

# **NUMERIC 2000 HR-V Digital In Built Battery User Manual**

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**NUMERIC 2000 HR-V Digital In Built Battery** 



# **Specifications**

• Battery Capacity: 28AH / 26AH

Nominal Battery DC Voltage: 24 VDC
 Output Voltage: 27.4 VDC +/- 1.0 VDC

Charging Time: 4 hoursMax Charging Current: 5A

• Display: LED display

• Protection: Discharge, Overcharge, and Overload protection

• Sound Alarms: Sounding every 10 seconds, every second, every 0.5 seconds, continuously sounding

• Dimensions: 200 X 410 X 467 mm

• Weight: 36.5 kg

• Standards: IS 16242 (Part1): 2014 / IEC 62040-1:2008

# Inspection

Before installation, inspect the unit to ensure nothing inside the package is damaged.

# **Connect Internal Battery**

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

For user safety, use tapes to isolate the battery terminals before operating the unit.

# **Connect to Utility and Charge**

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

Ensure the Circuit Breaker rating of the Branch Circuit supplied from the Mains Input panel sizing is 20A/250VAC.

#### **Connect to Device**

Simply plug devices into the battery-supplied sockets. It will provide continuous power to connected devices during power failure.

#### **FAQ**

1. Utility power is normal but the unit is in battery mode.

Possible Cause: AC input power cord is not connected well or Input breaker is activated.

2. When power fails, the backup time is shortened.

**Possible Cause:** The unit is overloaded, Battery voltage is too low, or Battery capacity is not full even after charging for at least 8 hours.

Nothing displays on the front panel when the utility power is normal.

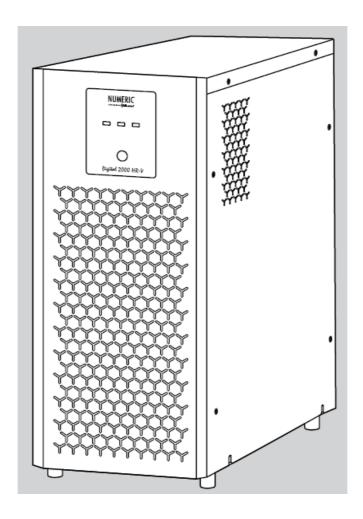
3. Possible Cause: The unit is not turned on.

#### **USER MANUAL**

## **DIGITAL 2000 HR-VIN-BUILT BATTERY**

#### **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.



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 computer peripherals, communication & consumer electronic products.

- Simulated sine wave output
- Ensuring high reliability through microprocessor-enabled controls
- Boost and buck AVR for voltage stabilization
- Selectable charging current
- · Auto restart while AC is recovering
- · Off-mode charging
- · Cold start function
- In-built 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 expired 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.

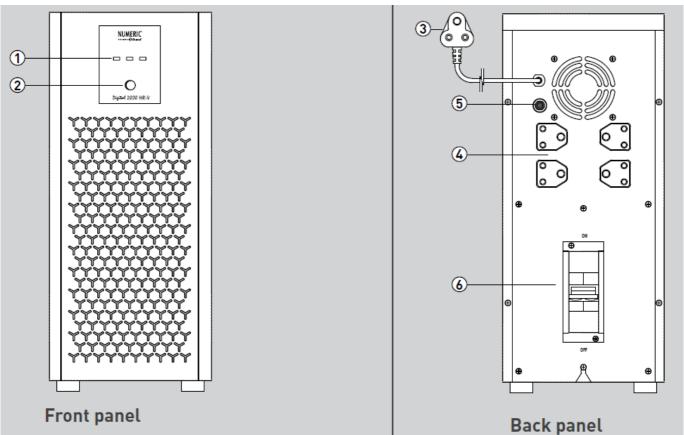
CAUTION! Use insulated tools to reduce the chance of short-circuit when installing or working with the inverter, the batteries, or other equipment attached to this unit.

## 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.

# SYSTEM DESCRIPTION

Digital 2000 HR-V in-built 28 AH (x2)



# Front panel

- 1. LED 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**

## **Connect Internal Battery**

The rating of the DC Breaker must be according to the UPS battery current (50 Amp). 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.

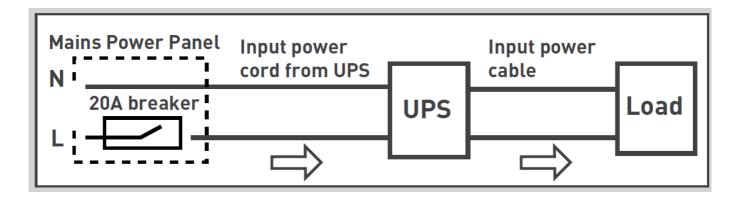
Table 2

Model	Nominal Battery DC Voltage
Digital 2000 HR-V	24 VDC

## **Connect to Utility and Charge**

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

Note: Circuit Breaker rating of the Branch Circuit supplied from the Mains Input panel sizing must be 20A/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 DIGITA	DIGITAL 2000 HR-V	
Capacity VA/W	2000 VA/1200 W	
INPUT		
Voltage	230 VAC	
Voltage range	140 – 300 VAC	
Frequency range	50 Hz	

OUTPUT				
AC Voltage regulation (Battery mode)	230 V +/- 10%			
Frequency Range (Battery mode)	50 Hz +/- 1 Hz			
Transfer time	Typical 4 – 8 ms			
Waveform (Battery mode)	Simulated sinewave			
Outlets	4 x India type 6 Amps			
BATTERY				
Battery capacity (In-built)	28AH / 26AH			
Battery voltage	24 VDC			
Floating charging voltage	27.4 VDC +/- 1.0 VDC			
Recharge time (to 90%)	4 hours			
Maximum charge current	5A			
DISPLAY				
Display	LED display			
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 (WxDxH) (mm)	200 X 410 X 467			
Net weight (Kgs)	36.5			
ENVIRONMENT				
Noise level at 1 m (dBA)	Less than 40 dBA			
Operating temperature	0 °C to +40 °C			
Protection index	IP 20			
Relative humidity (%)	0% to 95% (non-condensing)			
Storage temperature	-10 °C to +50 °C			
STANDARDS				
Safety Standards	IS 16242 (Part1): 2014 / IEC 62040-1:2008			

<sup>\*</sup>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	AC input power cord is not con nected well.	Check AC input power connection.
is in battery mode.	Input breaker is activated.	Reset the input breaker.
	The unit is overloaded.	Remove some non-critical loads.
When power fails,	Battery voltage is too low.	Charge the unit at least 8 hours.
the backup time is sh ortened.	Battery capacity is not full even after charging the unit for at le ast 8 hours.	Check the date code of the battery. If the batteries are too old, replace the batteries.
	The unit is not turned on.	Press power switch to turn on the unit.
Nothing displays on the front panel when	Battery is not connected well.	Check the Internal battery cable and terminal. Make s ure all the battery connections to the unit are all correc t.
the utility power is nor mal.	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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# **Documents / Resources**



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# References

- N Home | Numeric UPS
- User Manual

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