

## $\mu$ -Gard<sup>®</sup> Ethylene (C<sub>2</sub>H<sub>4</sub>) Analog Transmitter

### DESCRIPTION

Analog transmitter for monitoring of gases and vapors in the ambient air. It is used for cold storage, ripening chamber, refrigerant vehicles etc. The  $\mu$ -Gard analog transmitter series MA is a reliable gas detector.

### APPLICATION

For the detection of gases within a wide range of commercial applications. Due to the 4 – 20 mA or 2 - 10 V analog signals the transmitter is compatible to the  $\mu$ -Gard gas controller series ADC of MSR-E.

### FEATURES

- Continuous monitoring
- Low zero point drift
- Poisoning stable
- Long life sensor
- Easy maintenance / calibration
- Reverse polarity protected
- Overload protected
- 4 – 20 mA analog signal output
- 2-10V analog signal output
- IP 65 protected enclosure

### CONNECTING DIAGRAM

Transmitter	
1	24 VDC
2	Analog Output
3	0 VDC / GND

F Housing IP44



D Housing IP54



A Housing IP65



## SPECIFICATIONS

Sensor Model	MA-3-2089-X-F(C2H4)
Measuring Range	20-2000 ppm
Sensor element	Semiconductor
Response time $t_{90}$ (s)	$\leq 50$ s
Sensor life expectancy (normal operating environment) in years	$\geq 5$ years
Max. storage time	12 months
<b>Operating Environment</b>	
Humidity non-condensing	15 – 95 % RH
<b>Temperature</b>	
Working temperature	-15 °C to + 50 °C
Storage temperature	0 °C to 50 °C
Pressure range	Atmospheric $\pm 10\%$
<b>Electrical</b>	
Power supply	18 - 28 VDC (reverse polarity protected)
Power consumption	Semiconductor sensor: 35mA, max. 0.85 VA
<b>Physical characteristics</b>	
Enclosure type F	GW Plast 75 GWT
Flammability	UL 94: VO
Enclosure color	RAL 7032 (light grey)
Dimensions	F housing - (d X H) 87 x 45.5 mm
Weight	Approx. 0.2 kg
Protection class	X = F housing – IP44, A housing – IP65, D housing – IP54
Installation	Wall mounting
Cable entry	Standard 3 pieces
Wire connection	Screw type terminal, min. 0.25 mm <sup>2</sup> (24 AWG) max. 2.5 mm <sup>2</sup> (14 AWG)
Wire distance	Max. loop resist. 500 $\Omega$ (= wire resistor + controller input resistor)
<b>Output signal</b>	
Analog output signal	
Standard: 4-20 mA	Proportional, 4 – 20 mA, load $\leq 500 \Omega$ overload and short-circuit proofed
Selectable: 2-10 V	Proportional, 2 – 10 V, load $\leq 50 \text{ k}\Omega$ overload and short-circuit proofed
<b>Guidelines</b>	EMC- Directive 2004/ 108/ EEC, CE
<b>Warranty</b>	12 months on material (without sensor)