

PolyGard® Analog Low Power Transmitter AT02 3300 for combustibile gases

Description

Analog transmitter for monitoring the ambient air and detecting flammable gases and vapors such as natural gas, methane, propane and butane, ammonia etc. measuring below the lower explosion limit (LEL).

Application

The transmitter is used within a wide commercial range and in Ex- Zone 2 for monitoring leakage in gas pipes, gas fan heaters, gas heating systems, gas engines, gas boilers, gas fittings, gas transfer stations, gas valves, domestic gas boiler installations and in gas operated vehicles in underground car parks. Due to the 4 to 20 mA analog signal the Ex – transmitter is compatible to any electronic analog control, DDC/PLC control or automation system (e.g. PolyGard Series MGC and DGC by MSR-E)

Optional Ex- Zone 2

The plug-in sensor is certified according to ATEX II 2G EEx d IIC, the housing is certified according to ATEX II 2G EEx e II T6/T5. The sensor in the stainless steel shell is mounted in the cable entry.

Features

- Continuous monitoring
- Low zero point drift
- Good poisoning permanence
- Long-life sensor
- Modular design (plug-in)
- Simple maintenance / calibration
- Reserve polarity protected
- Overload and short-circuit protection
- 4 – 20 mA analog signal output
- ATEX Ex Zone 2 (optional)
- Relay output (optional)
- Duct mounting (optional)
- IP 65 protected (optional)



Stainless steel

www.msr-electronic.de



ATTEX II enclosure

Specifications

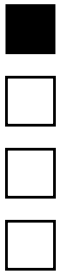
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|----------------------------------|--|
| Electrical | |
| Power supply | |
| - Operation mode <i>Analog</i> * | 18 - 28 VDC, reverse polarity protected |
| - Operation mode <i>DGC-DT</i> * | 9,3 – 28 VDC, reverse polarity protected |
| Power consumption | |
| - Operation mode <i>Analog</i> * | 50 mA, max. (1,2 VA) |
| - Operation mode <i>DGC-DT</i> * | 40 mA, max. (1,0 VA) |
| Output signal | |
| - Operation mode <i>Analog</i> * | 4 – 20 mA, load \leq 500 Ω , overload and short-circuit protected. |
| - Operation mode <i>DGC-DT</i> * | 0,8 – 4 mA, load \leq 500 Ω , overload and short-circuit protected. |
| * Selectable with wire strap | |
| Operating Environment | |
| Humidity range - Continuous | 15 – 90 % RH non-condensing |
| - Short-time | 0 – 99 % RH non-condensing |
| Working temperature | -10 °C to + 50 °C (14 °F to 122 °F) |
| Storage temperature | 0 °C to + 40 °C (32 °F to 104 °F) |
| Working pressure | Atmospheric \pm 10 % |
| Sensor Performance | |
| Gas detected | Combustible gases and vapors |
| Sensor element | Catalytic bead (pellistor), diffusion |
| Measuring Range | 0 - 100% LEL |
| Accuracy | \pm 1% of reading |
| Sensor life expectancy | 3 years, normal operating environment |
| Response time | $t_{90} \leq$ 10 s/methane |
| Long term zero point drift | \pm < 5% LEL _{methane} /year |
| Long term sensitivity drift | \pm < 2% LEL _{methane} /month |
| Physical | |
| Enclosure material* | Stainless Steel |
| Enclosure color* | Natural, untreated |
| Dimensions (H x W x D)* | 135 x 113 x 45 mm (5.35 x 4.5 x 1.8 in.) |
| Weight* | ca. 0,5 kg, (1.1 lbs.) |
| Protection class* | IP 55 |
| Mounting* | Wall mounted, pillar mounted |
| Cable entry | Standard 1 x M 20 |
| Wire connection | Screw-type terminal, min. 0,25 mm ² , (24 AWG), max. 2,5 mm ² (14 AWG) |
| Wire distance | Max. loop resistance 500 Ω (= wire resistance & controller input resistance) |
| Approvals/Listings | |
| | EMV- Directive 89/336/EWG |
| | CE |
| Warranty | One year material and workmanship (Without sensor) |

*For option "stainless steel" and further enclosure types see datasheet AT-DT Enclosure.

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|------------------------------|--|
| Option Ex Zone 2 ATEX | |
| Enclosure material | Polyester |
| Enclosure color | Dark gray |
| Dimensions (H x W x D) | 114 x 114 x 60 mm (4.5 x 4.5 x 2.4 in.) |
| Weight | ca. 0,4 kg (0.88 lbs.) |
| Protection class | IP 65 |
| Mounting | Wall mounted |
| Cable entry | Standard 1 x M 16 |
| Approvals | |
| Sensor | BAS 01 ATEX 2122U (Ex) II 2G EEx d II C |
| Enclosure | PTB 99 ATEX 3103 (Ex) II 2G EEx e II T6/T5 |
| Cable entry | PTB 00 ATEX 3119 X (Ex) II 2G EEx e II |

Ordering Information

AT-02-33XX-0-001



Options

- 1XX Relay package¹
- X5X Heating¹
- XX1 With calibration
0 – 100 % LEL

Enclosure²

- 0 Plastic enclosure
- 1 Duct mounting
- 2 Steel, galvanized
- 3 Aluminium
- 4 IP 65 protected
- 5 Stainless steel
- 7 Zone 2 ATEX

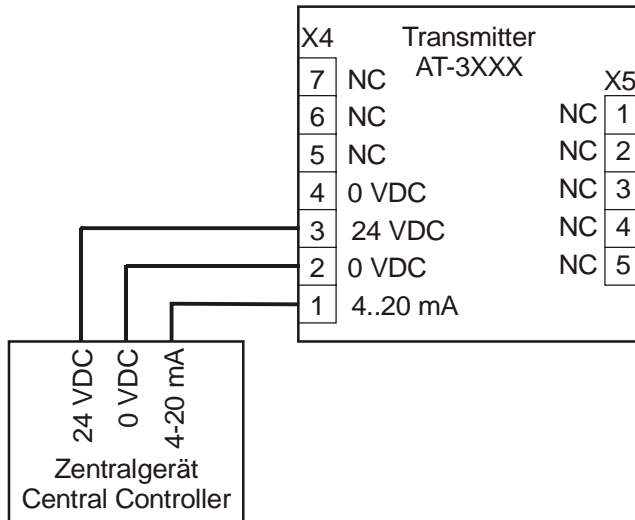
¹ See Data sheet „AT-Options“
² See Data sheet „PolyGard AT/DT Enclosure“

Gastype

| | | |
|----|---------------|--|
| 05 | Acetylene | C ₂ H ₂ |
| 15 | Cyclohexane | C ₆ H ₁₂ |
| 20 | Ethane | C ₂ H ₆ |
| 25 | Ethyl Alcohol | C ₂ H ₅ OH |
| 27 | Ethyl-Acetate | CH ₃ COOC ₂ H ₅ |
| 30 | Gasoline | C ₆ H ₆ |
| 35 | n-Hexane | C ₆ H ₁₄ |
| 40 | Hydrogen | H ₂ |
| 45 | Isop. Alcohol | (CH ₃) ₂ CHOH |
| 50 | Methanol | CH ₃ OH |
| 00 | Methane | CH ₄ |
| 60 | n-Butane | C ₄ H ₁₀ |
| 70 | n-Oktane | C ₈ H ₁₈ |
| 75 | n-Pentane | C ₅ H ₁₂ |
| 80 | Propane | C ₃ H ₈ |
| 85 | Acetone | (CH ₃) ₂ CO |

Example: Transmitter for methane gas, stainless steel enclosure with calibration.
Ordering Number: AT-02-3300-5-001

Connecting Diagram



Dimensions

See Data sheet "PolyGard AT/DT Enclosure"