



# OS24-SR

## Solar Powered Repeater

The OS24-SR Solar Powered Repeater has been specifically designed to supply power to an Industrial Wireless Radio Modem. Repeaters are typically required to extend the effective operating distance and/or detour the line-of-sight transmission due to obstacles in its path. Solar Power is utilized in areas where conventional power is inaccessible or too costly to provide. Functioning as an Access Point or Repeater the OS24-SR is a stand-alone device powered by the sun's energy to provide 24-hour continuous operation. The system is fully automatic and designed to render years of maintenance free operation.

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### Principle of Operation:

The OS24-SR Solar Powered Repeater has been designed to operate as a stand-alone system that incorporates an industrial wireless radio modem powered by a solar power supply. The radio modem can be configured to operate as an access point and/or repeater. The OS24-SR utilizes a high efficiency photovoltaic solar module (PV) to convert the sun's energy to 12 Volts dc. The system's solid-state controller maintains continuous battery monitoring and temperature compensated charging during daylight hours. Between charging cycles, the system's sealed lead acid gel battery has sufficient standby power to maintain 24-hour continuous operation for several days. Lightning arrestors are provided on the PV module and antenna to protect the system from high voltage transients. The OS24-SR has been meticulously designed with the highest quality components designed for solar applications. The system is fully automatic and designed to render years of maintenance free operation.

### Markets:

- Oil and Gas Field Monitoring
- Water and Waste Water
- Power Utilities
- Petrochemical
- Industrial Control
- Security
- Robotics
- SCADA

### Benefits:

- Installation speed, flexibility and simplicity.
- Saves money by reducing installation costs.
- Allows for real time data access for difficult to reach geographic locations.
- Enables the installation of a repeater in areas with inaccessible power.
- Eliminates leased line or wireless service fees.

### Features:

- High quality Industrial Wireless Radio Modem.
- Secure data encryption.
- High efficiency photovoltaic solar module.
- Solid-state microprocessor based charge controller.
- High efficiency extended life standby battery.
- Maintenance free operation.
- Completely assembled and tested.
- Stand-alone operation, requiring no external power or operator assistance.

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# Solar Repeater

## Specifications:

### General

Control Size: 18" high X 16" wide X 10" deep  
Weight: 36 Lbs (less battery)  
Enclosure Type & Material: NEMA 3R Power Coated Heavy Gauge Aluminum  
Operating Temperature: -40° C to +75° C

### Radio Modem

Frequency: 2.4 – 2.4835 Ghz FHSS  
Typical Range: 3 kilometers with ½ λ omni antenna  
up to 25 kilometers line-of-sight with high gain antennas  
Output Power: 1 mw – 250mw, Programmable  
Certifications: UL; CE; FCC Part 15.247

### Solar Module

Size: 33" high X 21" wide X 2" deep  
Weight: 13 Lbs.  
Power: 50 watts  
Certifications: UL, FM, TUV

### Solar Controller

Charge Type: Temperature Compensated PWM  
LVD: 11.5 Volts  
Certifications: UL, CE

### Battery

Type: Sealed Gel Lead Acid  
Voltage: 12 Vdc  
Capacity: 40 Ah  
Cycles @ 20% discharge: 5000

## Ordering:

OS24-PS12-XXX-XXX: 12 VDC Solar Power Supply  
OS24-PS24-XXX-XXX: 24 VDC Solar Power Supply

XXX-XXX = Configuration of system to accommodate power demands  
of connected equipment.

## Warranty:

3 year Limited Warranty – Reference Warranty for complete details.

Specifications not shown above for 12 Vdc.

Antenna(s) and Antenna cable(s) sold separately.

Specifications subject to change without notice.

Distributed By:

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