IEC61000-4-4, 5, 11

MECHANICAL

DIMENSION	4 x 2 x 1.34 inch (L x W x H)
UNIT WEIGHT	< 180 gms



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN INCHES[MM]
GEN TOLERANCE : + / -0.04 [+ / - 1.00MM]

Note: 1. This open frame power supply should preferably be mounted horizontally on 4 metal stand-offs having diameter not more than 6 mm and height not less than 7 mm.
2. Screws used to fix PCB on stand off should not have head diameter more than 6 mm.
3.Washer used should not have diameter more than 6 mm.

CONNECTOR DETAILS

Ref Des	Description	Type	Pin number	Function
J1	Input AC connector	Tyco: 640445-3; Mates with 647402-3; Pin: 3-647409-1	1	AC Neutral
			2	Not connected
			3	AC Line
J2	Output DC connector (Header type)	Tyco: 640445-4; Mates with 647402-4; Pin: 3-647409-1	1, 2	V1 Negative
			3, 4	V1 Positive
J3	Fan connector	Molex: 22-04-1021; Mates with 22-01-1022; Pin: 08-50-0113	1	V2 Positive
			2	V2 Negative
-	Earth*	Mounting holes marked with Earth symbol	-	Earth

Note:
*All the mounting holes marked with Earth symbol must be Earthed.

WIRING INSTRUCTIONS

1. To prevent risk of electric shock, power supply equipment must be kept OFF while wiring.
2. Terminals and electrically charged parts must not be touched when the power is ON.
3. Wiring shall be done strictly according to the connector details.

⚠ WARNING : Risk of electrical shock, fire, personal injury or death.

1. Do not use the power supply without proper grounding (Protective Earth)
2. Do not use in wet locations or in areas where moisture or condensation can be expected.
3. Make sure mains power supply is off before wiring the power supply unit. Make sure of correct wiring. Incorrect wiring may cause electrical shock or damage.
4. Do not touch the power supply during operation or immediately after turning off because some parts get hot or are at high voltage which may cause burns or electrical shock.
5. Do not install the power supply where human body may come into contact while power is supplied to the power supply.
6. Do not repair the power supply at user end. Modification or repairing of the power supply by users may cause electrical shocks, damage & other accidents.
7. If damage or malfunction occurs during operation, immediately turn off mains power.

MEANING OF PRODUCT SAFETY SYMBOL

	WEEE symbol for Electrical and Electronic Equipment waste management Symbole DEEE pour la gestion des déchets d'équipements électriques et électroniques

SAFETY INSTRUCTIONS

- This manual is meant for personnel involved in wiring installation operation & routine maintenance of the equipment.
- Disconnect power supply of your system before starting any installation operation or wiring.
- Improper installation operation or wiring may impair safety & failure of the unit or electrical shock or damage.
- Connect the ground completely. A protective earthing terminal stipulated in safety standards is used. Electric shock or malfunction may occur if ground is not connected properly.

? SERVICE DETAILS

This power supply is not field serviceable product. In case of failure or malfunction, send back the power supply to factory.
Please contact service center for repair on the following numbers:

Tel. No. : +91-7498077172;
Email : service@selec.com

NO WARRANTY ON UNIT DAMAGED DUE TO WRONG CONNECTION OF POWER SUPPLY.

(Specifications are subject to change, since development is a continuous process.)

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