



GENERAL MONITORS
Protection for life.

SECOND SIGHT[®] TC

Infrared Gas Cloud Imaging Camera



Features

- Wide field of view and long detection range
- Requires no gas calibration in the field
- Able to deselect specific areas within the field of view that are not of interest or could contain known sources of false alarm
- Simultaneous detection of up to four gases
- Able to identify location of gas leaks to a section within the field of view
- Quantification and visualization of gases

Benefits

- Large coverage area per device
- Reduced maintenance
- Allows camera to be focused on an area without being affected by a false alarm source
- Flexibility to detect broad range of gases
- Allows operators to address gas leaks at the source
- Real time gas concentration display

Description

Second Sight^{®1} is a remote gas detection system designed to provide an additional layer of safety in the detection of combustible and toxic gases. Second Sight uses an uncooled microbolometer array to identify and visualize gas leaks in real time. The infrared (IR) remote gas detector is suited for simultaneously detecting several combustible and toxic gases at up to 2,000 m. With a standard 30° field of view, Second Sight provides wide, continuous monitoring of critical areas.

In addition to large coverage areas per device, Second Sight is designed for ease of use. A human machine interface (HMI) allows operators to see target gases as they are detected by the IR camera. Levels of gas concentrations overlaid on a video image provide a unique picture of gas dispersal that allows personnel not only to address the source of a leak, but also to respond more effectively to an alarm based on the direction of the gas cloud. Further, the HMI also allows users to mask zones within the field of view that are not of interest or could be sources of false alarm.

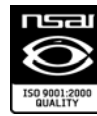
Second Sight requires no gas calibration in the field. An automatic optical check performed every 30 minutes assesses optical path integrity (window cleanliness), optical alignment, and the position of the focal plane array. The result is a system that requires little maintenance and is immune to major false alarm sources.

The video recorder function in Second Sight allows the operator to play back an alarm event or record the current detection. Stored files enable facility management and safety personnel to view video images and concentration profiles of events as they unfold over time. Users can retrieve and examine alarm events in detail by using the standard commands of a video recorder. The enhanced event logging reduces the time and complexity of managing safety records and informs management of potential improvements at the target site.

Applications

- Chemical Plants
- Compressor Stations
- LNG/LPG Storage, Processing, and Transport
- Gas Turbines
- Offshore Platforms
- Refineries

¹ Second Sight is a registered trademark of Bertin Technologies, S. A., France

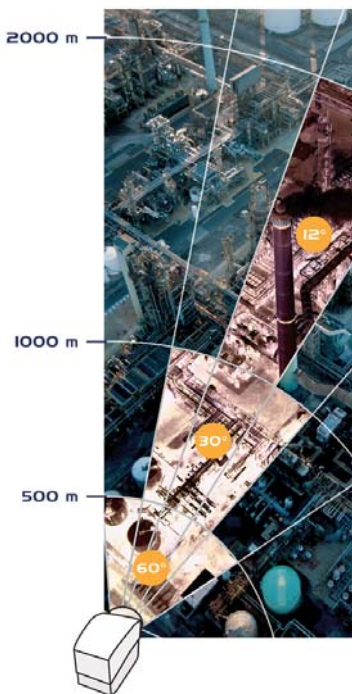


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System Specifications

Type:	Long wave infrared (LWIR) camera
Spectral Range:	8 - 14 mm (IR)
Spectral Channels:	6 IR filters
Spatial Resolution:	384 x 272 pixels
Maximum Range:	3,281 ft. (1,000 m) standard 6,562 ft. (2,000 m) optional
Sensitivity:	0.1 LEL-m, methane 0.1 LEL-m, propylene 0.3 LEL-m, butane 0.5 LEL-m, propane
Approvals:	CSA (electric safety), CE Marking
Response Time:	T ₉₀ £ 8 s
Field of View & Max. Range:	30°, 1,000 m (standard) 12°, 2,000 m (available) 60°, 500 m (available)



For other target gases, please consult the factory.

Mechanical Specifications

Housing:	Aluminum and plastic
Dimensions:	670 x 280 x 330 mm ³
Weight:	39.7 lbs. (18 kg)
Ingress Protection:	IP55
Mounting:	Tripod or aluminum bracket
Standard Configuration:	SecondSight-01-02-03-04-1-0-0 4 gases selectable, 30° FOV, 1,000 m

Environmental Specifications

Operating Temperature Range:	+14°F to +131°F (-10°C to +55°C)
Storage Temperature Range:	-4°F to +140°F (-20°C to +60°C)
Operating Humidity Range:	0-95% RH, non-condensing

Electrical Specifications

Input Power:	11-35 VDC (80 W), 24 VDC (nominal)
Power Cables:	3-wire shielded cable, 2.5 mm ² gauge, 10 m max. allowed
Network Cable:	Ethernet Cat 5 cable with RJ45 connectors (100 m max. allowed before repeaters are used)
IEEE 802.3	
Input:	Modbus TCP/IP
Output:	Modbus TCP/IP Video streaming JPEG format Alarm event recording in AVI format

Accessories: IP67 AC/DC power supply, lead battery power supply, mounting bracket, remote pan-tilt mechanism, tripod

Classification: General purpose, non-hazardous locations

Warranty: One year

Specifications subject to change without notice.

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