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## Model #: HTR22-3U

### Audio/Video Pure Sine Wave UPS - On-Line, Double-Conversion, Pure Sine Wave Power Management System

#### Highlights

- 2200VA/1600W on-line, double-conversion, extended-run UPS; rackmount hardware included
- 9 outlets; 2 switchable load banks
- IP remote access, control and diagnostics capability with email notification (built-in accessory slot, SNMPWEBCARD available separately)
- Zero transfer time to battery takes incoming AC power and remakes it into perfect output power with a pure sine wave
- Maintains sine wave 100/110 or 120V +/-2% output during overvoltages to 138 and brownouts as low as 65V (50/60Hz auto-sensing)
- Pure Sine Wave operation completely isolates connected components from power problems
- Drivers written for [Crestron](#) & [AMX](#) for seamless integration
- 2-year warranty; \$250,000 [Ultimate Lifetime Insurance](#) (USA & Canada only)



#### Description

Tripp Lite's HTR22-3U Pure Sine Wave 2200VA/1600W on-line, double-conversion UPS system prevents media data loss, equipment freeze-ups, downtime and equipment damage due to power outages, voltage fluctuations and transient surges. Provides full-time sine wave 100, 110 or 120V +/-2% output with zero transfer time between AC and battery operation. Actively converts raw incoming AC power to DC, then re-converts output back to completely regulated, filtered AC output. Operates continuously without using battery power during brownouts to 65V and overvoltages to 138V. Network-grade AC surge and EMI/RFI line noise suppression. Requires only 3 rack spaces (3U). Large internal batteries provide 18 min. half-load runtime and 6 min. full load runtime; runtime is expandable with optional BP72V15-2U and BP72V28RT-3U external battery packs. 2200VA/1600W power handling capacity is compatible with audio/video components and other sensitive electronic applications. Includes 9 UPS-supported outlets arranged in two switchable load banks that can be individually controlled via software interface to reboot selected equipment on demand or automatically shed less significant loads to extend battery runtime for more critical equipment. Supports real time UPS communications via DB9 serial port or SNMPWEBCARD slot for the ultimate in IP remote access, control and diagnostics capability with email notification. Supports detailed monitoring of equipment load levels, self-test data and utility power conditions via both network interfaces. Includes PowerAlert monitoring software and complete cabling. Multi-function audible alarms and front-panel LEDs provide at-a-glance notification of UPS and line power status. Attractive all-black color scheme. 2-year warranty; \$250,000 [connected equipment insurance](#) (USA & Canada only)

#### Applications

- Ideal for protection of AV systems, Crestron, AMX, HD sources, boardrooms, studios, houses of worship - FOH and other sensitive electronic equipment

#### Package Includes

- HTR22-3U Audio/Video Pure Sine Wave UPS System
- PowerAlert Software and cabling
- Optional-use NEMA 5-15P Plug
- Mounting hardware for 4-post rack enclosures

- Instruction manual with warranty information

## Features

- HTR22-3U Pure Sine Wave UPS provides perfectly regulated sine wave output within 2% of 120V under all usage conditions
- 2200VA/1600W power handling capacity compatible with control systems, HD sources, Audio/Video editing suites, digital consoles, DVD/music/PCs/servers, RAIDs, media centers, PVRs/DVRs, boardrooms, digital processors/EFX, racks and other sensitive electronics
- Removes harmonic distortion, fast electrical impulses, frequency variations and other hard-to-solve power problems not addressed by other UPS types
- Corrects line voltage conditions as low as 65V and as high as 138V back to 120V (+/-2%) values
- 2 switchable load banks (each with 4 outlets) enable remote outlet management for load shedding or remote reboot of individual devices from anywhere in the world
- Standard internal battery set offers 18 min. runtime at half load (800W) and 6 min. at full load (1600W)
- Optional BP72V15-2U external battery pack increases runtime to 98 min. at half load (800W) and 41 min. at full load (1600W); limit 1
- Optional BP72V28RT-3U external battery pack increases runtime to 160 min. at half load (800W) and 69 min. at full load (1600W); multi-pack compatible
- Fault-tolerant auto-bypass maintains continuous utility output to connected equipment, even in cases where the UPS suffers internal failure and requires maintenance
- Offers complete UPS monitoring through included DB9 interface or SNMP interface (requires optional SNMPWEBCARD), or the monitoring of any number of additional UPS systems over IP with included PowerAlert monitoring software
- PowerAlert UPS monitoring and unattended shutdown software enables configurable network broadcast messaging, pager and email notification, event logging and running user-defined script commands
- Front panel LEDs offer current monitoring and battery charge level information
- UPS ships fully assembled in full compliance with DOT regulations; no time-consuming connection of internal batteries by user required
- 2-year warranty; \$250,000 [Ultimate Lifetime Insurance](#) (USA & Canada only)

## Specifications

SYSTEM OVERVIEW	
Voltage compatibility	120 VAC
OUTPUT	
Output Volt Amp Capacity (VA)	2200
Output Watt Capacity (watts)	1600
Nominal Output Voltage(s) Supported	120v
Frequency compatibility	50 / 60 Hz
Frequency compatibility details	Output frequency matches input nominal on startup
Output voltage regulation (line mode)	+/- 2%
Built-in UPS output receptacles	4 5-15R outlet(s); 4 5-15/20R outlet(s); 1 L5-20R outlet(s)
Built-in controllable switched load banks	Two switchable four-outlet load banks (bank 1 - four 5-15R outlets, bank 2 - four 5-15/20R outlets)
Output circuit breaker	15A branch rated breakers (x2) protect 4 outlets each, L5-20R outlet is unbreakered
INPUT	
Rated input current (at maximum load)	16A

<b>UPS input connection type</b>	5-20P
<b>UPS Input cord length (ft.)</b>	10 ft.
<b>Recommended Electrical Service</b>	120V 30A dedicated circuit
<b>BATTERY</b>	
<b>Full load runtime (minutes)</b>	7 min. (1600w)
<b>Half load runtime (minutes)</b>	18 min. (800w)
<b>Expandable battery runtime</b>	Supports extended runtime with optional external battery packs <a href="#">BP72V15-2U</a> (limit 1) and <a href="#">BP72V28RT-3U</a> (multi-pack compatible)
<b>External battery pack compatibility</b>	<a href="#">BP72V15-2U</a> (limit 1); <a href="#">BP72V28RT-3U</a> (multi-pack compatible)
<b>DC system voltage</b>	72VDC
<b>Battery recharge rate (included batteries)</b>	Less than 6 hours from 10% to 80%
<b>Replacement battery cartridge (internal UPS battery replacement)</b>	<a href="#">RBC96-3U</a> (quantity 1)
<b>Battery Access</b>	Hot-swap battery replacement supported via front access panel
<b>Typical battery lifespan</b>	3-6 years, depending on usage
<b>VOLTAGE REGULATION</b>	
<b>Voltage regulation description</b>	On-line, double-conversion power conditioning maintains output within 2% of 100/110/120 volts at all times
<b>Overvoltage correction</b>	Maintains output of selected nominal +/-2% during overvoltages to 138V AC
<b>Undervoltage correction</b>	2% output voltage regulation during undervoltages to 80
<b>Severe undervoltage correction</b>	Maintains output within 2% of nominal during undervoltages to 65 (under 70% load only)
<b>LEDS ALARMS &amp; SWITCHES</b>	
<b>LED Indicators</b>	14 LEDs indicate line power, online mode, economy/bypass mode, on-battery, overload, battery low, replace battery and fault status information; 4-LED meter displays load and battery charge levels; LED panel rotates for viewing in rack/tower formats
<b>Alarms</b>	Multi-function audible alarm with distinctive ring patterns offer notification of backup operation (2 sec. on / 0.5 sec. off), low battery warning (1.25 sec. on / 0.5 sec. off), overload (sounds continuously), UPS fault (4.2 sec. on / 1 sec. off), input voltage out of frequency (2.1 sec. on / 0.14 sec. off) and high input voltage (2.1 sec. on 0.07 sec. off)
<b>Switches</b>	Power off/on switch and battery charge/load level display select switch
<b>SURGE / NOISE SUPPRESSION</b>	
<b>UPS AC suppression joule rating</b>	1014 joules
<b>EMI / RFI AC noise suppression</b>	Yes

AC suppression response time	Instantaneous
<b>PHYSICAL</b>	
Installation form factors supported with included accessories	4 post 19 inch rackmount (mounting rail kit included)
Installation form factors supported with optional accessories	2 post rackmount (2POSTRMKITWM); Tower (2-9USTAND)
UPS / Power Module dimensions in primary form factor (height x width x depth / inches)	5.2 x 17.5 x 20.5
UPS / Power Module dimensions in primary form factor (height x width x depth / cm)	13.3 x 44.4 x 52.1
UPS / Power Module weight (lbs)	74.9
UPS / Power Module weight (kg)	34
UPS Shipping dimensions (height x width x depth / inches)	13.5 x 24 x 25.8
UPS Shipping dimensions (height x width x depth / cm)	34.3 x 61 x 65.4
Shipping weight (lbs)	90.3
Shipping weight (kg)	41.0
UPS housing material	Steel
Cooling method	Built-in cooling fan
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature Range	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
Relative Humidity	0 to 95%, non-condensing
AC mode BTU / hr. (full load)	812.9
Battery mode BTU / hr. (full load)	885.6
<b>COMMUNICATIONS</b>	
Communications interface	DB9 Serial; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface

<b>WatchDog compatibility</b>	
<b>EPO port</b>	Supports Emergency Power Off function via set of dedicated built-in EPO jacks
<b>SNMP compatibility</b>	Slot for optional <a href="#">SNMPWEBCARD</a> accessory (Tripp Lite Model # <a href="#">SNMPWEBCARD</a> )
<b>Software and cabling included</b>	PowerAlert Software CD-ROM and complete cabling
<b>LINE / BATTERY TRANSFER</b>	
<b>Transfer time</b>	No transfer time (0 ms.) in online, double-conversion mode
<b>Low voltage transfer to battery power (setpoint)</b>	80V (100% load), 65V (
<b>High voltage transfer to battery power (setpoint)</b>	138
<b>SPECIAL FEATURES</b>	
<b>Cold Start (startup in battery mode during a power failure)</b>	Cold-start operation supported
<b>Appearance</b>	Attractive all-black color scheme
<b>CERTIFICATIONS</b>	
<b>Certifications</b>	Tested to UL1778 (USA), cUL (Canada), NOM (Mexico), FCC Class A (emissions)
<b>WARRANTY</b>	
<b>Standard warranty period</b>	2 years
<b>Connected equipment insurance (USA, Canada, Puerto Rico)</b>	\$250,000 (USA and Canada only)
<b>Optional Coverage</b>	3- and 5-year extended warranties, plus next day and on-site warranty coverage available for select opportunities. Contact Tripp Lite for additional information.

## Related Items

### Optional Products

Product Type	Related Model	Description	Qty.
Tower Stands	<a href="#">2-9USTAND</a>	Enables Tower Placement of Rackmount UPS Systems	-
Rackmount/Wallmount Kits	<a href="#">2POSTRMKITWM</a>	Enables 2-Post Rackmount or Wallmount Installation of Select Rackmount UPS Systems	-
External Battery Packs	<a href="#">BP72V15-2U</a>	BP72V15-2U - External Battery Pack for UPS System	-
External Battery Packs	<a href="#">BP72V28RT-3U</a>	BP72V28RT-3U - External Battery Pack for UPS System	-
Surge Protectors	<a href="#">DCATV</a>	Network Surge Suppressor - Essential protection for TV/VCR coaxial lines	-
Surge Protectors	<a href="#">DNET1</a>	Network Surge Suppressor - Essential protection for data and communication lines	-
Surge Protectors	<a href="#">DTEL2</a>	Network Surge Suppressor - Essential protection for data and communication lines	-

SNMP Accessories	<a href="#">ENVIROSENSE</a>	Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.)	-
Power Distribution	<a href="#">PDU1215</a>	Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment	-
SNMP Accessories	<a href="#">SNMPWEBCARD</a>	For remote monitoring and control via SNMP, Web, or Telnet.	-

More information, including related products, owner's manuals, and additional technical specifications, can be found online at [www.tripplite.com/en/products/model.cfm?txtModelID=3342](http://www.tripplite.com/en/products/model.cfm?txtModelID=3342).