MIDAS S2 ETHYLENE OXIDE GROUP (C_2H_4O, $C_6H_{12}O$, $SiC_8H_{20}O_4$)

Sensor Cartridge Specifications

Selectable gases	Ethylene Oxide (C_2H_4O) Cyclopentyl Methyl Ether ($C_6H_{12}O$) Tetraethoxysilane ($SiC_8H_{20}O_4$)
Cartridge Part Number	MIDAS S2-E-TEO 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	C_2H_4O 0 – 40ppm $C_6H_{12}O$ 0 – 40ppm $SiC_8H_{20}O_4$ 0 – 40ppm
Default Alarm 1	C_2H_4O 5ppm $C_6H_{12}O$ 5ppm $SiC_8H_{20}O_4$ 5ppm
Default Alarm 2	C_2H_4O 10ppm $C_6H_{12}O$ 10ppm $SiC_8H_{20}O_4$ 10ppm
LDL, LAL	C_2H_4O 3.6ppm $C_6H_{12}O$ 3.6ppm $SiC_8H_{20}O_4$ 3.6ppm
Resolution	C_2H_4O 0.2ppm $C_6H_{12}O$ 0.2ppm $SiC_8H_{20}O_4$ 0.2ppm
Accuracy	≤ ± 5% of measured value
Response Time $t_{62\cdot5}$	Typical 20 seconds
Sensor Cartridge Life Expectancy (Expiration Period)	24 months under typical application conditions Extendable for 1 year through calibration after 24 months
Operating Temperature	0°C to +40°C (32°F to 104°F)
Effect of Temperature Sensitivity	≤ ± 10% of measured value at 20°C
Operating Humidity	10 to 90% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	C_2H_4O 20ppm $C_6H_{12}O$ 20ppm $SiC_8H_{20}O_4$ 20ppm
Warm Up Time	< 10 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on the test data with C_2H_4O gas under normal Lab test conditions (20-25 C, 0 - 60%RH, normal atmosphere pressure); observed performance may vary based on the actual monitoring system and the sampling conditions employed.

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CROSS SENSITIVITIES

Each Midas S2 sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to other gases than those originally designated. The table below presents typical readings that will be observed when a new sensor cartridge is exposed to the cross sensitive gas (or a mixture of gases containing the cross sensitive species).

Gas Measured	Chemical Formula	Concentration Applied(ppm)	Reading (ppm C_2H_4O)
Carbon Monoxide	CO	50	21.2
Ethanol	C_2H_5OH	10	6.6
Ethylene Oxide	C_2H_4O	10	8.2
Iso Propanol	C_3H_7OH	10	0
Methyl Ethyl Ketone	C_4H_8O	10	0
Toluene	C_7H_8	10	0
Hydrogen Chloride	HCl	4	0
Silane	SiH_4	10	14.4
Hydrogen	H_2	500	0
Chlorine	Cl_2	1	0
Ammonia	NH_3	50	0
Phosphine	PH_3	0.6	0
Ozone	O_3	0.2	0
Sulfur Dioxide	SO_2	4	0
Hydrogen Fluoride	HF	6	0
Hydrogen Sulfide	H_2S	20	37.2
Nitrogen Dioxide	NO_2	6	0
Nitric Oxide	NO	50	36.6
Carbon Dioxide	CO_2	10000	0
Hydrogen Cyanide	HCN	10	4.8

Interference differs from cartridge to cartridge and over cell life. It is not recommended to calibrate with cross sensitivity factors. The target gas should be used for calibration.

For more information
automation.honeywell.com

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