



**GENERAL MONITORS**  
Protection for life.

## SECOND SIGHT<sup>®</sup> TC

### Stand-Off Real Time Gas Cloud Detecting 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 multiple gases
- Precise identification of gas leak sources
- 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
- Flexible system that covers a wide range of applications
- Allows operators to address gas leaks at the source
- Real time gas concentration display on monitored interface

#### Description

Second Sight<sup>®1</sup> is a remote gas detection system designed to provide an enhanced 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 inside an industrial site (up to 500 m). With a standard 60° 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 calibration in the field, but a gas calibration on site may enhance the gas detection performance. 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

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

<sup>1</sup> Second Sight is a registered trademark of Bertin Technologies, S. A., France



# SECOND SIGHT<sup>®</sup> TC



## System Specifications

<b>Type:</b>	Long wave infrared (LWIR) camera
<b>Spectral Range:</b>	8 - 14 mm (IR)
<b>Spectral Channels:</b>	6 IR filters
<b>Spatial Resolution:</b>	640 x 480 pixels
<b>Maximum Range:</b>	500 m standard
<b>Sensitivity*:</b>	0.1 LEL-m, methane 0.1 LEL-m, propylene 0.3 LEL-m, butane 0.5 LEL-m, propane
<b>Approvals:</b>	CSA (electric safety), CE Marking
<b>Response Time:</b>	T <sub>90</sub> < 8 s

## Mechanical Specifications

<b>Housing:</b>	Aluminum and plastic
<b>Dimensions:</b>	Dimension Head Camera: 350 x 184 x 236 mm Dimension Processing unit: 260 x 200 x 150 mm
<b>Weight:</b>	Head camera: 5.2 kg Processing unit: 5.0 kg
<b>Ingress Protection:</b>	IP55
<b>Mounting:</b>	Tripod or aluminum bracket

## Environmental Specifications

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

\*For other target gases, please consult the factory.

## Electrical Specifications

<b>Input Power:</b>	20-29 VDC (80 W), 24 VDC (nominal)
<b>Power Cables:</b>	3-wire shielded cable, 2.5 mm <sup>2</sup> gauge, 10 m max. allowed
<b>Network Cable:</b>	Ethernet Cat 5 cable with RJ45 connectors (100 m max. allowed before repeaters are used)
<b>IEEE 802.3</b>	
<b>Input:</b>	Modbus TCP/IP
<b>Output:</b>	Second Sight TC signal output is ethernet (10/100/100 Base-T). Bertin Technologies will provide support for interfacing the Second Sight TC to the supervision system of the factory. - Web service: configure, parameter and supervision of the system (web browser) - Video stream (MJPEG) under UDP protocol with picture including gas cloud - Alarm: alarm launch with information related (concentration level, cloud direction)
<b>Accessories:</b>	IP67 AC/DC power supply, lithium ion battery, mounting bracket, remote pan-tilt mechanism, tripod
<b>Classification:</b>	General purpose, non-hazardous locations
<b>Warranty:</b>	One year
<b>Standard Configuration:</b>	Second Sight 003075-003-RD001

*Specifications subject to change without notice.*

*Represented by:*

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