



SENTINEL

HV AERIAL



Use Protective high voltage alarm and motion stop near electricity sources to keep personnel and machines safe. Retrofit any aerial machine with Sentinel HV and prevent it from moving closer to overhead powerlines, while allowing the operator to safely move the machine away from the high voltage electricity source.



Detect live overhead powerlines



Avoid risk of electric shock



Avoid costly and time-consuming damage



Alarm and motion stop options



Stop upward motion towards overhead powerlines



Allow motion away from overhead powerlines



Retrofit to any machine



Monitor control motions

Aerial High Voltage Protection System

Free from interference from radio and other devices

Custom military-grade wireless communications

Reduce risk and improve workflow efficiency

Unmatched reliability in machine safety

Engineered control – safer than a spotter



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SENTINEL HV AERIAL



Integrates seamlessly with SENTINEL range of products by PRM Engineering

The Patent Pending Sentinel HV Aerial High Voltage Protection System can be retrofitted to any machine that may have contact with aerial electrical conductors. The small mounting footprint allows installation to almost anywhere along the boom. The system prevents the machine moving within its exclusion zone by interfacing computer controls and machine controls to monitor and override as required.

The Control Interface Module monitors both machine control motions and the AC sensors. When a powerline is detected, active machine motions become locked-out, preventing the machine from moving closer while allowing the operator to direct the machine away from the electricity source.

The Sentinel HV Aerial High Voltage Protection System uses a capacitive sensing and active filtering technology to remove unwanted interference from radio frequency and other sources, minimising nuisance detections.

Sentinel HV Aerial High Voltage Protection System

Wireless Sensor

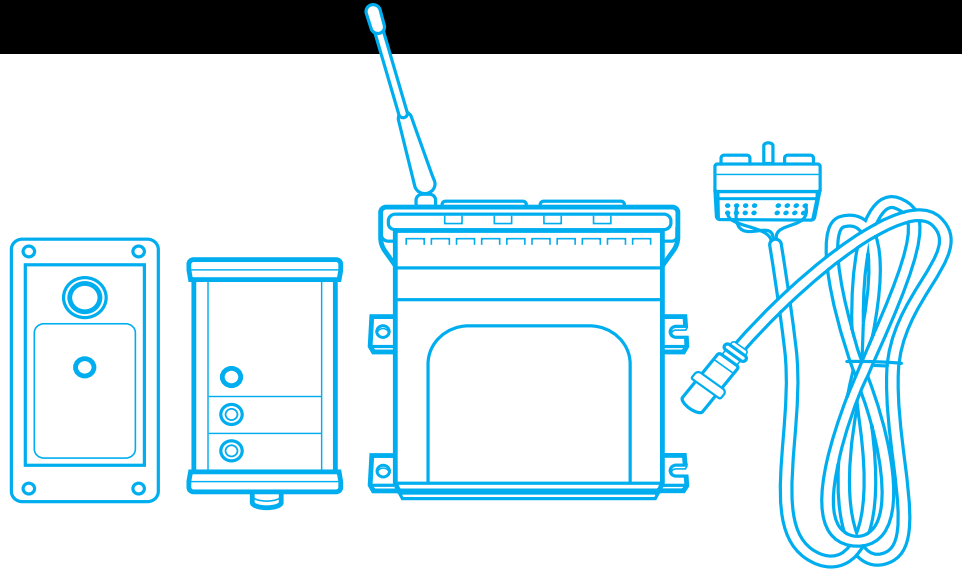
It uses wireless sensors over a 900 MHz Military-Grade RF communications network from a BaseController, ensuring consistent protection of machines. As the system operates in the ISM band below the maximum power settings permitted, it does not require a permit or license to use in Australia and many other countries. The system is designed to comply with Part 15 of the FCC rules.

The Sensors and the BaseController are both programmable and the firmware is upgradable, allowing the system to be customised to an unlimited number of applications.

Proximity Sensor

The sensors consistently detect distribution voltages commonly used in Australian Electricity networks:

11KV (11,000v) at 50 hertz and above.



The System is tested for operation at 5Kv, to ensure a margin for most machine and install applications. It will not detect low voltage under 1,000 volts with consistency or predictability for ensuring safe working distances.

Solar Powered

The Sentinel HV Wireless Sensors are self-sufficient, self-powered, AC Non-Contact Voltage Detectors. They feature a built-in, solar charging cell and battery pack, allowing the sensor to operate from a couple hours of sunlight per day.



Technical Specifications

Detection Type: Microprocessor Filtered Capacitive Non-Contact Voltage Detection

Detection Voltage: 415 V to 500 kV
50 Hz / 60 Hz Alternating Current

Detection Distance: Firmware Adjustable from 200mm – 10 metres based on voltage

Output: LED indicator light and buzzer options

Frequency: 2.4Ghz ISM Band, Low Power

Communication: EQ Wireless®

Battery Life (without solar charge):
55 Days*

Charging time to full charge (solar):
22 Hours*

Communication Range: >30 metres



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*Under normal operating conditions and service requirements