

USER'S MANUAL (IFU)

TORQUE SERIES

DIGITAL HOME UPS

SSU-KoM
powered by innovation

Salient Features

- ◆ Micro Controller Based Digital Technology using MOSFETs.
- ◆ Very Fast Change Over Time.
- ◆ Run your Computer with other IT Equipments like Printer, Modem, Router etc.
- ◆ Extra Long Back-Up for Computers as Compared To Ordinary UPS.
- ◆ Fuzzy Logic Control based Battery Charger Technology.
- ◆ Reduces Frequency of Water Topping and Enhances Battery Life.
- ◆ Dual selection for Battery charging.
- ◆ Smart Overload and Short Circuit Protection with Auto-Reset.
- ◆ Automatic Low Battery Protection.
- ◆ Great Power Saving.
- ◆ User-Friendly Graphical Display.

GLOBAL CERTIFICATIONS:

ISO 9001 : 2000
ISO 14001:2004

R&D
Recognised
by
MINISTRY OF SCIENCE & TECHNOLOGY
GOVERNMENT OF INDIA

Before connecting, operating, or adjusting this unit, please read this instruction booklet carefully .

Customer Care : +91 - 11 - 44231111

CONTENT

❁ INTRODUCTION & SAFETY INSTRUCTIONS.....	1
❁ FRONT PANEL.....	2
❁ BACK PANEL & TROUBLE SHOOTING.....	3
❁ TECHNICAL SPECIFICATIONS.....	4

Welcome to **Su-Kam**

Dear Customer,

Congratulations!

We thank you for your trust in Su-Kam products. We take pride in our reputation for product quality and industry proven performance. We are confident that you will be fully satisfied with its performance and that it will serve your power back-up needs. This Torque Digital Home UPS has been developed using state-of-the-art Micro controller based digital technology and FLC (Fuzzy Logic Control) based battery charger.

Su-Kam is committed to continual product improvement and feel the best way to accomplish this task is by listening to our valued customers. This commitment gets strengthened every time you buy a Su-Kam product.

Please read this manual to become familiar with its features and various applications.

IMPORTANT SAFETY INSTRUCTIONS & PRECAUTIONS

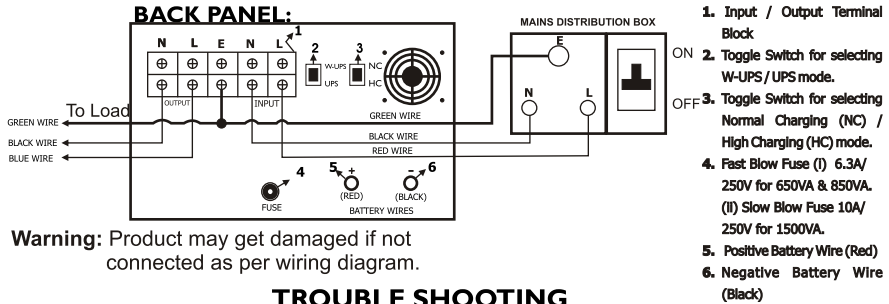
Before proceeding further kindly go through the safety instructions carefully.

1. Before using the Home UPS read all instructions and cautionary markings on the Home UPS, the Batteries, all appropriate section of this instruction manual.
2. Do not expose Home UPS to rain, liquids of any type. The Home UPS is designed for interiors only.
3. Do not disassemble the Home UPS, take it to a Su-Kam Engineering Service Center when service or repair is required.
4. To reduce risk of electric shock, disconnect all the wiring before cleaning.
5. Do not cover your Home UPS with any cover or cloth.
6. Do not install this Home UPS on or near flammable materials (plywood, chemicals, gasoline etc.).
7. Be extra cautious when working with metal tools on and around batteries. It could short-circuit the batteries or other electrical parts, producing a spark that could cause an explosion.
8. Never disconnect the battery cables while the Home UPS is working.
9. Do not switch on the heavy load like Refrigerators, Motor, Cooler, etc when Computer is running on battery backup mode.
10. We recommend that you have point to point wiring of the Home UPS.
11. This Home UPS must be connected to a proper earth, permanent wiring system.

FRONT VIEW:

On the front panel of the Digital Home UPS there is one Power Active switch and a graphical symbol panel, for indications.

1. **MAINS ON** : It's indicate that incoming mains is available display glow continuously. If mains fuse blown then display blinking with buzzer beep.
2. **INV.ON** : It's indicate that incoming mains is not available and output power is from Battery.
3. **BATT. CHARGING / CHARGED** : This white graphical glows intermittently during charging and glows continuously when battery is charged.
4. **O.L. / SHORT CIRCUIT** : This graphical symbol, shows that either Short circuit has occurred or there is overload on the Battery mode. The Digital Home UPS resets itself automatically and makes 8 attempts in case of overload and 4 attempts in case of short circuit. During overload or short circuit this graphical symbol glows and the buzzer gives a intermittent beeps.
5. **LOW BATT.** : Home UPS will shut down automatically after a few minutes. During this stage the graphical symbol glows and the buzzer gives continuous beep. The battery is discharged.
6. **POWER ACTIVE SWITCH** : The ON/OFF switch in the front is to be pressed inside to ensure that the Home UPS switch on in the event of mains failure and connected load is run by Home UPS.



TROUBLE SHOOTING

Symptoms	Rectifications
Main power is coming. Home UPS shows mains fuse blown on its display panel.	Reduce the load and replace or reset the fuse of specified ratings given at rear side of the Home UPS.
No power during backup mode.	(1) Check if low battery graphic symbol is glowing, switch OFF the Home UPS by power active switch. Allow the battery to charge when the mains is resumed before running the Home UPS on battery again.
Home UPS does not operate.	(2) Check if overload/short circuit graphic symbol is glowing. Reduce load and reset the Home UPS by Power Active switch.
Home UPS trips frequently at backup mode.	Check the battery connections and the mains connections Reduce the load and restart Home UPS through Power Active Switch.

Symptoms	Problem	Remedy
There is no output power	(1) Low Battery.	Check condition of batteries and recharge.
	(2) Loose or corroded batt. Connections.	Check and clean all connections.
	(3) Loose AC output connection.	Check all AC output connections.
System shuts down after 20 sec no display at all	Output of Home UPS is wired back to its own input.	Check for proper AC input and output wiring.
Low/High AC output voltage	Measuring with the wrong type Voltmeter.	Meter must be a true RMS reading meter.
Low surge power	Weak batteries, battery cable too long.	Refer to cable and battery recommendations in this manual.

TECHNICAL SPECIFICATIONS

MODEL	TORQUE	TORQUE	TORQUE
CAPACITY	650VA/12V	850VA/12V	1500VA/24V

VOLTAGE RANGE NARROW WINDOW-UPS MODE (185V-265V ± 10V)

Mains A.C. Low cut	185 ± 10V
Mains A.C. Low cut Recovery	190 ± 10V
Mains A.C. High cut	265 ± 10V
Mains A.C. High cut Recovery	260 ± 10V

VOLTAGE RANGE WIDE WINDOW-W-UPS MODE (105V-285V ± 10V)

Mains A.C. Low cut	105 ± 10V
Mains A.C. Low cut Recovery	120 ± 10V
Mains A.C. High cut	285 ± 10V
Mains A.C. High cut Recovery	275 ± 10V

OUTPUT PARAMETER

Mains Output Frequency	Same as Input (45 Hz-55Hz)
Output Frequency	50.0 Hz. ± 0.1 Hz
Output Voltage with Full Load	200V-230V ± 25V
Overload	Above 110%
Short Circuit protection	>250% Load (Few msec)

BATTERY CHARGING

FLC based SCR charging with Soft start over full range of mains 140V to 285V ± 10V	
Charging Current	9.0 ± 1.0 Amp, 13 ± 1.0 Amp For HC mode
Charging Boost Voltage	13.9V ± 0.2V each Battery
Charging Float Voltage	13.6V ± 0.2V each Battery
Battery Lower Voltage Cut	10.2V ± 0.2V each Battery (Depending on Load)
Recommended Battery capacity	100AH-200AH

Dimension (W X D X H) in mm	272 x 275 x 122	272 x 275 x 122	395 x 306 x 168
Weight(Kg)	8.3	9.3	17.2

SU-KAM OFFICES ADDRESSES

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PKG-ML- 162