TOXIC AND EXPLOSIVE GAS TRANSMITTERS
RAS with enose® Technology

DESCRIPTION

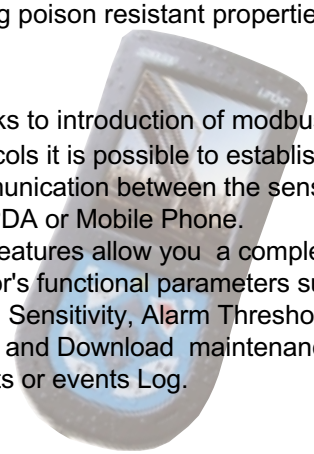
RAS/AD and RAS/DY are rugged, intelligent gas detectors for a wide variety of Explosive and Toxic gases.

Main Characteristic

- Microprocessor based
- 4-20 mA output
- Three Voltage free relay contacts output
- RS-485 MODBUS serial interface or Bluetooth protocol for remote control maintenance
- LCD Display 8x2 characters
- Non Intrusive "One Person" calibration
- Fully programmable
- Small size
- Low Power consumption
- Certificate **ATEX II 2G EEx-d IIC T6**

RAS-AD

Explosion Proof housing
Ideal to detect combustible gases and solvents
Strong poison resistant properties



Thanks to introduction of modbus or Bluetooth protocols it is possible to establish a direct communication between the sensor and your PC, PDA or Mobile Phone.
This features allow you a complete control of all sensor's functional parameters such as Zero, Span, Sensitivity, Alarm Thresholds TWA, STEL and Download maintenance operations reports or events Log.

ATEX

RAS-DY

Explosion Proof housing with display
- Robust construction
- Built-in or remote sensor transmitter
- Built-in relays enable full stand-alone capability
- Optional magnetic Keypad

MAIN SUBSTANCES LIST (IR Infrared Technology)

SUBSTANCES	DESCRIPTION	PRODUCT CODE
Methane (CH4)	Infrared sensor for fixed detecting systems of explosive substances 0-100%L.E.L.	RAS/AD/201/...
Propane (CH3CH2CH3)	Infrared sensor for fixed detecting systems of explosive substances 0:100% L.E.L.	RAS/AD/204/...
Carbon Dioxide (CO2)	Infrared sensor for fixed detecting systems of toxic substances 0:100%Vol.	RAS/AD/279/...

MAIN SUBSTANCES LIST (Catalytic Technology)

Methane (CH4)	General purpose catalytic sensor for fixed detecting systems of explosive substances 0-100%L.E.L.	RAS/AD/101/...
L.P.G. (Mix)	General purpose catalytic sensor for fixed detecting systems of explosive substances 0-100%L.E.L.	RAS/AD/102/...
Propane (CH3CH2CH3)	General purpose catalytic sensor for fixed detecting systems of explosive substances 0:100% L.E.L.	RAS/AD/104/...
Hydrogen (H2)	General purpose catalytic sensor for the detection of H_2 0-100% L.E.L.	RAS/AD/127/...
Ammonia (NH3)	General purpose catalytic sensor NH_3 0-100% L.E.L.	RAS/AD/140/...
Ammonia (NH3)	High Quality catalytic sensor NH_3 0-2% v/v (0-20.000ppm)	RAS/AD/141S/...

MAIN SUBSTANCES LIST (Electrochemical Cells Technology)

SUBSTANCES	DESCRIPTION	PRODUCT CODE
Ammonia (NH3)	Electrochemical Cell for NH_3 0-100 / 0-500 / 0-1.000 / 0-5.000 PPM	RAS/AD/340/...
Carbon monoxide (CO)	Electrochemical Cell for CO 0-300 / 0-1.500 PPM	RAS/AD/320/...
Nitrogen sulphide (H2S)	Electrochemical Cell for H2S 0-30 / 0-100 PPM	RAS/AD/369/...
Oxygen (O2)	Electrochemical Cell for O2 0-25% Vol.	RAS/AD/361/...
Cloride (Cl2)	Electrochemical Cell for Cl2 0-10 PPM (only certified for ordinary locations)	RAS/AD/365/...

MAIN SUBSTANCES LIST (Chemical absorption Technology)

Ammonia (NH3)	Chemical absorbtion sensor optimised for NH_3 0-1.000 PPM	RAS/AD/440/...
Carbon monoxide (CO)	Chemical absorbtion sensor optimised for CO 0-100 / 0-300 PPM	RAS/AD/420/...
Nitrogen sulphide (H2S)	Chemical absorbtion sensor optimised for H2S 0-20 PPM	RAS/AD/469/...
VOCs	Chemical absorbtion sensor optimised for VOCs 0-5.000 PPM	RAS/AD/471/...
Carbon Dioxide (CO2)	Chemical absorbtion sensor optimised for CO2 0-10.000 PPM	RAS/AD/479/...

OUTPUTS CONFIGURATIONS

Outputs	Description	Code
4-20 mA	Analog current loop	AAA
4-20 mA + RS485	Analog current loop	AAS
3 Relays + RS485	Voltage free contacts 0.5A 100 Vdc max. + Serial RS485 Modbus Protocol	CCS
3 Relays + 4-20mA + RS485	Voltage free contacts 0.5A 100 Vdc max. + Analog current loop + Serial RS485 Modbus Protocol	CAS

GENERAL SPECIFICATIONS

Sensors	Catalitytic pellistor or electrochemical cells or Infrared or chemical absorbtion cell
Code of protection	ATEX II 2G EEx-d IIC T6
Location	Hazardous area
Degree of protection	IP65
Short-term repeatability	±2% FSD 60 min.
Long-term repeatability	±5% FSD 3 months.
Accuracy(linearity)	±5% FSD

MECHANICAL SPECIFICATIONS

Overall dimensions	170x100x70 mm
Weight	0.8 Kg.
Mounting	2x6 mm holes
Junction box attachment	3/4" NPT

ENVIRONMENTAL SPECIFICATIONS

EMC susceptibility	10V/m
Storage temperature	-40 to85 °C
Operating temperature	-10 to 70 °C
Humidity range	100% R.H. n.c.

ELECTRICAL SPECIFICATIONS

Supply Voltage	10-30 Vdc
Power consumption	1 watt (AAA Version)
Supply fuse	500 mA
Signal fuse	63 mA
Analog output	4-20 mA
Load	0-300 ohms at 24Vdc
Cable Type	3 conductors cable (AAA Version)

PART NUMBER DESCRIPTION

Body	Description	Technology	Substance Code	Output Configuration Code
	II 2G EEx-d IIC T6	1 (Catalytic sensor)	01 (methane)	AAA Analog4-20mA
RAS/AD	II 2G EEx-d IIC T6	2 (Infrared sensor)	02 (L.P.G.)	AAS Analog 4-20mA + RS485
RAS/DY	II 2G EEx-d IIC T6	3 (Electrochemical cell)	27 (Hydrogen)	CCS Relay Contacts + RS485 (only RAS/AD body)
	II 2G EEx-d IIC T6	4 (Chem. Abosrption sensor)	40 (Ammonia)	CAS Relay Contacts + 4-20mA + RS485 (only RAS/DY body)

Example: Part Number composition of gas detector in EEx-d execution with catalytic sensor for methane with analogue output 4-20 mA: Cod. **RAS/AD/101/AAA**

Example: Part Number composition of gas detector in EEx-d execution with electrochemical cell for ammonia with display and relay contacts output:
Cod. **RAS/DY/340/CAS**