

# Outdoor UPS

Dc output

Wide temperature batteries

Wide ac input voltage window

## Outdoor UPS model

### 8013

96 watts  
input can be  
115 or 230 vac  
output is  
48 vdc  
2 hour @ 96W  
4 hours @ 48W  
-20° to +60°C;  
-40° to +60°C  
with optional  
battery heater

### 8014

96 watts  
input can be  
115 or 230 vac  
output is  
48 vdc  
4 hours @ 96W  
8 hours @ 48W  
-20° to +60°C;  
-40° to +60°C  
with optional  
battery heater

## Outdoor On-line UPS with Dc Output

The TSi Power Outdoor-UPS-8013/8014 with dc output are for dc powered applications needing backup power in extreme weather conditions. They are constructed with wide temperature batteries and are housed in a weather protected IP44 (NEMA-3R) enclosure. These offer a wide input voltage window (88 to 264 vac) and low ripple 48 vdc output, with heavy duty surge protection and noise filtering.

### Key Outdoor UPS benefits

This rugged outdoor dc output UPS design is suitable for use in severe outdoor environments.

Outdoor UPS 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.

The wide input voltage window enables dc output without having to drain or exercise the batteries, thereby ensuring long battery life.

Battery run-times for the Outdoor-UPS-8013 are approximately 2 hours at 96 watts load, and 4 hours at a 48 watts load. For the Outdoor-UPS-8014, approximately 4 hours at 96 watts load, and 8 hours with a 48 watts load.

### How the Outdoor UPS works

The outdoor UPS with dc output provides extended battery backup through a system which takes nominal 115 or 230 vac input (from 88 to 264 vac), converts it to dc, charges the batteries, and delivers a nominal 48 vdc (40 to 56 vdc) with a less than 200 millivolts peak to peak ripple. The heavy duty surge protection and noise filtering on the ac input helps protect the unit and load from transient surges on the line.

Because the unit is already delivering dc power, upon a deep brownout or loss of power, the Outdoor UPS with dc output has a zero transfer time to the reserve power in the batteries.

For OEMs, a small 'hotel' space is provided inside the unit for your equipment to reside.



### Typical applications

These heavy duty outdoor UPS systems are designed to power wireless communications, perimeter surveillance cameras (CCTV), security/gate control systems, LED traffic light/roadway display systems and industrial remote terminal units (RTUs).

### Key Outdoor UPS features

- Cabinet can be pedestal (ground), pole, or wall mounted
- Full weather outdoor protection IP44 (NEMA-3R) metal cabinet
- Dc output with low ripple
- Wide temperature batteries
- Heavy-duty surge protection and noise filtering
- Wide ac input voltage window lengthens battery life
- Two year warranty on electronics  
One year warranty on batteries



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# Outdoor UPS



Outdoor dc output UPS with a wide ac input voltage window and extreme/wide temperature batteries

Specification	Outdoor-UPS-8013	Outdoor-UPS-8014
<b>Electrical</b>		
Capacity in watts	96 watts	
UPS topology	Ac to dc rectifier, battery charger and sealed gel-cell batteries	
<b>Input</b>		
Nominal voltage	115 or 230 volts ac	
Operating voltage	88 to 264 vac without using batteries	
Input current	1A maximum @ 115vac, or 0.5A maximum @ 230 vac	
Operating frequency	50 or 60Hz (47 to 63Hz)	
<b>Output</b>		
Nominal voltage	48 volts dc	
Operating voltage	40 to 56 volts dc (depending on battery charge status)	
Output current	2A maximum @ 48vdc	
Dc ripple voltage	Less than 200 millivolts peak to peak	
Power efficiency	84% (typical)	
Power on/off switch	On/off rocker style power switch	
Transfer time to backup	Zero transfer time	
Battery backup time	2 hour @ 96 watts (2A) load, 4 hours @ 48 watts (1A) load.	4 hours @ 96 watts (2A) load, 8 hours @ 48 watts (1A) load.
Recharge time	8 hours to 90% capacity after full discharge.	16 hours to 90% capacity after full discharge.
Batteries	5 amp hours, 48vdc      10 amp hours, 48vdc 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.	
Ac connections	3 position terminal block provided for 3 x 1mm <sup>2</sup> (18AWG), L1, L2 and Ground connections via 12mm (1/2") diameter liquid-tight cable glands.	
Dc connections	2 position terminal block provided for dc output wires connection via 19mm (3/4") diameter liquid-tight cable glands.	
<b>Physical</b>		
Dimensions	254 mm W x 305 mm H x 152 mm D (10" wide x 12" high x 6" deep)	406 mm W x 406 mm H x 152 mm D (16" wide x 16" high x 6" deep)
Weights	14kg (30 lbs)	23kg (50 lbs)
Steel cabinet	Full weather IP44 (NEMA 3R) UL 50 outdoor padlockable enclosure.	
Mounting options	Pole mountable to monopole via optional 'H' style bracket (mounting bands not included). Wall mountable via enclosure's top+bottom brackets. Also, optional pedestal (ground) brackets are available.	
'Hotel' space for OEM option	Approximately 254mm (10") wide x 76mm (3") high x 152mm (6") deep, (if more space is needed, unit can be built with a larger enclosure).	
<b>Environmental</b>		
Operating temperature, battery heater option	-20° to +60°C (-4° to +140°F) ambient air temperature. -40° to +60°C (-40° to +140°F) with optional battery heater.	
<b>Warranty</b>		
Warranty	Two year limited warranty, parts and labor. One year battery warranty.	



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## Outdoor UPS



optional bandable or  
boltable monopole  
mounting brackets



### Outdoor-UPS-8013/8014 at a glance

Heavy-duty outdoor on-line UPS with dc output, wide ac input voltage window, and 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
- Low dc output ripple
- 48vdc battery bus
- **2 hours @ 96 watts load**, or  
 4 hours @ 48 watts load with  
**the Outdoor-UPS-8013**
- **4 hours @ 96 watts load**, or  
 8 hours @ 48 watts load with  
**the Outdoor-UPS-8014**
- Nominal 48 volts dc (40 to 56 vdc) output  
 from 88 to 264 vac input  
 without going to batteries
- Weather protected IP44/NEMA-3R, UL50  
 painted metal cabinet
- Optional pole, wall or floor  
 mounting brackets available.  
 Must be specified/ordered at  
 time of purchase order.
- Larger OEM 'hotel' space is  
 available, please call if more  
 space is necessary.



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ac input is via a  
12 mm (1/2") diameter  
liquid-tight cable gland,  
and dc output is via a  
19 mm (3/4") diameter  
liquid-tight cable gland

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