

# Outdoor XUPs

Pure sine wave

Wide temperature batteries

Voltage regulation

## Outdoor XUPs model

### 600AHV

600 VA  
420 watts  
230 vac  
40 min @420W  
1.5 hrs @210W  
5 hours @50W  
-20° to +60°C;  
-40° to +60°C  
with optional  
battery heater

### 600BHV

600 VA  
420 watts  
230 vac  
1.3 hrs @420W  
3 hrs @210W  
10 hrs @ 50W  
-20° to +60°C;  
-40° to +60°C  
with optional  
battery heater

## Outdoor UPS with Voltage Regulation

The TSi Power Outdoor XUPs-600AHV/BHV units are constructed with extreme wide temperature batteries, and are housed in a weather protected IP44 (NEMA-3R) enclosure. These offer line-interactive automatic voltage regulation, over/under-voltage protection, surge protection with heavy duty noise filtering, communications capability and optional extended battery backup.

### Key Outdoor XUPs benefits

This rugged UPS design, with microprocessor-controlled 15kHz sine wave inverter and optional conformal coated boards, reduces the number of solid-state devices required for power conversion and is suitable for use in severe outdoor environments.

Outdoor XUPs extreme/wide temperature batteries allow operation of the UPS system over an ambient temperature range of -20° to +60°C (-4° to +140°F); -40° to +60°C (-40° to +140°F) with optional battery heater. Built-in automatic voltage regulation enables a wide input voltage window within which power is delivered without having to drain or exercise the batteries, thereby ensuring long battery life. A fan exhausts hot air to protect batteries and electronics.

Battery run-times for the OutdoorXUPs-600AHV are approximately 40 minutes at 420 watts load, 1.5 hours at 210 watts load, and 5 hours at 50W; for the OutdoorXUPs-600BHV, approximately 1.3 hours at 420 watts, 3 hours at 210 watts, and 10 hours with a 50 watts load.

### How the Outdoor XUPs works

The Outdoor XUPs Series UPS provides automatic voltage regulation with surge protection and noise filtering, as well as overvoltage protection with a threshold of 280 vac, and undervoltage protection with a threshold of 190 vac. Upon a brownout, overvoltage, or loss of power, the XUPs will transfer to battery power in less than 4 milliseconds, enabling uninterrupted operation of computer, telecom, surveillance, signaling or other systems.

LEDs provide visual assessment of UPS status. By unlatching, the front door swings open; inside the cabinet is an array of LED status indicators and a power on/off control switch.



### Typical applications

This heavy duty outdoor UPS system is ideal for protection of WiFi/GSM/CDMA/satellite base stations, wireless communications/perimeter surveillance and security/gate control systems, LED traffic light/roadway display systems and industrial remote terminal units (RTUs).

### Key Outdoor XUPs features

- Cabinet can be pedestal (ground), pole, or wall mounted
- Full weather outdoor protection IP44 (NEMA-3R) metal cabinet
- Pure sine wave output
- Over/under-voltage protection
- Remote power on/off (optional)
- Wide temperature batteries
- Heavy-duty surge protection and noise filtering
- Automatic voltage regulation
- Comprehensive array of status bargraphs for voltage, load and battery levels
- Two year warranty on electronics  
One year warranty on batteries



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# Outdoor XUPs



Outdoor line-interactive UPS with automatic voltage regulation and extreme/wide temperature batteries



Ac input and UPS output cable entry via two 25 mm (1") liquid-tight cable glands

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Specification	OutdoorXUPs -600AHV	OutdoorXUPs -600BHV
<b>Electrical</b>		
Capacity in VA (watts)	600VA (420W)	
UPS topology	High efficiency line-interactive with 15kHz PWM sine wave inverter	
<b>Input</b>		
Nominal voltage	230 volts ac	
Input current	2.5 amperes maximum @ 230vac	
Operating voltage	190 to 280 vac without using batteries	
Operating frequency	47 to 63Hz	
<b>Output</b>		
Nominal voltage	230 volts ac	
Voltage regulation	230 vac +/-8% upon changes in line or load.	
Crest ratio	3:1	
Output waveform	Pure sine wave, less than 3% THD with linear load	
Power efficiency	97%, under full load conditions	
Power on/off switch	On/off rocker style power switch	
Transfer time	<4 milliseconds	
Batteries	32 ampere hours, 24 vdc Wide temperature sealed gel-cells -20° to +60°C (-4° to +140°F); -40° to +60°C (-40° to +140°F) with optional battery heater.	64 ampere hours, 24 vdc
Battery backup time	40 minutes @ 420 watts load. 1.5 hours @ 210 watts load. 5 hours @ 50 watts load.	1.3 hours @ 420 watts load. 3 hours @ 210 watts load. 10 hours @ 50 watts load.
Recharge time	8 hours to 90% capacity after full discharge.	16 hours to 90% capacity after full discharge.
SNMP interface for UPS monitoring and automatic shutdown configuration (optional)	Using an external SNMP adapter, the RS-232 signals (from the DB-9 female connector) from the UPS can be converted to 10M/100M fast Ethernet signals (and RJ-45 connection) for external UPS monitoring/configuration capability using Telnet, web browsers, or NMS (for TCP/IP, UDP, SNMP, Telnet, SNTP, PPP, HTTP & SMTP protocols).	
Surge let-through voltages	Test pulse injection: Line-Neutral: Line-Ground: and Neutral-Ground. Combination Wave: L-N: 450V, L-G: 300V, N-G: 300V	
Status indicators	5 LED load level indicator: 0 to 100% of rated load. 5 LED battery charge level indicator from 0 to 100% of rated charge. 3 LED indicators for: in boost, buck or normal mode. 3 LED indicators for: inverter on/off, battery fault, and overload.	
Input/output connections	3 position terminal blocks provided for 3 x 1.5mm <sup>2</sup> (16AWG) connections via 25mm(1") liquid-tight cable glands.	
<b>Physical</b>		
Dimensions	610mm(24")wide x 305mm(12")deep x 762mm(30")high	
Weights	45kg(100 lbs)	68kg(150 lbs)
Steel cabinet	Full weather IP44 (NEMA -3R) outdoor design.	
Mounting options	Bolting or banding mountable to monopole via optional 'H' style bracket (steel mounting bands not included), pedestal (ground) with optional bottom mounted u-channel, or wall mountable via four wall mounting 'feet' which are included standard.	
<b>Environmental</b>		
Operating temperature, battery heater option and cooling method	-20° to +60°C (-4° to +140°F) ambient air temperature. -40° to +60°C (-40° to +140°F) with optional battery heater. Thermostat controlled exhaust fan.	
Moisture protection	Conformal coating of electronic boards for moisture resistance to protect against high humidity environments.	
<b>Warranty</b>		
Warranty	Two year limited warranty, parts and labor. One year battery warranty.	



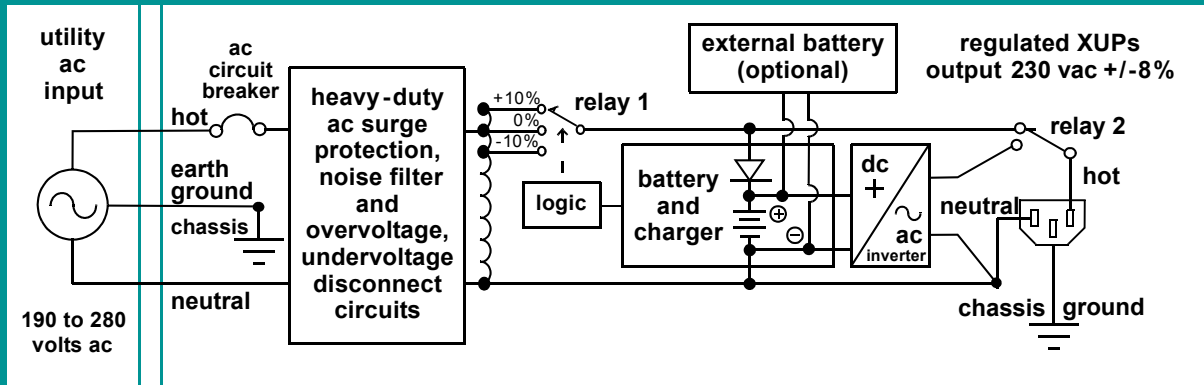
Outdoor  
**XUPs**



optional bandable or  
bolttable monopole  
mounting brackets



### OutdoorXUPs-600AHV/BHV system architecture



### OutdoorXUPs-600AHV/BHV at a glance

Heavy-duty outdoor UPS with line-interactive automatic voltage regulation and extreme/wide temperature batteries

- Wide ambient temperature range sealed gel-cell batteries: -20° to +60°C (-4° to +140°F); or -40° to +60°C (-40° to +140°F) with optional thermostat controlled battery heater
- 24vdc battery bus
- **40 minutes @ 420 watts load**, or 1.5 hours @ 210 watts load with **the OutdoorXUPs-600AHV**
- **1.3 hours @ 420 watts load**, or 3 hours @ 210 watts load with **the OutdoorXUPs-600BHV**
- 230vac +/- 8% output from 190 to 280vac input without going to batteries
- Weather protected IP44/NEMA-3R painted metal cabinet
- SNMP compatible (optional)
- Less than 4 ms transfer time
- Microprocessor-controlled 15kHz PWM sine wave inverter
- Thermostat controlled fan is included



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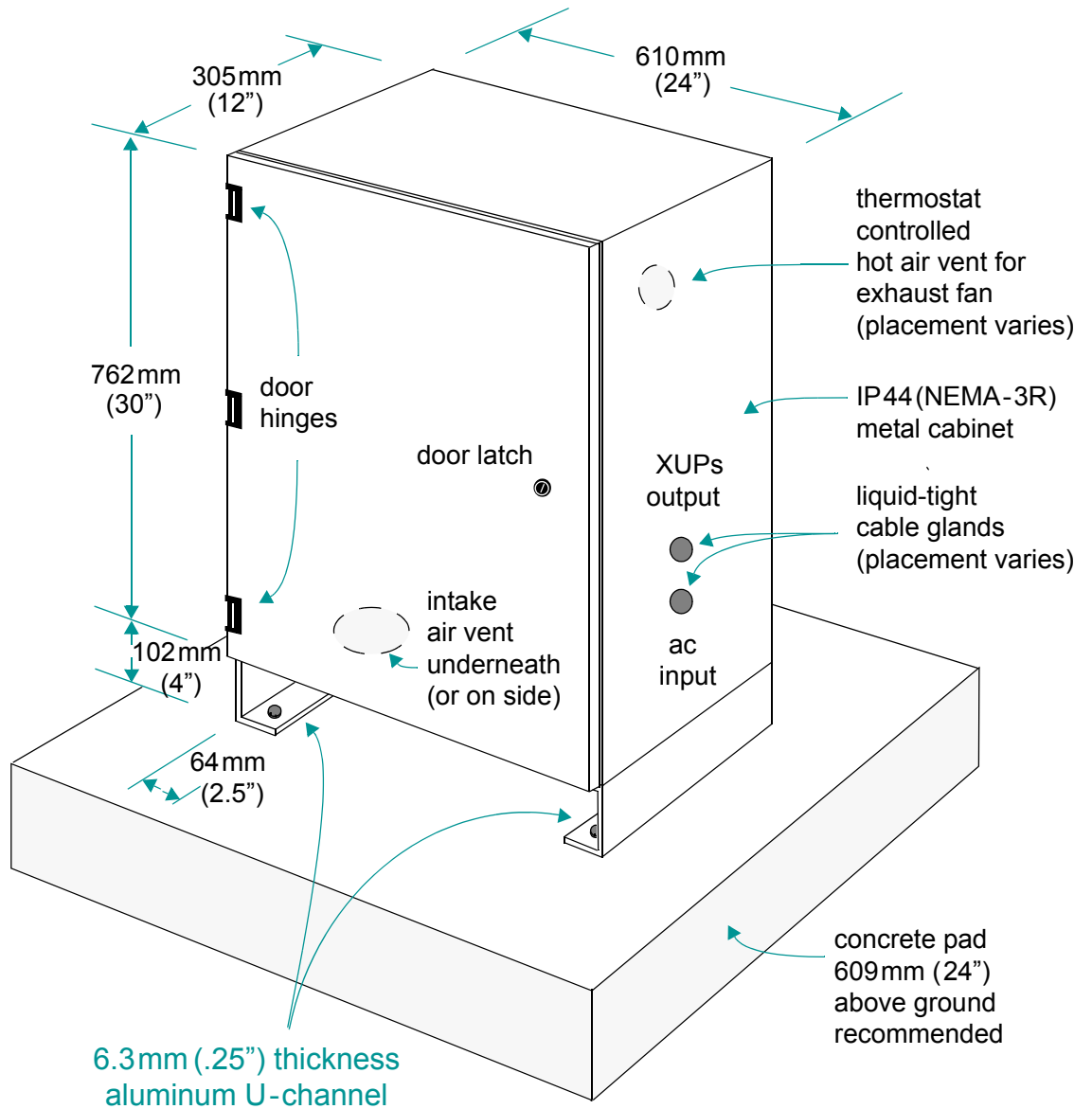
# Outdoor XUPs



## Mounting on a concrete pad with U-channel

Following is a drawing of a recommended pedestal/concrete pad mounted installation using the TSi Power aluminum U-channel mounting brackets. When ordered with these, the units will come with them already bolted to the bottom of the cabinet. There are four pre-drilled bolt holes that will then allow bolting of the unit to a concrete pad or other mounting surface, such as a Quazite® pad or Unistrut®.

## Outdoor XUPs pad mounted



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