

# Outdoor XUPs

Pure sine wave

wide temperature UPS (OEM version)

voltage regulation

## Outdoor XUPs model

**600CHV-OEM**  
*\*without batteries*

600 VA  
420 watts  
230 vac  
50/60Hz

*\*OEM version designed for use with six OEM supplied extreme/wide temperature batteries for 11 hrs @ 400W*

## Extreme wide temperature outdoor UPS with voltage regulation, and without batteries (OEM supplied)

The TSi Power Outdoor XUPs-600CHV-OEM is constructed for use with wide temperature batteries, and is housed in a weather protected IP44 (NEMA-3R) enclosure. This unit offers line-interactive automatic voltage regulation, over/under-voltage and surge protection with heavy duty noise filtering, communications capability and optional extended battery backup.

### Key Outdoor XUPs benefits

This rugged UPS design with conformal coated boards and microprocessor-controlled 20 kHz sine wave inverter reduces the number of solid-state devices required for power conversion and is suitable for use in severe outdoor environments.

Outdoor XUPs batteries are recommended to be special wide temperature batteries which allow operation of the UPS system over an ambient temperature range of -40° to +55°C. A thermostat controlled fan exhausts hot air, if temperature exceeds a preset limit, to protect batteries and electronics.

Expected battery run-time for the TSi Power Outdoor XUPs-600CHV-OEM (with six user supplied wide temperature batteries) would be approximately: 11 hours at 400 Watts load.

### How The Outdoor XUPs Works

The Outdoor XUPs-600CHV provides constant voltage regulation, surge protection, including an overvoltage threshold protection of 280vac, and an undervoltage threshold of 180vac. Upon a brownout, overvoltage, or loss of power, the Outdoor XUPs-600CHV will transfer to battery in less than 4 milliseconds, enabling uninterrupted operation of your telecom, surveillance systems, signaling or other outdoor systems.

LEDs provide visual assessment of UPS status. By unlatching the two latches, the front door swings open. Inside the cabinet, an array of LED status indicators and power on/off control switch are provided.



### 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 (RTU's).

### 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
- Automatic voltage regulation with over/under voltage protection
- Remote power on/off (optional)
- Designed for use with user/OEM supplied wide temperature batteries
- Heavy-duty surge protection and noise filtering
- Comprehensive array of status bargraphs for voltage, load and battery levels
- Two year warranty on electronics



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# Outdoor XUPs



Outdoor line-interactive UPS (*without batteries*) with automatic voltage regulation and designed for wide temperatures



Ac input and UPS output cable entry (two liquid-tight cable glands)

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Specification	OutdoorXUPs-600CHV-OEM ( <i>without batteries</i> )
<b>Electrical</b>	
Capacity in VA (watts)	600VA (420 watts)
UPS topology	High efficiency line-interactive with 20 kHz PWM sine wave inverter.
<b>Input</b>	
Nominal voltage	230 volts ac
Input current	2.5 amperes maximum @ 230vac
Operating voltage	180 – 280 vac without using batteries
Operating frequency	47 – 63Hz
<b>Output</b>	
Nominal voltage	230 volts ac
Voltage regulation	230 vac +/-8% for mains ac and battery modes, all operating conditions.
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
Battery recommended (User/OEM supplied) <i>Engineering will recommend based on excellent track record and high reliability.</i>	Recommended battery manufacturer/battery: Please call. (6) wide temperature batteries (-40° to +55°C ), 12vdc, 70AH. <b>Each</b> battery weighs 25kg, so six batteries will add 150kg, for a total system weight of about 200kg. Approximately 70% of the unit's internal space is left open for your battery placement. Batteries should be connected to provide 24 vdc. 210AH battery bank.
Battery back-up time	This UPS is designed to accommodate 11 hours @ 400 watts load.
Recharge time	Recharge time: 48 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 (most such external devices support TCP/IP, UDP, SNMP, Telnet, SNMP, PPP, HTTP and 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 connect.	Terminal blocks provided for 3 x 1.5 mm <sup>2</sup> (16AWG) via cable glands.
<b>Physical</b>	
Dimensions	610mm(24") wide x 305mm(12") deep x 914mm(36") high
Weights	46kg (100 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) or wall mountable. Four wall mounting 'feet' are included.
<b>Environmental</b>	
Operating temperature	-20° to +55°C (-4° to +131°F) ambient air temperature. Thermostat controlled exhaust fan. (Battery heater optional).
Moisture protection	Electronic boards are conformal coated for moisture resistance to protect against high humidity environments.
<b>Warranty</b>	
Warranty	Two year limited warranty, parts and labor (depot). (Does not include user supplied batteries).



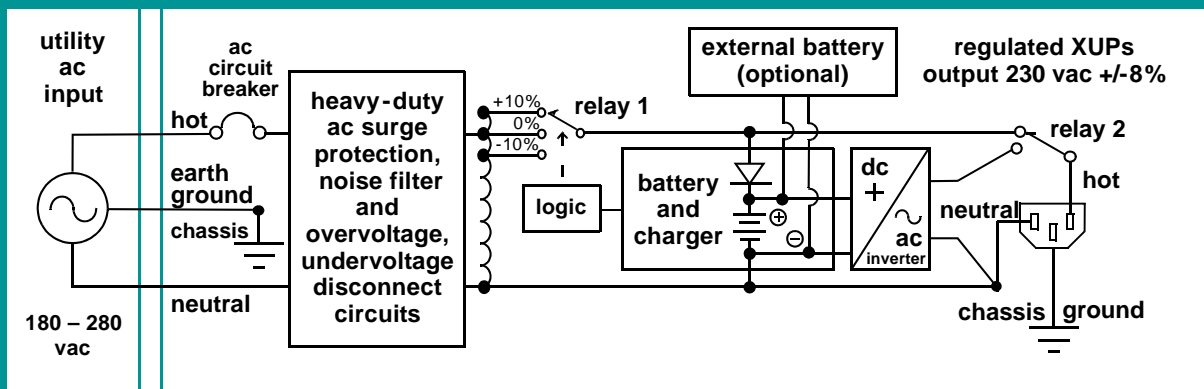
Outdoor  
**XUPs**



optional bandable or  
 boltable monopole  
 mounting brackets



### OutdoorXUPs-600CHV-OEM(without batteries) system architecture



### OutdoorXUPs-600CHV-OEM at a glance:

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

- Designed for a configuration of 11 hours @ 400 watts with user supplied batteries
- We recommend the use of wide ambient temperature range sealed gel-cell batteries: -40° to +60°C (-40° to +140°F)
- Thermostat controlled fan
- Microprocessor-controlled 20 kHz PWM sine wave inverter
- 230 vac +/- 8% output from 180 – 280 vac input without going to battery
- Weather protected IP44 (NEMA-3R) metal cabinet
- SNMP compatible (optional)
- Less than 4ms transfer time
- 24 vdc battery bus
- Comes without batteries



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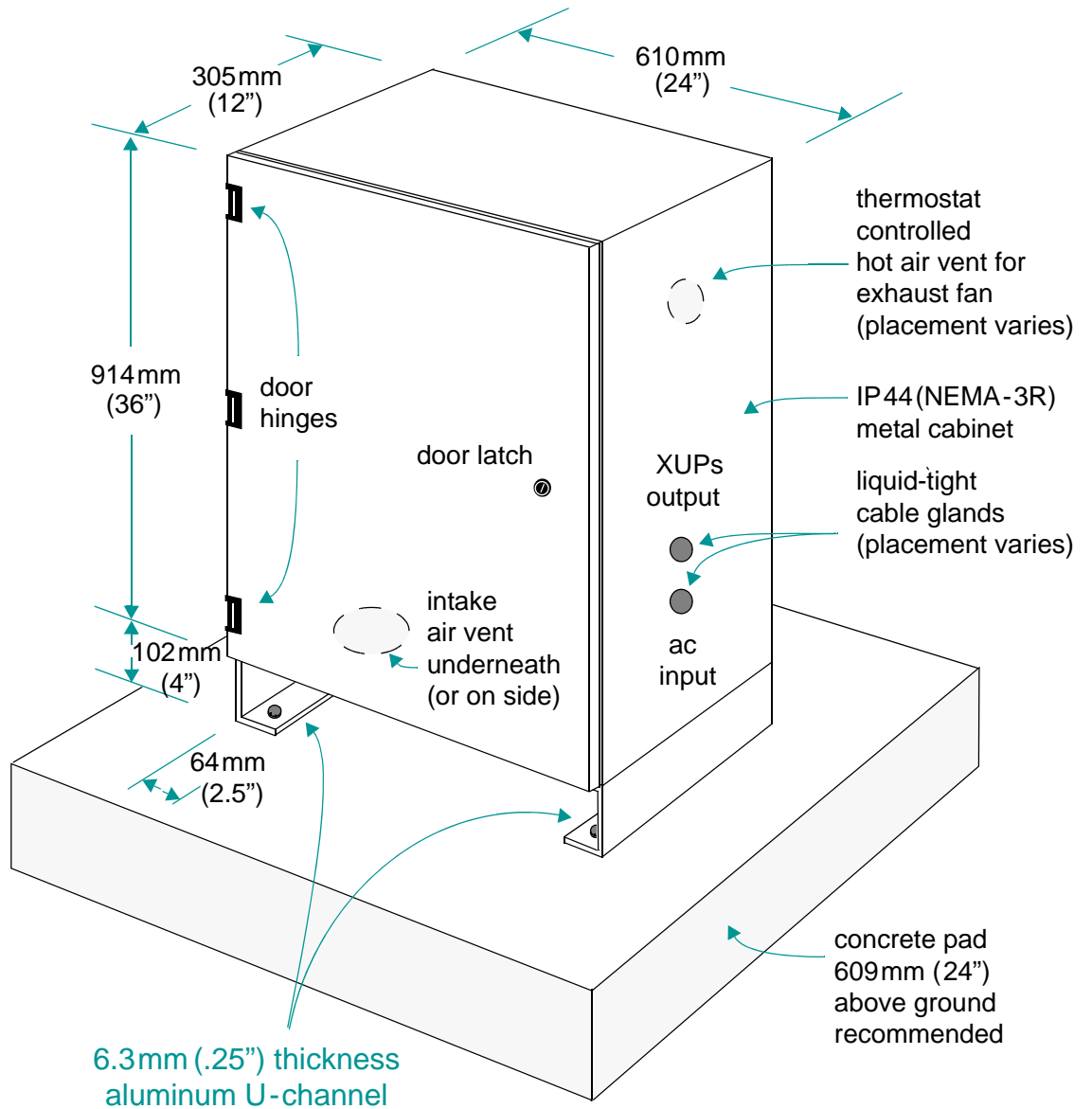
# Outdoor XUPs



## 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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