SSS-903M19 GAS DETECTOR

ESP model SSS 903M19 Gas Detector of hydrogen sulphide, combustible and toxic gases is intended for automatic and continuous monitoring of flammable, toxic and combustible gas levels. SSS consist of Transmitter SSS (threshold device) and plug-in universal gas transducers PGU with electrochemical (PGU-E), infrared (PGU-IR) sensors.

Transmitter SSS is the universal one-channel threshold unit intended for visualization of gas signals values receiving from plug-in gas transducers. Transmitter SSS has following output signals: 3 threshold relays and 1 "fault" relay, digital output (RS-485) and analog output 4-20 mA. Any HART-communicator device can be connected to Transmitter SSS via standard HART-connector for readout gas concentration values, threshold changing, zero set-up and sensitivity calibration in a field conditions.

Universal Gas Transducer PGU consist of either catalytic electrochemical, infrared replaceable sensors. PGU has integrated flash memory with adjustable settings, which are read automatically when connected to SSS Transmitter. Communication with Transmitter SSS is carried out by means of digital output RS-485. PGU sensor is fitted providing the additional protection from dust and high ambient humidity.

Transmitters SSS body is made from either stainless steel SS316 mark or Aluminum and has explosion proof protection and intrinsically safe barrier level.

Areas of Use	Feature and benefits
» Drilling and production » Refineries, bulk terminals and tank farms » Compressor stations and pipeline facility » Petrochemical, paint and fertilizer plants » Fuel loading facilities » Transportation facilities » Residential areas	» 3 Colour LED status indicator (normal,fault,alarm) » Integral 48 Digit LCD display for easy viewing of detector status » Calibration Indicator » Non intrusive configuration of device » Quick and easy start up procedure (warm up time of device is less than 15 sec.) » Remote sensor option » Viewing of last 30 min. historical trend on display » Continuous self checking to ensure stable full functionality at all times » Display: -Gas Type -Threshold level -Measuring units -Reading history of last 30 mins with self-illuminating backlight.

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3 Sensing Options

Electrochemical

Electrochemical sensors are used for detecting a wide range of toxic gases and oxygen. Fast response time and high reliability and operating life of the sensor makes it an excellent choice for detecting toxic gases in atmosphere.

Infrared

Based on multi beam dual compensated non focusing infrared absorption. Optical performance allows for operation of sensor up to 75% obscuration, includes heated optics and dirty optics warning. Temperature compensation is inbuilt for optimum operation.

Catalytic

For catalytic sensor combustible gases are available from C1 to C12 upon request as well as Hydrogen. PGU-C possesses long term stability and has proven to be extremely reliable in the harshest environments.

Display & No Display Options

SSS-903M19, is available in 2 options, with and without visual display.

4 in 1 Output

The SSS903M19 Gas detector has 4 standard outputs that it comes with. 4-20mA, Relays, RS-485 and embedded HART.

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Specification:

Voltage Supply:	24 VDC (18-32 VDC)
Power Consumption:	<4W (Stanby) <6W (Alarm) <12W (Heater ON)
Outputs:	• 4-20mA • RS-485 (Modbus) • HART 7.0 • Relay (Al1, AL2, Fault)
Sensor Types:	• Infrared, • Electrochemical • Photioinization • Thermo-catalytic

Operational Characteristics:

Operating Temperature	-40°C to +75°C
Humidity Range	0-95% RH
Ingress Protection	IP66
Display and Indication:	• 3 colour LED status indicator • Gas type • Gas range • Threshold level
Ex Marking:	Ex d IIC T4 GB
Repeatability:	+/- 2% FS
Zero Drift:	< 2% FS per year

Mechanical Characteristics

Material	Stainless Steel (SS316)/ Aluminium
Cable Entry	2 x 3/4 NPT as standard (other options on request)
Weight	Aluminum - 2.1 kg Stainless Steel - 5.2 kg
Warranty	5 years

Certification:

Ex d IIC T4
-40C to +75C
IP66

Ex d IIC T4
-40C to +85C
IP66

Controlled Gases

Transducer's type	Gas	Gas formula	Detected component measuring range	Accuracy	Response time
Plug-in universal gas transducer Optic Infrared PGU-IR	Methane	CH4	(0 - 100) % LEL	± 2% full Scale	T50 < 3 seconds T90 < 7 seconds
	Ethylene	C2H4			
	Hexane	C6H14			
	Butane	C4H10			
	Isobutane	C4H10			
	Ethane	C2H6			
	Cyclopentane	C5H10			
	Propylene	C3H6			
	Methanol	CH30H			
	Propane	C3H8			
	Pentane	C5H12			
	Heptane	C7H16			
	Octane	C8H18			
Plug-in universal gas transducers Electrochemical PGU-E	Hydrogen	H2	(O - 4) %val. (l 00% LEL) (0-100) ppm (0-1)%	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Oxygen	02	(0- 30) % vol.	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Carbon monoxide	CO	(0-100) pp (0-500) ppm (0 - 1 000) ppm	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Hydrogen sulfide	H2S	{0- 20) ppm (0 -50) ppm {0-100) ppm	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Methanol	CH3OH	{0- 100) ppm	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Chlorine	Cl2	{0- 20) ppm	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
Plug-in universal gas transducers Catalytic PGU-C	Methane	CH4	0 - 100% LEL	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Propane	C3H8	0 - 100% LEL	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Hexane	C6H14	0 - 100% LEL	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Acrylonitrile	C3H3N	0 -100% LEL	± 2% full scale	T50 < 10 seconds T90 < 15 seconds
	Hydrogen	H2	0-100 ppm	± 2% full scale	T50 < 10 seconds T90 < 15 seconds

*The gases mentioned in the above table is only a representative sample, for any gases or ranges not mentioned in the above table please contact a sales representative.