



# TS400

## SERIES CHEMICAL SENSOR

The TS Series Chemical Sensor, from Avir Sensors, puts unprecedented detection and identification capability into the hands of security officers by **delivering comprehensive information about chemical threats in a matter of seconds**. The TS Sensor can identify minute quantities of more than 50 hazardous gaseous chemicals over a wide coverage area and with minimal operating costs.



### FEATURES

- Continuous operation open path infrared sensor
- Rapidly identifies chemical and concentration levels
- Covers up to 100 meters
- No regular maintenance
- Expandable database of chemical signatures
- Integrates into standard wired or wireless network systems

### INSTALLATIONS

- Subway and Train Stations
- Chemical Plants/Storage Facilities
- Government Buildings
- Large Lobbies
- Airport Terminals
- Sporting Events
- Stadiums
- Theaters and Arenas
- Schools and Colleges
- Special Events

### The TS400 Series Sensor System

The TS400 Series Sensor is a continuously operating, open path sensor that uses infrared spectroscopy to reliably monitor lines of sight of up to 100 meters, detect and identify multiple chemicals and interferants. The TS400 Series Sensor is particularly suitable to monitor large facilities, indoor or outdoors, that face constantly varying challenges by multiple threats. It is robust, easy to install and operate, even by untrained personnel. Its exceptionally low-maintenance schedule and no-consumables make it the only "install-and-forget" sensor in the field. Unlike point sensors that can provide only localized snapshot views of the protected area, the TS400 Series Sensor offers a global view and fast response to nearly all chemical challenges and interferants.

Security and industrial safety officers can select the TS400 Series Sensor with confidence because it can detect and identify a wide range of TICs (toxic industrial chemicals) and interferants. It responds equally well to large and low concentrations without facing the risk of poisoning its sensing elements. New TIC or interferant signatures can be uploaded into the database of any sensor through standard wired and wireless communication network. Its user-friendly interface allows it to be readily integrated with industry standard sensor network systems or to autonomously activate desired responses.

## SYSTEM

Sensor Type:	Infrared absorption
Detection Sensitivity:	Varies by vapor; from 200 ppm-m to 2 ppm-m (well below IDLH in typical installations)
Path Length:	5 to 100 m (16 to 328 ft)
Response Time:	1 second
Identification Time:	1 second to 15 seconds
Calibration:	No calibration required
Warranty:	Two years
Consumables:	None
Maintenance Requirements:	System self-monitors to determine maintenance, if any
Operation:	Continuous

## MECHANICAL

Housing Size:	
Sensor:	7" x 7" x 11"
IR Lamp:	Dependent on distance; from 18" x 18" x 6" to 4" x 4" x 6"
Enclosure Material:	Aluminum
Weight:	
Sensor:	8 lbs (4 Kg)
IR Lamp:	5 lbs (3 Kg)

## ENVIRONMENTAL

Operating Temperature:	-40°F to +140°F (-40°C to +60°C)
Operating Humidity:	0 to 95% RH (Non-condensing)
Weatherproof rating:	IP66
Certification:	ISO 9001, UL (pending)

## ELECTRICAL

Operating Voltage:	120/240VAC
Power Consumption:	
Sensor:	25 watts
IR Lamp:	80 watts to 5 watts

## SOFTWARE

General:	Software provides gas identification, concentration, time stamp and other data in xml or flat file format for inclusion into industry standard integration software.
Diagnosis:	Self-diagnosing for path obstructions, contaminants along IR path, sensor status
Confidence Tester:	Internal, software activated relay that confirms sensor operation and communication at user defined intervals (daily, weekly, etc.)

## CHEMICALS DETECTED

Types:	Wide range of toxic industrial chemicals and toxic industrial materials while providing strong interferent rejection.
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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.



## INDUSTRIAL ENVIRONMENTS

The TS400 Series Sensor recognizes virtually any Toxic Industrial Chemical (TIC) or Toxic Industrial Material (TIM) that are a dangerous reality in every industrial environment. From petrochemical plants, with their wide range of possible threats, to many food processors using refrigeration processes that can leak ammonia and carbon dioxide, the TS400 Series Sensor offers comprehensive protection not available anywhere else in today's market.

## HOMELAND SECURITY

Subway platforms...stadiums...military installations...schools...airports...HVAC systems...perimeters...these are examples of TOVA's possible applications where TOVA can be used to monitor chemical threats. The sensor offers accurate and reliable detection and delivers virtually instantaneous results. And since today's threat matrix is ever-changing, threat chemical signatures and alarming modes can be added and updated over a wired or wireless communications network.

Instead of asking security officials to place bets on what **might** happen, the TS400 Series Sensor can tell you what **is** happening so you can determine what to do — in a time frame that can save lives. Its long life, low maintenance, large coverage area and field updateable chemical signatures provide robust return on investment protection.



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