

Axis video surveillance means powerful... solar protection. Solesa chose Axis' thermal network cameras to provide security for a solar field.



Organization:
Solesa, Solar Engineering

Location:
Poirino, Italy

Industry segment:
Critical infrastructure

Application:
Video surveillance and
security of photovoltaic
fields

Axis partner:
Sicurtel s.r.l.

Mission

Since 2007, Solesa has been an active player in the solar energy sector, developing, building and financing medium- and large-scale system projects. Solesa is one of Italy's top corporations operating in the planning of photovoltaic fields. In 2010, Solesa set up a photovoltaic plant that occupies almost 52 acres in Poirino (Turin province) and can produce 7.4 MW of power. This site requires 24-hour security both along the entire perimeter and within the compound to prevent theft and vandalism, especially at night when darkness and weather factors make it easier to break in.

Solution

For the planning and building stages of the video surveillance system, Solesa contacted Axis partner Sicurtel, a leading security alarm systems company. The state-of-the-art technological solutions provided by Axis include: an IP infrastructure that is easy to install and appropriate for all types of terrain; an HDTV video network that may be monitored remotely via PC, tablet or smartphone; 34 thermal network cameras and 2 IP cameras that provide reliable surveillance and a reduced risk of false alarms.

Result

Axis has proven its technological expertise by providing video surveillance solutions with easy remote monitoring and with a low level of false alarms linked to weather factors. The installed cameras solve physical and logistical problems and issues linked to the implementation of the security system, preventing electromagnetic and light pollution.

"The choice of AXIS Q1921-E Thermal Network Cameras was driven by the excellent performance provided by this model in all weather and lighting conditions, both during the day and at night. This is actually an essential requirement as thermal cameras were adopted for the security system together with video-analysis software to cover an extensive area and with no artificial lighting."

Claudio Toaldo, CEO, Sicurtel s.r.l.

IP technology has brought many advantages to the field of video surveillance solving problems linked to physical and logistical limitations that impact the implementation of these security systems. Its strengths include the use of a standard network structure, ease of installation, scalability and the ability to monitor in real time and remotely monitor alarms as well as contain costs. To this technology, Axis has added thermal cameras, originally designed for military applications, whose development has proven useful for civilian use.

The peculiarity of these cameras is the ability to "see" thanks to temperature and not light, creating images based on the heat released by all kinds of objects, people or animals. A thermal camera needs no light source as it detects infrared radiation from the electromagnetic spectrum therefore producing images of said radiation.

AXIS Q1921/-E Thermal Network Camera represents the perfect addition to any IP technology system that monitors an area 24 hours a day, 7 days a week, as in the case of photovoltaic fields that are often targets for theft and vandalism. The use of thermal network cameras has been found to be especially appropriate in this setting as monitoring is required of a large area that is morphologically difficult to guard without the aid of artificial lighting, which was specifically requested by Solesa to prevent light pollution.

Furthermore, animals that live in the ecosystem must be able to enter the field, so the security fence was installed several inches above ground thus creating a weak spot along the perimeter, which thermal technology offsets easily: whenever the alarm is activated, it can be seen immediately whether the perimeter was breached by an animal or if the situation calls for an intervention.

Thanks to the 34 cameras installed along the perimeter of the photovoltaic field, Solesa can detect animals, people, objects, acts of vandalism or attempted theft in complete darkness and difficult conditions, such as dust, fog and rain.

Other cameras used for checking and confirming alarms include AXIS Q6035-E PTZ, which provides optimal performance and very high-quality video. These dome cameras are outdoor-ready and provide high-definition surveillance video, coverage of extensive areas and detailed pictures within an integrated system as well as high performance for the security of the photovoltaic field and safety of the animals.

In case the alarm is activated by one of the thermal cameras, the light (installed on the camera poles) will illuminate and the AXIS Q6035-E Dome Network Cameras will redirect on the camera that triggered the alarm, switch to max-resolution recording and notify security to verify the source of the alarm.



"The solution we implemented provides continuous monitoring of the area without the need for artificial light sources as well as a reduced margin of error." Solesa

