OP1051-V03

selec **RPS480-48-CU**
Operating Instruction



FEATURES

- Supports 90 - 264 VAC / 127 - 370 VDC
- Power factor > 0.95 @ full load over entire input range
- Efficiency up to 94 %
- Protection against short circuit, overload, overvoltage & over temperature
- Cooling by free air convection
- UL 508 approved (E522848)

INTENDED USE

This device is designed for installation in an enclosure and is intended for the general professional use such as in instrumentation equipment, office, industrial control and communication .
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 %; 127 - 370 VDC (Refer datasheet for input de-rating)
FREQUENCY RANGE	50 - 60 Hz
EFFICIENCY (TYP.)	Up to 94 % @ 230 VAC
AC CURRENT (TYP.)	4.8 A @ 115 VAC; 2.4 A @ 230 VAC
INRUSH CURRENT (TYP.)	< 60 Amps; measured at 264 VAC, 25°C Ambient, Cold start
POWER FACTOR	> 0.95 @ Full load over entire input range

OUTPUT SPECIFICATIONS

OUTPUT VOLTAGE	48 - 56 VDC
OUTPUT CURRENT	10 A at 48 VDC; 8.57 A at 56 VDC
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 48 V & ≥ 12 msec at 56 V @ 115 / 230 VAC, Full Load
DC-OK CONTACT	30 VDC 1 A; 60 VDC 0.5 A; 125 VAC 0.5 A, resistive load; min. current 1mA
SERIES OPERATION	Possible for up to two power supplies (with external diode)

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

PROTECTIONS

INPUT FUSE	8 A - 250 VAC Internal
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	60 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 PFC choke reaches typically120°C; turns ON only after the temperature falls to below 90°C typically and AC power is recycled thereafter.

ENVIRONMENT

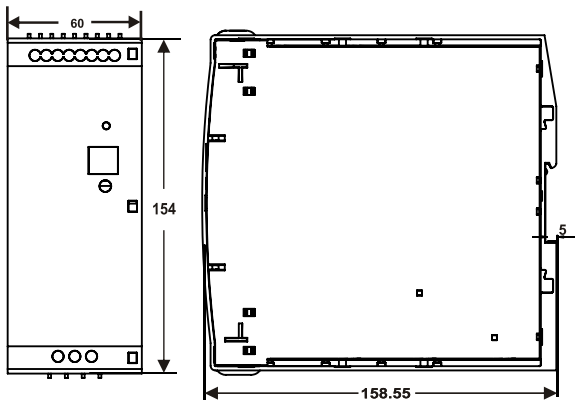
OPERATING TEMPERATURE	- 25°C to + 70°C *De-rate output power at 12 W /°C above + 50°C Ambient.
STORAGE TEMPERATURE	- 40°C to + 85°C
HUMIDITY	5 to 95 % RH, Non Condensing
ALTITUDE	2000 m

SAFETY & EMC

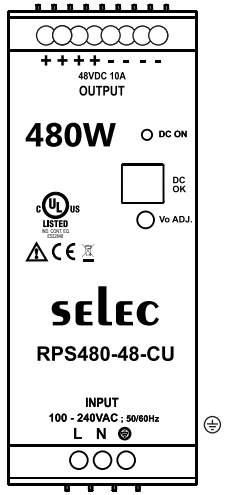
SAFETY STANDARDS	UL-508 approved (File number : E522848) Designed to meet IEC 62368-1
DIELECTRIC WITHSTAND VOLTAGE	I/P to Earth : 2500 VAC I/P to O/P : 4000 VAC O/P to Earth : 1500 VAC O/P to DC-OK : 500 VAC
INSULATION RESISTANCE	100 MΩ min. (between all outputs and all inputs / PE terminals) at 500 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	60 x 154 x 158.55 mm (W x H x D)
WEIGHT	1050 gms



WIRING DIAGRAM



PE (Protective Earth) Input

WIRING INSTRUCTIONS

Recommended Wire size and Torque

Connector	Wire size	Torque
Input	14 AWG	0.5 Nm
Output	19 AWG	0.5 Nm

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 terminal layout provided in the operating manual.

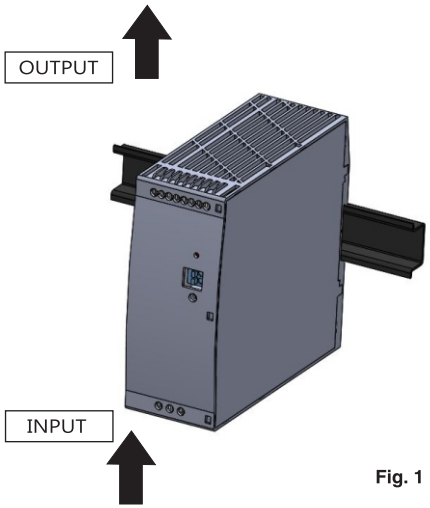


Fig. 1

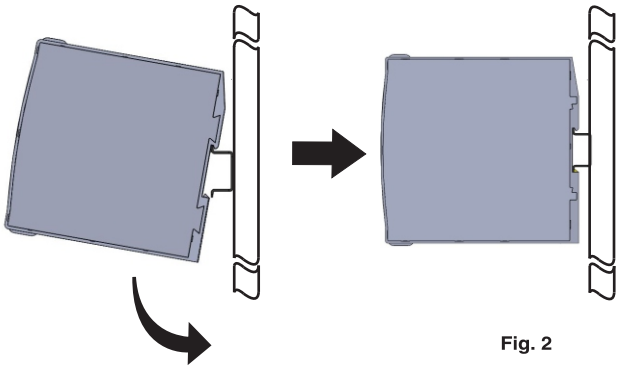


Fig. 2

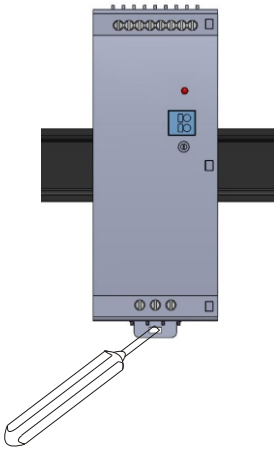


Fig. 3

INSTALLATION INSTRUCTIONS (POLLUTION DEGREE 2)

Attention: (Fig. 1)

1. Do not block the ventilation holes of power supply.
2. Keep at least 20 mm clearance around the switching power supply.
3. The Equipment should not be installed in environmental conditions other than those specified in this manual.

Mounting: (Fig.2)

1. Slightly tilt the unit to engage on the top side of Din Rail mounting.
2. Press it downward until it gets locked in Din Rail.

Removal: (Fig.3)

1. Before removing power supply unit from Din Rail ensure that supply has been switched off.
2. Unscrew all the wire connections of power supply unit.
3. Insert a screw driver into the mounting clamp slot & pull it down to remove the power supply from Din Rail.

⚠ 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

	Minor electric shock, fire or product failure may occasionally occur. Do not allow any pieces of metal or conductors or any clippings or cuttings resulting from installation work to enter the product. Un choc électrique mineur, un incendie ou une défaillance du produit peuvent survenir occasionnellement. Ne laissez pas de morceaux de métal ou de conducteurs ou de coupures ou de coupures résultant des travaux d'installation pénétrer dans le produit.
	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:

NO WARRANTY ON UNIT DAMAGED DUE TO WRONG CONNECTION OF POWER SUPPLY.
(Specifications are subject to change, since development is a continuous process.)

Selec Controls Pvt. Ltd.
Factory Address : EL-27/1, Electronic Zone, TTC Industrial Area, MIDC, Mahape, Navi Mumbai - 400 710, India.
Website : www.selec.com
For Sales & Support,
Tel. No. : +91-22-41418468 / 452
Mob. No. : +91-9136977315, **Email :** sales@selec.com
For Service,
Tel. No. : +91-7498077172 / +91-7400069545
Email : service@selec.com