MIDAS S2 PYROLYZER GROUP (C_4F_6, C_5F_8, CH_2F_2, $C_2H_2F_4$, $C_4H_2F_6$, HF)

Sensor Cartridge Specifications

Selectable gases	Hexafluorobutadiene (C_4F_6) Octofluorocyclopentene (C_5F_8) Difluoromethane (CH_2F_2) (R32) R134a ($C_2H_2F_4$) Hexafluoroisobutylene ($C_4H_2F_6$) Hydrogen Fluoride (HF)
Cartridge Part Number	MIDAS S2-E-XCF 2-year extended warranty
Sensor Technology	Electrochemical sensor
Measuring Range	C_4F_6 0 - 40ppm C_5F_8 0 - 40ppm CH_2F_2 0 - 120ppm $C_2H_2F_4$ 0 - 1000ppm $C_4H_2F_6$ 0 - 40ppm HF 0 - 12ppm
Default Alarm 1	C_4F_6 5ppm C_5F_8 5ppm CH_2F_2 15ppm $C_2H_2F_4$ 250ppm $C_4H_2F_6$ 12ppm HF 1.5ppm
Default Alarm 2	C_4F_6 10ppm C_5F_8 10ppm CH_2F_2 30ppm $C_2H_2F_4$ 500ppm $C_4H_2F_6$ 24ppm HF 3ppm
LDL, LAL	C_4F_6 1.7ppm C_5F_8 2ppm CH_2F_2 6ppm $C_2H_2F_4$ 40ppm $C_4H_2F_6$ 11ppm HF 1.05ppm
Resolution	C_4F_6 0.2ppm C_5F_8 0.2ppm CH_2F_2 1ppm $C_2H_2F_4$ 2ppm $C_4H_2F_6$ 0.2ppm HF 0.05ppm

Honeywell

Midas S2 Pyrolyzer group (C_4F_6, C_5F_8, CH_2F_2, $C_2H_2F_4$, $C_4H_2F_6$, HF)

Selectable gases	**Hexafluorobutadiene (C_4F_6) Octofluorocyclopentene (C_5F_8) Difluoromethane (CH_2F_2) (R32) R134a ($C_2H_2F_4$) Hexafluoroisobutylene ($C_4H_2F_6$) Hydrogen Fluoride (HF)**
Accuracy	≤ ± 10% of measured value
Response Time $t_{62\cdot5}$	Typical 60 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	≤ ± 20% of measured value at 20°C
Operating Humidity	20 to 75% non-condensing
Operating Pressure	90 – 110kPa
Calibration Gas	HF 6ppm
Warm Up Time	< 20 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on the test data with HF 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.

Pyrolyzer module (MIDAS-T-NP1) is required to measure C_4F_6, C_5F_8, CH_2F_2, $C_2H_2F_4$ or $C_4H_2F_6$ gases. To maintain stated performance, it is recommended to perform 50 – 104°F(10 - 40°C) and the humidity is in 30 – 70 %RH. Otherwise, more frequent bump testing or calibration will be required to confirm working specifications

Midas S2 Pyrolyzer group (C_4F_6, C_5F_8, CH_2F_2, $C_2H_2F_4$, $C_4H_2F_6$, HF)

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 HF)
Chlorine	Cl_2	1	1.5
Diborane	B_2H_6	1	0 (Negative Drift)
Hydrogen Chloride	HCl	4	3.2
Hydrogen Sulfide	H_2S	25	0 (Negative Drift)
Nitrogen Dioxide	NO_2	5	0.65
Phosphine	PH_3	1	0 (Negative Drift)
Sulfur Dioxide	SO_2	50	0 (Negative Drift)
Arsine	AsH_3	1	0
Carbon Monoxide	CO	2000	0
Hydrogen	H_2	20000	0
Iso Propanol	C_3H_7OH	500	0
Methanol	CH_3OH	500	0
Silane	SiH_4	10	0
Ammonia	NH_3	50	0
Ozone	O_3	0.2	0
Ethylene Oxide	C_2H_4O	20	0
Nitric Oxide	NO	50	0
Carbon Dioxide	CO_2	10000	0

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

Honeywell Process
Measurement and Control
2101 CityWest Blvd
Houston, TX 77042
www.honeywell.com

Midas S2-E-XCF | Rev 1 | 8/24

Honeywell