

NUMERIC®

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USER MANUAL

DIGITAL 1000 HR-V

IN-BUILT BATTERY

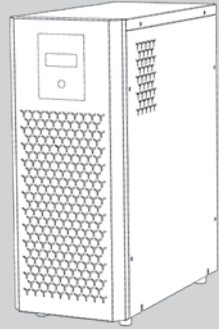


**NEW ENERGY
TO POWER**

www.numericups.com

CONGRATULATIONS!

We are delighted to welcome you to our family of customers. Thank you for choosing Numeric as your reliable power solution partner, you now have access to our widest network of 250+ service centers in the country. Since 1984, Numeric has been enabling its clients to optimize their business with top-notch power solutions that promise seamless and clean power with controlled environmental footprints. We look forward to your continued patronage in the years to come. This manual contains detailed instructions on how to use, install and operate this product.



Disclaimer

The contents of this manual are bound to change without prior notice. We have exercised reasonable care to give you an error-free manual. Numeric disclaims liability for any inaccuracies or omissions that may have occurred. If you find information in this manual that is incorrect, misleading or incomplete, we would appreciate your comments and suggestions. Before you begin the installation of the product, please read this manual thoroughly. The warranty of this product is null and void, if the product is abused/misused.

INTRODUCTION

This UPS is a compact unit which combines both the benefits of UPS and inverter for long-time operation. It can accept input voltage over a wide range and provide stable and pure power source to the connected devices such as personal computer, monitor and other precious 3C products.

- Simulated sine wave output
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Selectable charging current
- Auto restart while AC is recovering
- Off-mode charging
- Cold start function
- InBuilt Battery
- Ease of Installation.

IMPORTANT SAFETY INSTRUCTIONS

Save these instructions: This manual contains important instructions for this UPS that should be followed during installation and maintenance of the UPS and batteries.

- **CAUTION!** Do not drop any metal tool on the batteries. It could spark or short-circuit the batteries and could cause an explosion.
- **CAUTION!** Remove personal metal items such as rings, bracelets, necklaces and watches when working with batteries. Batteries can produce a short-circuit current high enough to melt metal, and could cause severe burns.
- **CAUTION!** Avoid touching eyes while working near batteries.
- **CAUTION!** Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- **CAUTION!** NEVER smoke or allow a spark or flame in vicinity of a battery.
- **CAUTION!** If a remote or automatic generator start system is used, disable the automatic starting circuit or disconnect the generator to prevent accident during servicing.
- **CAUTION!** The unit is designed for indoor use. Do not expose this unit to rain, snow or liquids of any type.
- **CAUTION!** To reduce risk of injury, only use qualified batteries from qualified distributors or manufacturers. Any unqualified batteries may cause damage and injury. Do NOT use old or overdue batteries. Please check the battery type and date code before installation to avoid damage and injury.

- **CAUTION!** Do not disassemble the unit. Contact with the qualified service center when service or repair is required.

WARNING!

Provide ventilation to outdoors from the battery compartment. The battery enclosure should be designed to prevent accumulation and concentration of hydrogen gas at the top of the compartment.

- **CAUTION!** Use insulated tools to reduce the chance of short-circuit when installing or working with the inverter, the batteries, or other equipments attached to this unit.

WARNING!

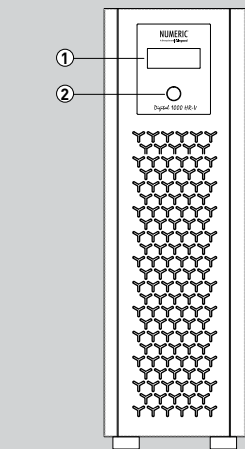
This equipment contains electronic components, which can produce arcs or sparks. To prevent fire or explosion do not install in compartments containing batteries or Flammable materials or in locations that require ignition protected equipment. This includes any space containing gasoline-powered machinery, fuel tanks, or joints, fittings, or other connection between components of the fuel system.

WARNING!

It is very important to use an appropriate external battery cable for the system's safety and its efficient operation. To reduce risk of injury, battery cables should be UL certified and rated for 75° C or higher. And do not use copper cables less than 10AWG. Check the external battery cable reference table according to system requirements.

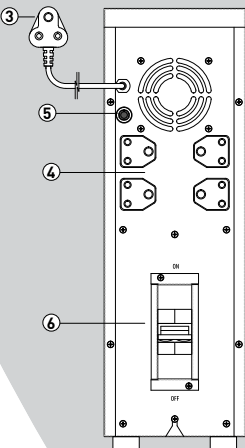
SYSTEM DESCRIPTION

Digital 1000 HR-V inbuilt 28Ah B01



Front panel

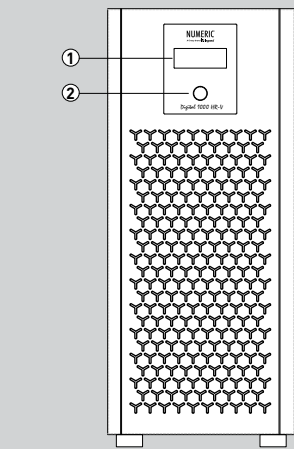
- 1. LCD Display
- 2. Power Switch



Back panel

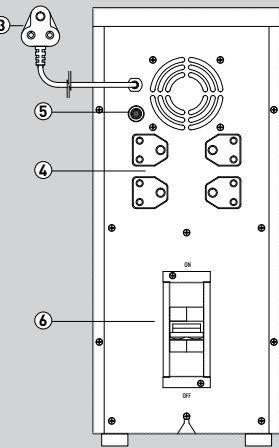
- 3. AC Input
- 4. Output Sockets
- 5. Circuit Breaker
- 6. Battery Breaker

Digital 1000 HR-V inbuilt 42Ah B01



Front panel

- 1. LCD Display
- 2. Power Switch



Back panel

- 3. AC Input
- 4. Output Sockets
- 5. Circuit Breaker
- 6. Battery Breaker

INSTALLATION AND OPERATION

1. Inspection

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged.

Checking Package Contents

You should receive the following items inside the package.

- UPS Unit with Battery
- User manual

Connect Internal Battery

The rating of the DC Breaker must be according to the Inverter's battery current (50Amp). Keep the Battery Breaker ON.

Note: For the user operation safety, we strongly recommend that you should use tapes to isolate the battery terminals before operating the unit.

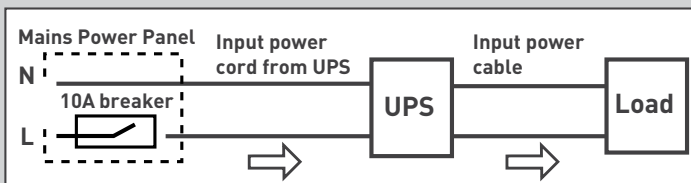
Table 2:

Model	Nominal Battery DC Voltage
Digital 1000 HR-V	12 VDC

Connect to Utility and Charge

Plug in the AC input cord to the wall outlet. The unit will automatically charge the connected external battery even though the unit is off.

Note: Circuit Breaker rating of the Branch Circuit supplied from the Mains Input panel sizing must be 10A/250VAC in accordance with National Electrical Codes and Standards as per schematic. (Based on N.E.C NFPA 70 -2014; Reference: Article 240)



Connect to Device

Simply plug devices to battery supplied sockets. During power failure, it will provide continuous power to connected devices.

SPECIFICATIONS

Model	Description	Digital 1000 HR-V
Capacity	VA/W	1000 VA/600 W
Input	Voltage	230 VAC
	Voltage Range	140 – 300 VAC
	Frequency Range	50 Hz
Output	AC Voltage Regulation (Batt. Mode)	230 V +/- 10%
	Frequency Range (Batt. Mode)	50 Hz +/- 1 Hz
	Transfer Time	Typical 4 – 8 ms
	Waveform (Batt. Mode)	Simulated Sinewave
Battery	Battery Capacity (In-built)	28AH / 42AH
	Battery Voltage	12 VDC
	Floating Charging Voltage	13.7 VDC +/- 1.0 VDC
	Maximum Charge Current	5A - 15A
Protection	Protection	Discharge, Overcharge and Overload Protection
Alarm	Battery Mode	Sounding every 10 seconds
	Low Battery	Sounding every second
	Overload	Sounding every 0.5 seconds
	Fault	Continuously sounding
Physical	Dimensions (DxWxH) (mm)	150 X410 X 467 (28Ah Battery)
		200 X 410 X 467 (42Ah Battery)
	Net Weight (Kgs)	23 / 29
Environment	Humidity	"0 to 90% Relative Humidity (Non – Condensing)"
	Noise Level	Less than 40 dB

*Product specifications are subject to change without further notice

TROUBLE SHOOTING

Use the table below to solve minor problems.

Problem	Possible cause	Remedy
Utility power is normal but the unit is in battery mode.	AC input power cord is not connected well.	Check AC input power connection.
	Input breaker is activated.	Reset the input breaker.
When power fails, the backup time is shortened.	The unit is overloaded.	Remove some non-critical loads.
	Battery voltage is too low.	Charge the unit at least 8 hours.
	Battery capacity is not full even after charging the unit for at least 8 hours.	Check the date code of the battery. If the batteries are too old, replace the batteries.
Nothing displays on the front panel when the utility power is normal.	The unit is not turned on.	Press power switch to turn on the unit.
	Battery is not connected well.	Check the Internal battery cable and terminal. Make sure all the battery connections to the unit are all correct.
	Battery defect.	Replace the batteries.
	Battery voltage is too low.	Charge the unit at least 8 hours.


IMPORTANT SAFETY WARNING

As dangerous voltages are present within the UPS, only NUMERIC technicians are permitted to open the UNIT to replace the failed / dead Batteries. Failure to observe this could result in electric shock risk and invalidation of any implied warranty.



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