USER'S GUIDE

LEONICS®

Wise 500

Wise 1000

MICROPROCESSOR CONTROLLED AUTOMATIC VOLTAGE STABILIZER

Authorized Distributor

LEN.MAN.STA.125 Rev.1.00/2007

LEONICS CO.,LTD A5043 ISO 9001

ISO 14001
EMS 01007/045

CONTENT

SAFETY INSTRUCTIONS

Please read carefully and follow this LEONICS Wise 500 and Wise 1000 guide.

Important : Please keep this manual for reference in order to use the LEONICS Stabilizer properly and safely. This user's guide contains instructions for installation, maintenance, operation and unit specifications.

If there are any symptoms of problems which are not mentioned in this guide or any queries, please contact your LEONICS local distributors, LEONICS Service Center, send e-mail to support@leonics.com or visit www.leonics.com.

For your convenience and quick reference for LEONICS Stabilizer service, please fill the requested information in the blanks below.

Stabilizer Model : _____

Serial Number : _____

Purchase date : _____

Purchased from : _____

1.1 Safety in handling Wise stabilizer

1.1.1 Handle the stabilizer with care.

1.1.2 The stabilizer is designed to be installed indoor in a dry, controlled temperature range of 0-45 degree C.

1.2 Electrical Safety

1.2.1 Do not work alone where there is danger of shock.

1.2.2 Contact with live conductors will cause burns and dangerous electric shock.

1.2.3 Please allow ONLY a certified electrician to wire your system permanently.

1.2.4 Periodically check your cable, outlets and power source to make sure that they are in good condition.

1.2.5 To reduce risk from electric shock, if you cannot find the electrical ground of the building, unplug the stabilizer from the AC source before plugging in yourload at the rear side of the stabilizer. Then, plug in the stabilizer to AC source.

1.2.6 Do not touch any metal parts of the loads when they are plugged into the stabilizer.

1.2.7 Use ONLY one hand when plugging and unplugging the load in order to avoid electric shock from touching two surfaces with different potential.

1.3 Safety guide for installation Wise stabilizer

1.3.1 Read this guide before installation.

1.3.2 To reduce risk from electric shock, use insulated tools and do not wear all jewelry such as rings, bracelets, etc during installation.

1.3.3 Wise stabilizer is designed for indoor use only.

1.3.4 Install Wise stabilizer in dry place with good ventilation, no fume, no chemical, no dust, no inflammable substances and no liquid. Avoid the place near radio transceiver devices, thermal expansion devices. Do not place it direct to sunlight.

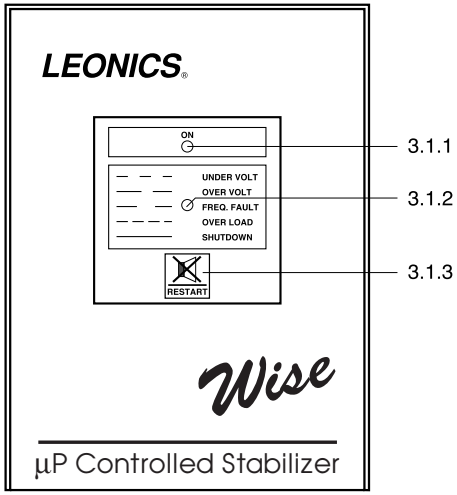
1.3.5 Install Wise stabilizer at least 20 cm from the wall for good ventilation and maintenance. Do not place anything on top of the stabilizer or block the ventilation grills because it has to release heat at all time.

INTRODUCTION

LEONICS Wise 500 and Wise 1000 is a microprocessor controlled stabilizer with high precision and high reliability. It supplies pure sine wave output. Moreover, it can detect electrical faults and voltage change in 0.01 second. It also consists of EMI/RFI protection, LED display and audible fault alarm.

FRONT AND REAR PANEL

3.1 Front panel

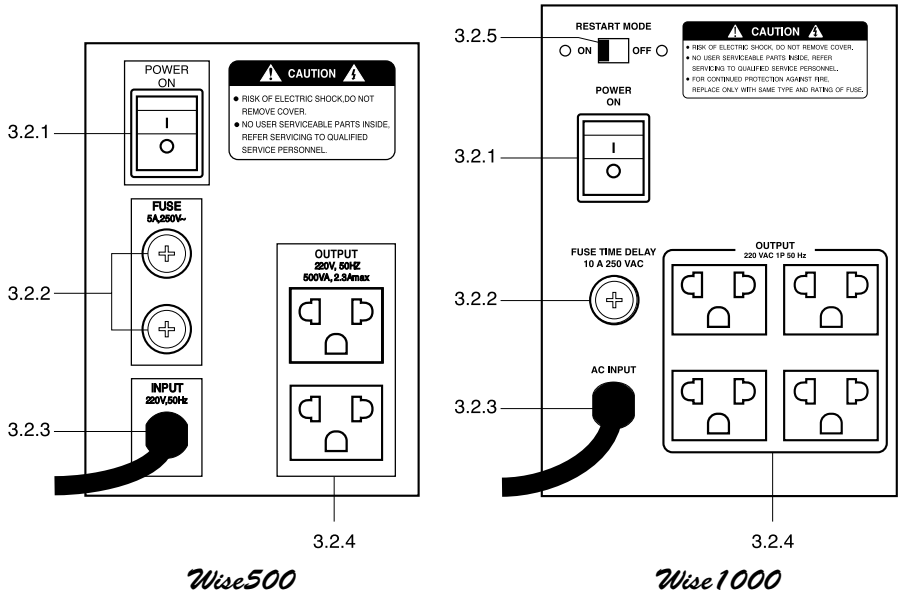


3.1.1 ON indicator lamp: indicates the utility line status.
Lit: Utility line is normal.
Blink or Off: Utility line is abnormal.

3.1.2 ALARM indicator lamp: indicates Wise stabilizer operating status along with audible alarm.
Lit for 0.4 sec. and off 3 sec. : Utility line voltage is too low (UNDER VOLT).
Lit for 3 sec. and off 0.4 sec. : Utility line voltage is too high (OVER VOLT).
Lit for 4 sec. and off 4 sec.: Frequency of the utility line is fault. (FREQ. FAULT).
Lit for 0.2 sec. and off 0.2 sec.: Loads which are connected to Wise stabilizer are exceed its rated capacity (OVER LOAD).
Lit continuously: Wise stabilizer is shutdown. It does not supply power to loads when overload or the utility line voltage is too low,(SHUTDOWN).

3.1.3 Mute/RESTART button: The button to mute alarm sound and to restart when Wise stabilizer does not supply power to loads by pressing and holding for 3 seconds.

3.2 Rear Panel



3.2.1 POWER switch: The switch to turn on and turn off Wise stabilizer.

3.2.2 FUSE holders: Fuses for protecting Wise stabilizer from over load and short circuit current.

3.2.3 INPUT power cord: The input power cord for connecting to utility line.

3.2.4 OUTPUT outlets: The outlets for connecting to electrical equipment.

3.2.5 RESTART MODE switch: The switch to select restart mode. If select ON (AUTO), the stabilizer will restart automatically. If select OFF (MANUAL), user need to press and hold RESTART button for 3 seconds to restart the stabilizer (available in Wise 1000 only).

INSTALLATION AND OPERATION

4.1 Plug electrical equipment power cords into Wise stabilizer OUTPUT outlets.
4.2 Plug INPUT power cord into the electrical outlet.
4.3 Turn on POWER switch at the rear panel and wait until ON indicator lamp is light up. Then turn on electrical equipment which connected to Wise stabilizer.
4.4 After use, turn off all electrical equipment which connected to Wise stabilizer and then turn off POWER switch at the rear panel.

TROUBLE SHOOTING

If the Wise stabilizer does not operate properly and you cannot solve the problem using the troubleshooting information in this user's guide, please contact your LEONICS local distributors, LEONICS Service Center, Send e-mail to support@leonics.com.

Symptoms	Possible causes	Solutions
ON indicator lamp does not light up and electrical equipment do not work.	INPUT power cord is not properly plugged into the electrical outlet.	Plug in INPUT power cord firmly.
	There is no input power in INPUT power cord.	Try to plug the INPUT cord into other electrical outlets. If problem persists, please contact us or our nearest service center.
	Fuses might be blown.	Check fuses in FUSE holders. If fuse is blown, replace with the same type and same rating fuse as mentioned above FUSE holders.

Symptoms	Possible causes	Solutions
ON indicator lamp blinks and alarm sound electrical equipment do not work.	The utility line voltage is out of range. The Wise Stabilizer cuts off to protect the electrical equipment from damages.	Wait until utility line voltage returns normal.
ON indicator lamp is lit, no audible alarm but electrical equipment do not work.	- Check the connections at OUTPUT outlets. - For model Wise 1000, user may set RESTART MODE switch at OFF.	1. Plug in electrical equipment input power cords firmly and check whether all electrical equipment are normal. 2. Press and hold RESTART button for 3 seconds to restart the stabilizer.
ON indicator lamp and ALARM indicator lamp are lit, alarm sound continuously alarms and cannot be mute.	The Wise Stabilizer is shutdown automatically because of overload.	1. Disconnect some electrical equipment until audible alarm stops. 2. Press and hold RESTART button for 3 seconds to restart the stabilizer.
ON indicator lamp is lit. ALARM indicator lamp blinks and alarm sound simultaneously (Lit for 0.2 sec. and off 0.2 sec.).	The electrical equipment which connected to Wise stabilizer are over the stabilizer rated capacity.	Disconnect some electrical equipment until audible alarm stops.

SPECIFICATIONS

MODEL		*Wise 500*	*Wise 1000*
RATED POWER		500 VA (500W)	1000 VA (1000W)
SYSTEM	UPS system	Microprocessor Controlled Static Electronic System	
	Number of tap change	6 taps	
	Tapping Technique	Zero current tap change	
INPUT	Voltage (single phase)	220 Vac -25%+23%	
	Frequency	50 Hz / 60 Hz ± 6% (auto sensing)	
	Wave form	Sine wave	
OUTPUT	Voltage (single phase)	220 Vac ± 5%	
	Frequency	Synchronize with input	
	Wave form	Sine wave	
	Total harmonic distortion	less than 0.3% THD	
	Overload capability	100% for continuous load	
		125% for 22 min.	
		150% for 11 min.	
		175% for 2 min.	
		200% for 44 sec.	
		more than 250% for 10 sec.	
	Crest factor ratio	6:1	
EFFICIENCY	AC to AC (at full load)	more than 96%	
SYSTEM	Overload	automatic shutdown with manual restart	
PROTECTION	Over / under voltage	automatic shutdown with auto restart	automatic shutdown with manual restart or auto restart (selectable)
	Frequency fault	audio and visual alarm	
	Short circuit	Fuse	
	Surge energy dissipation	320 Joules (6.5 kA)	
	Power dissipation	1,000,000 W within 100 microsec.	
	EMI/RFI dissipation	100 kHz - 80 MHz	
	Acoustic noise	Less than 30 dBA at 1 metre	
	Attenuation	more than 36 dBA	
INDICATOR	LED	power on, alarm (undervoltage, over voltage, frequency fault, overload, shutdown)	
AUDIBLE ALARM	Over load	— — — — —	0.2 sec. - 0.2 sec.
WITH RESET FOR	Over voltage	——— ——— ———	3 sec. - 0.4 sec.
SILENCE	Under voltage	— — —	0.4 sec - 3 sec.
	Frequency fault	——— ———	4 sec. - 4 sec.
	Overload shutdown	———————	
ENVIRONMENT	Temperature	0 - 45°C	
	Humidity	0 - 95% (non - condensing)	
DIMENSIONS	W x H x D	11 x 15 x 26 cm.	12 x 16.5 x 34 cm.
WEIGHT	Approximate	5.2 kg.	9.2 kg.

Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.