TOXIC AND EXPLOSIVE GAS TRANSMITTERS **RAS series with enose® Technology**



Explosion Proof and Stainless Steel housing Ideal to detect combustible gases and solvents Sensors with strong poison resistant properties

Thanks to introduction of modbus or protocols it is possible to establish a de Bluetooth 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.

DESCRIPTION

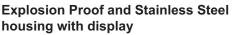
RAS/AD and RAS/DY are rugged, intelligent gas detectors for a wide variety of Explosive and Toxic gases.

Main Characteristic

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







- Robust construction
- Built-in or remote sensor transmitter
- Built-in relays enable full stand-alone capability
- Magnetic Keypad to change settings



MAIN SUBSTANCES LIST (IR Infrared Technology)

SUBSTANCES	SUBSTANCES DESCRIPTION		
Methane (CH4)	Infrared sensor for fixed detecting systems of explosive substances 0-100%L.E.L.	RAS/AD/201/	
Propane (C3H8)	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 up to 0-100%Vol.	RAS/AD/279/	
MAIN SUBSTANC	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 (C3H8)	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 H2 0-100% L. F. I.	RAS/AD/127/	
Ammonia (NH3)	General purpose catalytic sensor NH3 0-100% L.E.L.	RAS/AD/140/	
Ammonia (NH3)	High Quality catalytic sensor NH3 0-2% v/v (0-20.000ppm)	RAS/AD/141S/	

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MAIN SUBSTANCES LIST (Electrochemical Cells Technology)

SUBSTANCES	DESCRIPTION	PRODUCT CODE
Ammonia (NH3)	Electrochemical Cell for NH3 0-100 / 0-500 / 0-1.000 / 0-5.000 PPM	RAS/AD/340/
Carbon monoxide (CO)	Electrochemical Cell for CO 0-300 / 0-500 PPM	RAS/AD/320/
Hydrogen sulphide (H2S)	Electrochemical Cell for H2S 0-20 / 0-100 PPM	RAS/AD/369/
Oxygen (O2)	Electrochemical Cell for O2 0-25% Vol.	RAS/AD/361/
Sulphur dioxide (SO2)	Electrochemical Cell for SO2 0-20 PPM	RAS/AD/370/

MAIN SUBSTANCES LIST (Chemical absorption Technology)

Ammonia (NH3)	Chemical absorbtion sensor optimised for NH3 0-1.000 PPM	RAS/AD/440/
Carbon monoxide (CO)		
Hydrogen sulphide (H2S)		
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 + RS485	Analog current loop + Serial RS485 Modbus Protocol	AAS (RAS/AD & DY)	
3 Relays + RS485	Voltage free contacts 1A 100 Vdc max. + Serial RS485 Modbus Protocol	CCS (RAS/AD only)	
3 Relays + 4-20mA + RS485 Voltage free contacts 1A 100 Vdc max. + Analog current loop + Serial RS485 Modbus Protocol		CAS (RAS/DY only)	

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

Material Aluminium alloy with chrome plated brass or

Stainless Steel
Weight 0.8 Kg.
Mounting 2x6 mm holes

Junction box attachment 3/4" Conical thread UNI 6125

ENVIRONMENTAL SPECIFICATIONS

EMC According to EN61000-4

Storage temperature -40 to85 °C
Operating temperature -20 to 70 °C
Humidity range 90% R.H. n.c.

ELECTRICAL SPECIFICATIONS

Supply Voltage 12-30 Vdc

Power consumption 1 watt (AAS 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 (AAS Version) Relay Contact Rating Max. 1A - 100Vdc - 150 m Ω

PART NUMBER DESCRIPTION

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



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

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