



## 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 dc output wide temperature uninterruptible power system

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 – 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– 264 vac), converts it to dc, charges the batteries, and delivers a nominal 48 vdc (40–56 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.



Note: shown with optional liquid-tight cable glands

## 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, parts and labor; manufacturer's warranty on batteries



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# Outdoor UPS



Note: shown with optional liquid-tight cable glands

Outdoor UPS with dc output and wide temperature batteries

Specification	Outdoor-UPS-8013	Outdoor-UPS-8014
<b>Electrical</b>		
Capacity in watts	96 watts	
UPS topology	Ac – dc rectifier, battery charger and sealed gel-cell batteries	
<b>Input</b>		
Nominal voltage	115 or 230 volts ac	
Operating voltage	88–264 vac without using batteries	
Input current	2 amperes maximum @ 115 vac, or 1 ampere maximum @ 230 vac	
Operating frequency	50 or 60Hz (47–63Hz)	
<b>Output</b>		
Nominal voltage	48 volts dc	
Operating voltage	40–56 volts dc (depending on battery charge status)	
Output current	2 amperes maximum @ 48 vdc	
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 ampere hours, 48 vdc      10 ampere hours, 48 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.	
Ac connections	3 position terminal block provided for 3 x 1 mm <sup>2</sup> (18AWG), L1, L2 and Ground connections via 12mm(1/2") diameter holes.	
Dc connections	2 position terminal block provided for dc output wires connection via 12mm(1/2") diameter holes.	
<b>Physical</b>		
Dimensions	406mmW x 406mmH x 254mmD (16"wide x 16"high x 10"deep)	
Weights	17 kg (37 lbs)	26 kg (57 lbs)
Steel cabinet	Full weather IP44 (NEMA 3R) 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 406mm(16") wide x 76mm(3") high x 254mm(10") 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	2 year limited warranty, parts & labor; manufacturer's battery warranty.	

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Note: shown with optional liquid-tight cable glands

Outdoor  
UPS



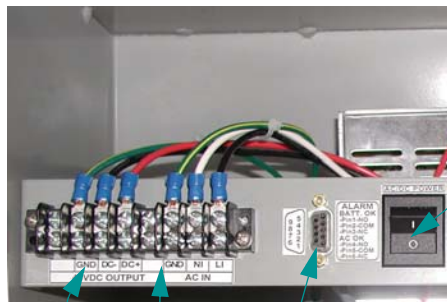
optional bandable or bolttable monopole mounting brackets



## 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
- 48 vdc 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 (40–56 vdc) output from 88–264 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.



terminal block connectors

DB9 alarm signals

on/off switch  
\*note: panel placement may vary

ac inputs / outputs are via 12 mm (1/2") diameter knockouts, (shown are optional liquid-tight cable glands and an optional third hole for OEM use)

swivel out flange for attaching a seal or padlock once lid is closed



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