PolyGard® Analog High Power Transmitter AT22 3400 for combustible 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).

Stainless steel

Application

The transmitter is used within a wide commercial range 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)

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
- Relay output (optional)
- Duct mounting (optional)
- IP 65 protected (optional)

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Specifications

Electrical	
Power supply	
- Operation mode *Analog**	18 - 28 VDC, reverse polarity protected
- Operation mode *DGC-DT**	9,3 - 28 VDC, reverse polarity protected
Power consumption	
- Operation mode *Analog**	65 mA, max. (1,5 VA)
- Operation mode *DGC-DT**	55 mA, max. (1,3 VA)
- w/relay package AT-2R	70 mA, max. (1,7 VA)
Output signal	
- Operation mode *Analog**	Proportional, 4 - 20 mA, load ≤ 500 Ω, overload and short-circuit protected
- Operation mode *DGC-DT**	Proportional, 0,8 - 4 mA, load ≤ 500 Ω, overload and short-circuit protected
* Mode selectable with wire strap	
Sensor Performance	
Detected gas	Combustible gases and vapors
Sensor element	Catalytic bead (pellistor), diffusion
Measuring range	0 - 100% LEL (Linear 0 to 60 % LEL)
Accuracy	± 1% of reading
Long-term zero point drift	± < 2,5% LEL $_{methane}$/year
Long-term sensitivity drift	± < 2% LEL $_{methane}$/month
Response time	t_{90} ≤ 10 sec/methane
Sensor life expectancy	3 years, normal operating environment
Detection limit	0,5% LEL
Operating Environment	
Working temperature	-10 °C to + 50 °C (14 °F to 122 °F)
Storage temperature	5 °C to + 50 °C (41 °F to 122 °F)
Humidity range	15 – 95 % RH non-condensing
Working pressure	Atmospheric ± 10 %
Physical Characteristics	
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, 0,25 to 2,5mm^2, (24 to 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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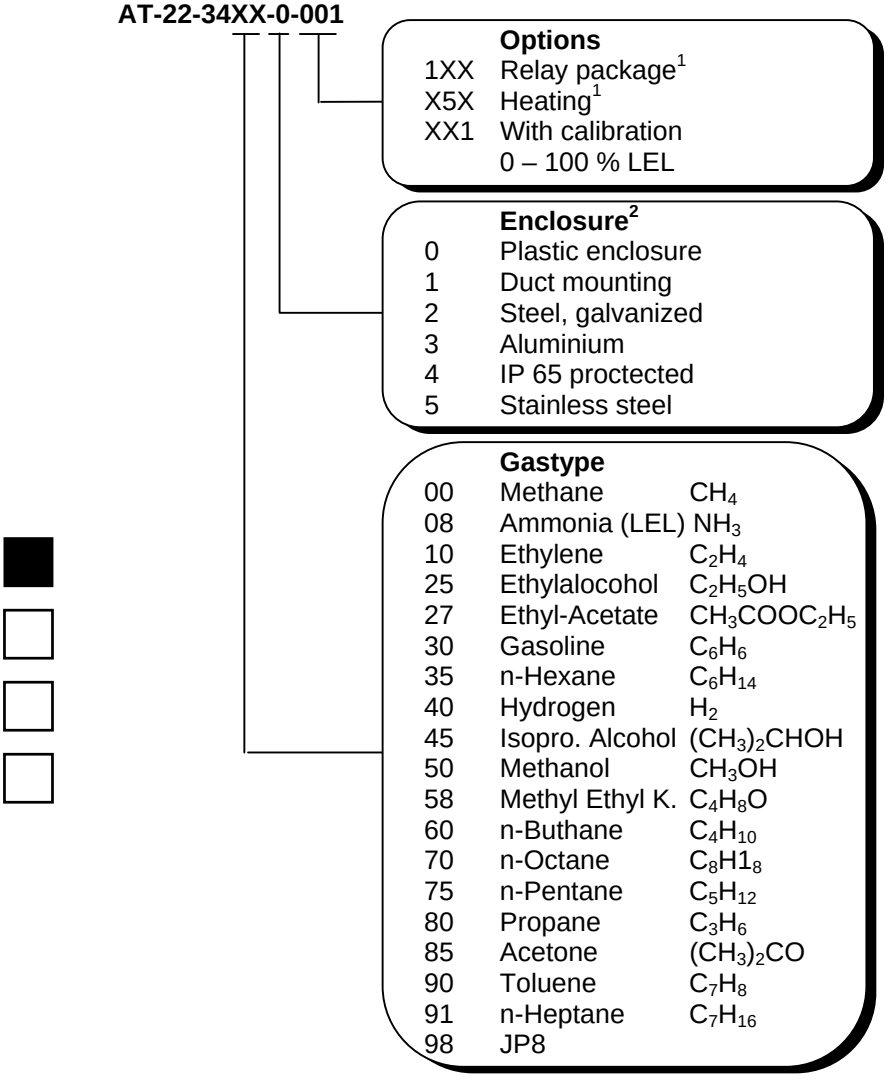
Ordering Information

AT-22-34XX-0-001



	Options
1XX	Relay package[1]
X5X	Heating[1]
XX1	With calibration 0 – 100 % LEL

	Enclosure[2]
0	Plastic enclosure
1	Duct mounting
2	Steel, galvanized
3	Aluminium
4	IP 65 proctected
5	Stainless steel

	Gastype	
00	Methane	CH_4
08	Ammonia (LEL)	NH_3
10	Ethylene	C_2H_4
25	Ethylalocohol	C_2H_5OH
27	Ethyl-Acetate	$CH_3COOC_2H_5$
30	Gasoline	C_6H_6
35	n-Hexane	C_6H_{14}
40	Hydrogen	H_2
45	Isopro. Alcohol	$(CH_3)_2CHOH$
50	Methanol	CH_3OH
58	Methyl Ethyl K.	C_4H_8O
60	n-Buthane	C_4H_{10}
70	n-Octane	C_8H1_8
75	n-Pentane	C_5H_{12}
80	Propane	C_3H_6
85	Acetone	$(CH_3)_2CO$
90	Toluene	C_7H_8
91	n-Heptane	C_7H_{16}
98	JP8	

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

Example: Transmitter for methane gas, stainless steel enclosure with calibration.
Ordering Number: AT-22-3400-5-001

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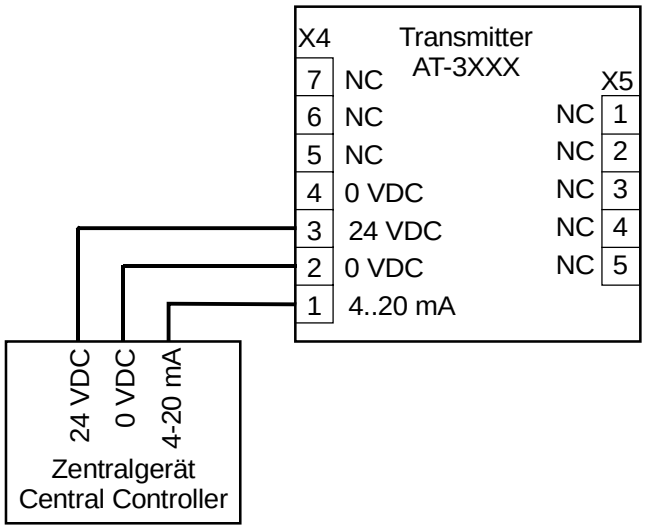
Connecting Diagram



Dimensions

See Data sheet “PolyGard AT/DT Enclosure”

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