

TOXIC AND EXPLOSIVE GAS TRANSMITTERS

enose® Technology



DESCRIPTION

The RAS/AD and RAS/DY is a rugged, intelligent gas transmitter with a variety of Ex-Tox- sensors.

Main Characteristic

- Microprocessor based
- 4-20 mA output
- Three Voltage free relay contacts
- RS485 digital interface
- 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 for detect combustible gas and solvents
Strong poison resistant properties



RAS-DY

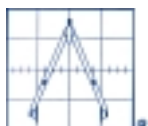
Explosion Proof housing with display

Robust construction
Built-in or separate sensor transmitter
Built-in relays enable full stand-alone capability

MAIN SUBSTANCES LIST (Catalytic sensor)

| SUBSTANCES | DESCRIPTION | Prod.cod. |
|----------------|--|------------|
| Methane | General purpose catalytic sensor for fixed detecting systems of explosive substances 0-100%L.E.L. | Ras-AD/101 |
| L.P.G. | General purpose catalytic sensor for fixed detecting systems of explosive substances 0-100%L.E.L. | Ras-AD/102 |
| Propane | General purpose catalytic sensor for fixed detecting systems of explosive substances 0:100% L.E.L. | Ras-AD/104 |
| Ethanol | General purpose catalytic sensor for fixed detecting systems of explosive substances 0:100% L.E.L. | Ras-AD/106 |
| Gasoline vapor | General purpose catalytic sensor for fixed detecting systems of explosive substances 0-100%L.E.L. | Ras-AD/110 |
| Acetylene | Optimised catalytic sensor for the detection of C2H2 0-100% L.E.L. | Ras-AD/115 |
| Hydrogen | Optimised catalytic sensor for the detection of H2 0-100% L.E.L. | Ras-AD/127 |
| Ammonia | Optimised catalytic sensor NH3 0-100% L.E.L. 1000 PPM sensitivity. | Ras-AD/140 |
| Ammonia | Optimised catalytic sensor NH3 0-4% v/v 400 PPM sensitivity. | Ras-AD/141 |

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MAIN SUBSTANCES LIST (Chemical absorption sensor)

| | | |
|-------------------|--|-----------|
| Ammonia | Chemical absorption sensor optimised for NH ₃ 100/ 200/ 500/ 1000 PPM | RAS-AD/40 |
| Carbon monoxide | Chemical absorption sensor optimised for CO 20-500/1000 PPM | RAS-AD/20 |
| Hydrogen cyanide | Chemical absorption sensor optimised for HCN 2-20 PPM | RAS-AD/63 |
| Hydrogen chloride | Chemical absorption sensor optimised for HCl 0-20 PPM | RAS-AD/64 |
| Chloride | Chemical absorption sensor optimised for Cl ₂ 0-20 PPM | RAS-AD/65 |
| Nitrogen dioxide | Chemical absorption sensor optimised for NO ₂ 0-50/200 PPM | RAS-AD/66 |
| Nitrogen monoxide | Chemical absorption sensor optimised for NO 0-200/400 PPM | RAS-AD/67 |
| Nitrogen sulphide | Chemical absorption sensor optimised for H ₂ S 0-100 PPM | RAS-AD/69 |
| Sulphur dioxide | Chemical absorption sensor optimised for SO ₂ 0-50/100 PPM | RAS-AD/70 |
| Carbon Dioxide | Chemical absorption sensor optimised for CO ₂ 500-10.000 PPM | RAS-AD/79 |

Outputs Configurations

| Outputs | Description | Code |
|------------------|---|------|
| 4-20 mA | Analog current loop | AA |
| 3 Open Collector | Sink outputs 400 mA max. | OC |
| 3 Relays | Voltage free contacts 0.5A 100 Vdc max. | CC |

SPECIFICATION

| | |
|--------------------------|---|
| Sensors | Catalytic pellistor or chemical absorption 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 |

Environmental Specification

| | |
|-----------------------|----------------|
| EMC susceptibility | 10V/m |
| Storage temperature | -40 to 85 °C |
| Operating temperature | -10 to 70 °C |
| Humidity range | 100% R.H. n.c. |

Mechanical Specification

| | |
|-------------------------|----------------|
| Overall dimensions | 170x100x70 mm |
| Weight | 0.8 Kg. |
| Mounting | 2x6 mm holes |
| Termination EEx-d | Terminal block |
| Junction box attachment | 3/4" NPT |

Electrical Specification

| | |
|-------------------|-------------------|
| Supply Voltage | 10-30 Vdc |
| Power consumption | 2 watts |
| Supply fuse | 500 mA |
| Signal fuse | 63 mA |
| Analog output | 4-20 mA |
| Load | 0-300 ohms |
| Cable Type | 3 conductor cable |

Part number description

| Body | Description | Substance Code | Output Configuration Code | |
|--------|--------------------|----------------|---------------------------|----------------|
| RAS/AD | II 2G EEx-d IIC T6 | 101 | AA | Analog 4-20 mA |
| RAS/DY | II 2G EEx-d IIC T6 | : | CC | Relay Contacts |



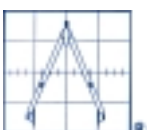
Example of composition of the Part number for a sensor for methane in execution EEx-d with analogue output 4-20 mA
cod. RAS AD/101/AA



Example of composition of the Part number for a sensor for ammonia in execution EEx-d with display and relay contacts output
cod. RAS DY/40/CC

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