



Meridian

Sensor Specifications



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Combustible catalytic bead sensor

Meridian combustible catalytic bead sensor

Part Number	096-3473-55		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	100% LEL	1% LEL	2.5% v/v CH4‡
Accuracy/Linearity*	±3% LEL for conc < 50% LEL		
	±5% LEL for conc ≥ 50% LEL		
Response Time*	t50 < 10 sec		
	t90 < 20 sec		
Operating Temperature	-40 to +75°C (-40 to +167 F)		
Operating Humidity	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		

Recommendations

calibration Gas	Target combustible gas (methane default)
Surrogate Calibration Gas	Methane or Propane
Calibration Frequency	Quarterly
Calibration Tubing	Tygon
Notes	‡A minimum of 10% oxygen is required for the sensor to operate properly
	* Sensor may be adversely affected by exposure to silicones, sulfur compounds, halogens or lead-containing compounds.

Common k-factors (relative to methane)

see Common K-Factors on Page 4

Common k-factors (relative to methane)

Meridian combustible catalytic bead sensor

Common k-factors (relative to methane)					
K-Factor	k-factor	COMMON SYNONYMS	K-Factor	k-factor	COMMON SYNONYMS
Acetaldehyde (C ₂ H ₄ O)	0.64		Heptane (C ₇ H ₁₆)	0.42	
Acetone ((CH ₃) ₂ CO)	0.60		n-Hexane (C ₆ H ₁₄)	0.40	
Acetylene (C ₂ H ₂)	0.63		Hydrogen (H ₂)	0.81	
Ammonia (NH ₃)	1.43		Isopropyl Alcohol ((CH ₃) ₂ CHOH)	0.44	Isopropanol, IPA
Benzene (C ₆ H ₆)	0.45		Methane (CH ₄)	1.00	
1,3-Butadiene (C ₄ H ₆)	0.45		Methyl Alcohol (CH ₃ OH)	0.78	Methanol
n-Butane (C ₄ H ₁₀)	0.52		Methylene Chloride (CH ₂ Cl ₂)	1.11	
Isobutane (C ₄ H ₁₀)	0.45		Methyl Chloride (CH ₃ Cl)	0.88	
Isobutylene (C ₄ H ₈)	0.58		Methyl Ethyl Ketone (C ₄ H ₈ O)	0.43	MEK
Butyl Acetate (C ₆ H ₁₂ O ₂)	0.40		n-Octane (C ₈ H ₁₈)	0.32	
n-Butyl Alcohol (C ₄ H ₉ OH)	0.45	Butanol	Pentane (C ₅ H ₁₂)	0.51	
Chlorobenzene (C ₆ H ₅ Cl)	0.38		Isopentane (C ₅ H ₁₂)	0.46	
Cyclohexane (C ₆ H ₁₂)	0.46		Propane (C ₃ H ₈)	0.51	
Diethyl ether ((C ₂ H ₅) ₂ O)	0.50		Propylene (C ₃ H ₆)	0.62	Propene
n-Decane (C ₁₀ H ₂₂)	0.29		Propylene Oxide (C ₃ H ₆ O)	0.44	
Ethane (C ₂ H ₆)	0.68		Styrene (C ₈ H ₈)	0.43	
Ethyl Acetate (C ₄ H ₈ O ₂)	0.46		Tetrahydrofuran ((CH ₂) ₄ O)	0.47	THF
Ethyl Alcohol (CH ₃ CH ₂ OH)	0.63	Ethanol	Toluene (C ₇ H ₈)	0.42	
Ethylbenzene (C ₆ H ₅ CH ₂ CH ₃)	0.41		Vinyl Chloride (C ₂ H ₃ Cl)	0.56	VCM
Ethylene (C ₂ H ₄)	0.63	Ethene	o-Xylene (C ₈ H ₁₀)	0.38	Xylene, Xylenes
Ethylene Oxide (C ₂ H ₄ O)	0.49				

K-factors may be used two ways:

- for a sensor calibrated to read methane:
When a gas other than methane is known to be present, multiply the reading times the k-factor to get the concentration of the interfering gas.
- To use methane to calibrate an instrument to read another gas:
Divide the methane cal gas concentration by the k-factor and span the instrument to that value.
Example: to span for methanol, apply 32% LEL methane and 32/0.78 = 41% LEL (methanol)

Ammonia (NH₃) sensor

Meridian ammonia (NH₃) sensor

Part Number	096-3473-03		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	100 ppm (default)	1 ppm	50 ppm NH ₃
	50 ppm	0.1 ppm	25 ppm NH ₃
	250 ppm	1 ppm	50 ppm NH ₃
	300 ppm	1 ppm	300 ppm NH ₃
	500 ppm	1 ppm	300 ppm NH ₃
Accuracy/Linearity*	±2 ppm or 2% applied gas		
Response Time *	t50: < 30 sec		
	t90: 3 min		
Operating Temperature	-5 to +50°C (23 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0.7	Hydrazine	
	0.6	Hydrogen (H ₂)	
	0.5	MMH (monomethyl hydrazine)	
Ratio: 1 ppm of interference gas will appear as the value shown on an NH ₃ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.			
Recommendations			
calibration Gas	Ammonia (NH ₃)		
Surrogate Calibration Gas	None Recommended		
Calibration Frequency	Quarterly		
Calibration Tubing	Teflon or other fluoropolymer tubing		
Notes	*For a new sensor operating at 25°C, 50%RH		
	†Sensor includes all listed ranges.		

Bromine, high RH (RS Br₂ HRH) Rock solid sensor

Meridian rock solid bromine, high RH (RS Br₂ HRH) sensor

Part Number	096-3473-24		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.01 ppm	5 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	1	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	0.9	Fluorine (F ₂)	
	< 0.1	Hydrogen Chloride (HCl)	
	< 0.1	Ozone (O ₃)	
	< 0.01	Sulfur Dioxide (SO ₂)	
	< 0.01	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS Br₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

RECOMMENDATIONS

Calibration Gas	Bromine (Br ₂)
Surrogate Calibration Gas	Chlorine (Cl ₂) Span sensor to Cl ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing
Notes	*For a new sensor operating at 25°C, 50%RH
	†Sensor includes all listed ranges.
	‡Use Range-Invariant Calibration feature if < 1 ppm Cl ₂ calibration gas is unavailable.
	§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

NOTES:
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Carbon Monoxide (CO) Sensor

Meridian carbon monoxide (CO) sensor

pN	096-3473-01		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	100 ppm (default)	1 ppm	50 ppm CO
	50 ppm	0.1 ppm	25 ppm CO
	150 ppm	1 ppm	100 ppm CO
	500 ppm	1 ppm	250 ppm CO
	1000 ppm	1 ppm	500 ppm CO
Accuracy/Linearity*	±5% of applied gas, or better		
Response Time*	t50: < 5 sec		
	t90: < 15 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F)		
Operating Humidity	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0.2	Hydrogen (H ₂)	
	0	Hydrogen Sulfide (H ₂ S)	
	0	Isopropanol (IPA) ((CH ₃) ₂ CHOH)	
	0.5	Methanol (CH ₃ OH)	
	0	Methyl Mercaptan (CH ₃ SH)	
	0	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a CO sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

Calibration Gas	Carbon Monoxide (CO)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Tygon
Notes	*For a new sensor operating at 25°C, 50%RH
	†Sensor includes all listed ranges.

Chlorine, high RH (RS Cl₂ HRH) rock solid sensor

Meridian chlorine, high RH (RS Cl₂ HRH) rock solid sensor

pN	096-3473-20		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	5 ppm default	0.01 ppm	2 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
	10 ppm	0.1 ppm	5 ppm Cl ₂
	20 ppm	0.1 ppm	10 ppm Cl ₂
	30 ppm	0.1 ppm	10 ppm Cl ₂
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F)		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1	Bromine (Br ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	0.9	Fluorine (F ₂)	
	< 0.1	Hydrogen chloride (HCl)	
	< 0.1	Ozone (O ₃)	
	< 0.01	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS Cl₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

Calibration Gas	Chlorine (Cl ₂)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing

*For a new sensor operating at 25°C, 50%RH

†Sensor includes all listed ranges.

‡Use Range-Invariant Calibration feature if < 1 ppm Cl₂ calibration gas is unavailable.

§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

Chlorine, low RH (RS Cl₂ LRH) rock solid sensor

Meridian chlorine, low RH (RS Cl₂ LRH) rock solid sensor

pN	096-3473-21		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	5 ppm default	0.01 ppm	2 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
	10 ppm	0.1 ppm	5 ppm Cl ₂
	20 ppm	0.1 ppm	10 ppm Cl ₂
	30 ppm	0.1 ppm	10 ppm Cl ₂
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1	Bromine (Br ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	0.9	Fluorine (F ₂)	
	< 0.1	Hydrogen Chloride (HCl)	
	< 0.1	Ozone (O ₃)	
	< 0.01	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS Cl₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

Calibration Gas	Chlorine (Cl ₂)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 1 ppm Cl₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

Chlorine Dioxide, high RH (RS ClO₂ HRH) rock solid sensor

Meridian chlorine Dioxide, high RH (RS ClO₂ HRH) rock solid sensor

Part Number	096-3473-37		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	5 ppm default	0.01 ppm	5 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
Accuracy/Linearity*	10% of full scale		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 75 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F)		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH ₃)	
	0.6	Chlorine (Cl ₂)	
	0	Hydrogen chloride (HCl)	
	< 0.001	Hydrogen sulfide (H ₂ S)	
	< 0.01	Nitric oxide (NO)	
	0.2	Nitrogen dioxide (NO ₂)	
	0.3	Ozone (O ₃)	
	< 0.001	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS ClO₂ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information

Recommendations

Calibration Gas	Chlorine Dioxide (ClO ₂)
Surrogate Calibration Gas	Chlorine (Cl ₂) Span sensor to 0.6 × Cl ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 1 ppm Cl₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

Chlorine Dioxide, low RH (RS ClO₂ LRH) rock solid sensor

Meridian chlorine dioxide, low RH (RS ClO₂ LRH) rock solid sensor

Part Number	096-3473-28		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	5 ppm default	0.01 ppm	5 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
Accuracy/Linearity*	10% of full scale		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 75 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH ₃)	
	0.6	Chlorine (Cl ₂)	
	0	Hydrogen Chloride (HCl)	
	< 0.001	Hydrogen sulfide (H ₂ S)	
	< 0.01	Nitric oxide (NO)	
	0.2	Nitrogen dioxide (NO ₂)	
	0.3	Ozone (O ₃)	
	< 0.001	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS ClO₂ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information

Recommendations

Calibration Gas	Chlorine Dioxide (ClO ₂)
Surrogate Calibration Gas	Chlorine (Cl ₂) Span sensor to 0.6 × Cl ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 1 ppm Cl₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

Fluorine, high RH (RS F₂ HRH) rock solid sensor

MERIDIAN ROCK SOLID FLUORINE, HIGH RH (RS F₂ HRH) SENSOR

PN	096-3473-22		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	5 ppm default	0.01 ppm	2 ppm Cl ₂
	1 ppm	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.1	Bromine (Br ₂)	
	1.1	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	< 0.1	Hydrogen Chloride (HCl)	
	< 0.1	Ozone (O ₃)	
	< 0.01	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS F₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Fluorine (F ₂)
Surrogate Calibration Gas	Chlorine (Cl ₂) Span sensor to 1.1 × Cl ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing
Notes	*For a new sensor operating at 25°C, 50%RH
	†Sensor includes all listed ranges.
	‡Use Range-Invariant Calibration feature if < 1 ppm Cl ₂ calibration gas is unavailable.
	§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

Fluorine, low RH (RS F₂ LRH) rock solid sensor

Meridian rock solid fluorine, low RH (RS F₂ LRH) sensor

pN	096-3473-23		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	1 ppm default	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
	5 ppm	0.01 ppm	2 ppm Cl ₂
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 ≤ 5 sec		
	t90 ≤ 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.1	Bromine (Br ₂)	
	1.1	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	< 0.1	Hydrogen Chloride (HCl)	
	< 0.1	Ozone (O ₃)	
	< 0.01	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS F₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Fluorine (F ₂)
Surrogate Calibration Gas	Chlorine (Cl ₂) Span sensor to 1.1 × Cl ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing
Notes	* For a new sensor operating at 25°C, 50%RH
	† Sensor includes all listed ranges.
	‡ Use Range-Invariant Calibration feature if < 1 ppm Cl ₂ calibration gas is unavailable.
	§ This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

Hydrogen (H₂) Sensor

Meridian hydrogen (H₂) sensor

Part Number	096-3473-12		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	4% (default)	0.01%	2% H ₂
	1%	0.01%	1% H ₂
Accuracy/Linearity*	±3% full scale for conc < 50% full scale		
	±5% full scale for conc ≥ 50% full scale		
Response Time*	t50 < 12 sec		
	t90 < 110 min		
Operating Temperature	-30 to +50°C (-22 to +122 F)		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH ₃)	
	0	Carbon Monoxide (CO)	
	0	Chlorine (Cl ₂)	
	2.2	Hydrogen Sulfide (H ₂ S)	
	0	Methane (CH ₄)	
	0	Nitric Oxide (NO)	
	0	Nitrogen Dioxide (NO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a H₂ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional crosssensitivity information

Recommendations

calibration Gas	Hydrogen (H ₂)
Surrogate Calibration Gas††	none recommended
Calibration Frequency	Quarterly
Calibration Tubing	Tygon
Notes	* For a new sensor operating at 25°C, 50%RH
	†† Sensor includes all listed ranges.

Hydrogen Chloride, High RH (RS HCl HRH) Rock solid sensor

Meridian hydrogen chloride, high RH (RS HCl HRH) rock solid sensor

pN	096-3473-25		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	25 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±4% of applied gas		
Response Time*	t50 < 20 sec		
	t90 < 60 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.3	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	1.6	Fluorine (F ₂)	
	1	Hydrogen Fluoride (HF)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	
	1.3	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS HCl sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Hydrogen Chloride (HCl)
Surrogate Calibration Gas¶	Sulfur Dioxide (SO ₂) Span sensor to 1.3 × SO ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Tygon for SO ₂ ; Teflon or other fluoropolymer tubing for HCl

*For a new sensor operating at 25°C, 50%RH

†Sensor includes all listed ranges.

‡Use Range-Invariant Calibration feature if < 1 ppm HCl or SO₂ calibration gas is unavailable.

§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

¶Cl₂ may be used to adjust the sensor output but must be followed with an acid-gas bump to ensure proper function. Acceptable bump gases include: HF, HCl, SO₂, acetic acid (vinegar).

Notes

Hydrogen Chloride, Low RH (RS HCl LRH) Rock solid sensor

Meridian hydrogen chloride, low RH (RS HCl LRH) rock solid sensor

pN	096-3473-26		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	25 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±4% of applied gas		
Response Time*	t50 < 20 sec		
	t90 < 60 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.3	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	1.6	Fluorine (F ₂)	
	1	Hydrogen Fluoride (HF)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	
	1.3	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS HCl sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Hydrogen Chloride (HCl)
Surrogate Calibration Gas¶	Sulfur Dioxide (SO ₂) Span sensor to 1.3 × SO ₂ cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Tygon for SO ₂ ; Teflon or other fluoropolymer tubing for HCl

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 1 ppm HCl or SO₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

¶ Cl₂ may be used to adjust the sensor output but must be followed with an acid-gas bump to ensure proper function. Acceptable bump gases include: HF, HCl, SO₂, acetic acid (vinegar).

Hydrogen Cyanide (HCN) Sensor

Meridian hydrogen cyanide (HCN) sensor

Part Number	096-3473-11		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	25 ppm default	1 ppm	10 ppm HCN
	100 ppm	1 ppm	10 ppm HCN‡
Accuracy/Linearity*	±10% applied gas for conc ≥ 50% full scale		
Response Time *	t50 < 15 sec		
	t90 < 2.5 min		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0.25	Acetylene (C ₂ H ₂)	
	0.05	Carbon Monoxide (CO)	
	6	Hydrogen Sulfide (H ₂ S)	
	-1	Nitric Oxide (NO)	
	-3	Nitrogen Dioxide (NO ₂)	
	3	Sulfur Dioxide (SO ₂)	
Ratio: 1 ppm of interference gas will appear as the value shown on a HCN sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information			
Recommendations			
calibration Gas	Hydrogen Cyanide (HCN)		
Surrogate Calibration Gas¶	none recommended		
Calibration Frequency	Quarterly		
Calibration Tubing	Teflon or other fluoropolymer tubing		
Notes	*For a new sensor operating at 25°C, 50%RH		
	†Sensor includes all listed ranges.		
	‡Use Range-Invariant Calibration feature if > 20 ppm HCN calibration gas is unavailable		

Hydrogen Fluoride, high RH (RS HF HRH) Rock solid sensor

Meridian hydrogen fluoride, high RH (RS HF HRH) rock solid sensor

pN	096-3473-27		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	5 ppm	0.01 ppm	5 ppm SO ₂ ‡
	30 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±4% of applied gas		
Response Time*	t50 < 20 sec		
	t90 < 60 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.3	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	1.6	Fluorine (F ₂)	
	1	Hydrogen Fluoride (HF)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	
	1.3	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS HF sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Hydrogen Chloride (HCl)
Surrogate Calibration Gas¶	Sulfur dioxide (SO ₂) Span sensor to 1.3 × SO ₂ cal gas concentration
	Hydrogen Chloride (HCl) Span sensor to HCl cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Tygon for SO ₂ ; Teflon or other fluoropolymer tubing for HCl

*For a new sensor operating at 25°C, 50%RH

†Sensor includes all listed ranges.

‡Use Range-Invariant Calibration feature if < 1 ppm HF, HCl or SO₂ calibration gas is unavailable.

Notes

§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

¶Cl₂ may be used to adjust the sensor output but must be followed with an acid-gas bump to ensure proper function. Acceptable bump gases include: HF, HCl, SO₂, acetic acid (vinegar).

Hydrogen Fluoride, low RH (RS HF LRH) Rock solid sensor

Meridian hydrogen fluoride, low RH (RS HF LRH) rock solid sensor

pN	096-3473-28		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	5 ppm	0.01 ppm	5 ppm SO ₂ ‡
	30 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±4% of applied gas		
Response Time*	t50 < 20 sec		
	t90 < 60 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.3	Chlorine (Cl ₂)	
	0.4	Chlorine Dioxide (ClO ₂)	
	1.6	Fluorine (F ₂)	
	1	Hydrogen Chloride (HCl)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	
	1.3	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS HF sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Hydrogen Fluoride (HF)
Surrogate Calibration Gas¶	Sulfur Dioxide (SO ₂) Span sensor to 1.3 × SO ₂ cal gas concentration
	Hydrogen Chloride (HCl) Span sensor to HCl cal gas concentration
Calibration Frequency	Quarterly
Calibration Tubing	Tygon for SO ₂ ; Teflon or other fluoropolymer tubing for HCl

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 1 ppm HF, HCl or SO₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

¶ Cl₂ may be used to adjust the sensor output but must be followed with an acid-gas bump to ensure proper function. Acceptable bump gases include: HF, HCl, SO₂, acetic acid (vinegar).

Hydrogen Sulfide (low methanol) (H₂S-LM) sensor

Meridian hydrogen sulfide (low methanol) (H₂S-LM) sensor

pN	096-3473-02		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	50 ppm (default)	0.1 ppm	25 ppm H ₂ S
	10 ppm	0.1 ppm	10 ppm H ₂ S
	25 ppm	0.1 ppm	10 ppm H ₂ S
	100 ppm	1 ppm	50 ppm H ₂ S
Accuracy/Linearity*	±1 % of applied gas, or better		
Response Time *	t50: < 15 sec		
	t90: < 45 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F)		
Operating Humidity	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Carbon Monoxide (CO)	
	0	Hydrogen (H ₂)	
	0	Isopropanol (IPA) ((CH ₃) ₂ CHOH)	
	0	Methanol (CH ₃ OH)	
	0	Methyl Mercaptan (CH ₃ SH)	
	< 0.2	Sulfur Dioxide (SO ₂)	
Ratio: 1 ppm of interference gas will appear as the value shown on an H ₂ S-LM sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.			
Recommendations			
calibration Gas	Hydrogen Sulfide (H ₂ S)		
Surrogate Calibration Gas	None Recommended		
Calibration Frequency	Quarterly		
Calibration Tubing	Tygon		
Notes	*For a new sensor operating at 25°C, 50%RH		
	†Sensor includes all listed ranges.		

Nitrogen Dioxide (NO₂) Sensor

Meridian nitrogen dioxide (NO₂) sensor

Part Number	096-3473-54		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm (default)	0.1 ppm	5 ppm NO ₂
	20 ppm	0.1 ppm	5 ppm NO ₂
Accuracy/Linearity*	±0.6% full scale for conc < 50% full scale		
	±10% applied gas for conc ≥ 50% full scale		
Response Time*	t50 < 5 sec		
	t90 < 75 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH ₃)	
	0	Carbon Monoxide (CO)	
	-1	Chlorine (Cl ₂)	
	0	Hydrogen (H ₂)	
	0.08	Hydrogen Sulfide (H ₂ S)	
	0	Nitric Oxide (NO)	
	1.4	Ozone (O ₃)	
	0	Sulfur Dioxide (SO ₂)	

Ratio: 1 ppm of interference gas will appear as the value shown on a NO₂ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information

Recommendations

calibration Gas	Nitrogen Dioxide (NO ₂)
Surrogate Calibration Gas	none recommended
Calibration Frequency	Quarterly
Calibration Tubing	Teflon or other fluoropolymer tubing
Notes	* For a new sensor operating at 25°C, 50%RH
	† Sensor includes all listed ranges.

Oxygen (O₂) Sensor

Meridian oxygen (O₂) sensor

pN	096-3473-19		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	25% V/V (default)	0.1% V/V	20.9% O ₂ and 100% N ₂
	10% V/V	0.1% V/V	20.9% O ₂ ‡ and 100% N ₂
Accuracy/Linearity*	0.25% V/V		
Response Time*	t50: < 5 sec		
	t90: < 20 sec		
Operating Temperature	-30 to +50°C (-22 to +122 F)		
Operating Humidity	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Recommendations			
calibration Gas	Nitrogen (N ₂) and Air		
Surrogate Calibration Gas	None Recommended		
Calibration Frequency	Quarterly		
Calibration Tubing	Tygon		
Notes	* For a new sensor operating at 25°C, 50%RH		
	† Sensor includes all listed ranges.		
	‡ Use Range-Invariant Calibration feature if <10% O ₂ calibration gas is unavailable.		

Ozone, High RH (RS O₃ HRH) Rock solid sensor

Meridian hydrogen fluoride, low RH (RS O₃ HRH) rock solid sensor

Part Number	096-3473-39		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	1 ppm default	0.01 ppm	2 ppm Cl ₂ ‡
	3 ppm	0.01 ppm	2 ppm Cl ₂
Accuracy/Linearity*	±0.5 ppm or 3% of applied gas		
Response Time*	t50 < 10 sec		
	t90 < 2 min		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	08	Chlorine (Cl ₂)	
	0.6	Chlorine Dioxide (ClO ₂)	
	0.002	Hydrogen Chloride (HCl)	
	< 0.001	Hydrogen Sulfide (H ₂ S)	
	0.001	Nitric oxide (NO)	
	0.06	Nitrogen dioxide (NO ₂)	
	0	Sulfur Dioxide (SO ₂)	
Ratio: 1 ppm of interference gas will appear as the value shown on a RS O ₃ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information			
Recommendations			
calibration Gas	Ozone (O ₃)		
Surrogate Calibration Gas¶	Sulfur Dioxide (SO ₂) Span sensor to 1.3 × SO ₂ cal gas concentration		
	Chlorine (Cl ₂) Span sensor to 0.8 × Cl ₂ cal gas concentration		
Calibration Frequency	Quarterly		
Calibration Tubing	Teflon or other fluoropolymer tubing		
Notes	*For a new sensor operating at 25°C, 50%RH		
	†Sensor includes all listed ranges.		
	‡Use Range-Invariant Calibration feature if < 2 ppm Cl ₂ calibration gas is unavailable		
	§This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 70% RH ± 15%.		

Silane (SiH₄) Sensor

Meridian Silane (SiH₄) Senore

Part Number	096-3473-09		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm (default)	0.1 ppm	16 ppm PH ₃
	1 ppm	0.01 ppm	500 ppb PH ₃
Accuracy/Linearity*	±5% full scale for conc < 50% full scale		
	±10% applied gas for conc ≥ 50% full scale		
Response Time*	t50 < 10 sec		
	t90 < 45 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH ₃)	
	1.6	Arsine (AsH ₃)	
	0	Diborane (B ₂ H ₆)	
	1.6	Germane (GeH ₄)	
	0.01	Hydrogen Cyanide (HCN)	
	< 0.001	Isopropanol (IPA) ((CH ₃) ₂ CHOH)	
	1.7	Phosphine (PH ₃)	

Ratio: 1 ppm of interference gas will appear as the value shown on a SiH₄ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional crosssensitivity information

Recommendations

calibration Gas	Silane (SiH ₄)
Surrogate Calibration Gas	Phosphine (PH ₃) Span sensor to 1.7 × PH ₃ cal gas
Calibration Frequency	Quarterly
Calibration Tubing	Tygon
Notes	* For a new sensor operating at 25°C, 50%RH
	† Sensor includes all listed ranges.

Sulfur Dioxide, high RH (SO₂ HRH) sensor

Meridian sulfur dioxide, high RH (SO₂ HRH) sensor

Part Number	096-3473-05		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	50 ppm (default)	0.1 ppm	16 ppm SO ₂
	10 ppm	0.1 ppm	5 ppm SO ₂
	100 ppm	1 ppm	16 ppm SO ₂ ‡
	500 ppm	1 ppm	16 ppm SO ₂
Accuracy/Linearity*	±5% full scale for conc < 50% full scale		
	±10% applied gas for conc ≥ 50% full scale		
Response Time*	t50 < 5 sec		
	t90 < 60 sec		
Operating Temperature	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	0.04	Chlorine (Cl ₂)	
	< 0.01	Hydrogen (H ₂)	
	0	Hydrogen Fluoride (HF)	
	0.06	Hydrogen Sulfide (H ₂ S)	
	0.4	Nitric Oxide (NO)	
	-0.07	Nitrogen Dioxide (NO ₂)	
	2	Phosphine (PH ₃)	

Ratio: 1 ppm of interference gas will appear as the value shown on an SO₂ sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional crosssensitivity information

Recommendations

calibration Gas	Sulfur Dioxide (SO ₂)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Tygon

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if > 20 ppm SO₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

Sulfur Dioxide, high RH (RS SO₂ HRH) Rock Solid sensor

Meridian sulfur dioxide, high RH (RS SO₂ HRH) rock solid sensor

pN	096-3473-31		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	3 ppm	0.01 ppm	5 ppm SO ₂ ‡
	25 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±5% reading		
Response Time*	t50 < 5 sec		
	t90 < 75 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.6	Chlorine (Cl ₂)	
	0.5	Chlorine Dioxide (ClO ₂)	
	1.5	Fluorine (F ₂)	
	0.8	Hydrogen Chloride (HCl)	
	0.8	Hydrogen Fluoride (HF)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS SO₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information

Recommendations

calibration Gas	Sulfur Dioxide (SO ₂)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Tygon

Notes

* For a new sensor operating at 25°C, 50%RH

† Sensor includes all listed ranges.

‡ Use Range-Invariant Calibration feature if < 3 ppm SO₂ calibration gas is unavailable.

§ This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.

Sulfur dioxide, low RH (RS SO₂ LRH) Rock solid sensor

Meridian sulfur dioxide, low RH (RS SO₂ LRH) rock solid sensor

pN	096-3473-32		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm SO ₂
	1 ppm	0.01 ppm	5 ppm SO ₂ ‡
	3 ppm	0.01 ppm	5 ppm SO ₂ ‡
	25 ppm	0.1 ppm	9 ppm SO ₂
Accuracy/Linearity*	±5% reading		
Response Time*	t50 < 5 sec		
	t90 < 75 sec		
Operating Temperature	-20 to +50°C (-4 to +122 F)		
	-40 to +50°C (-40 to +122 F) non-condensing		
Operating Humidity §	5-95% RH, non-condensing		
Operating Pressure	100 kPa ± 20 kPa (29.5 in Hg ± 5.9 in Hg)		
Common Interference Gases	Ratio	Interference Gas	
	1.6	Chlorine (Cl ₂)	
	0.5	Chlorine Dioxide (ClO ₂)	
	1.5	Fluorine (F ₂)	
	0.8	Hydrogen Chloride (HCl)	
	0.8	Hydrogen Fluoride (HF)	
	< 0.5	Hydrogen Sulfide (H ₂ S)	
	< 0.1	Ozone (O ₃)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS SO₂ sensor. Other gases may influence sensor; refer to Appendix A on page 24 for additional cross-sensitivity information.

Recommendations

calibration Gas	Sulfur Dioxide (SO ₂)
Surrogate Calibration Gas	None Recommended
Calibration Frequency	Quarterly
Calibration Tubing	Tygon

*For a new sensor operating at 25°C, 50%RH

†Sensor includes all listed ranges.

Notes

‡Use Range-Invariant Calibration feature if < 3 ppm SO₂ calibration gas is unavailable.

§This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.

NOTES:
Meridian

Guidelines for using the Meridian interference table

- The gas interference table does not show, nor should it be implied that no additional interferences may occur. These selectivity ratios are used as guides only. The gas species' actual cross-sensitivities may vary from the values shown.
- It is always best practice to use the target gas to calibrate any sensor. In some cases, however, the target gas is not practically available in a known or stable concentration. In these instances, a surrogate calibration gas may be used. Selectivity ratios for acceptable surrogates are indicated with grey cell highlights.
- For each sensor type, the table shows how 1 ppm of an Interference Gas appears on that specific sensor type. For example, 1 ppm chlorine dioxide (ClO_2) will appear as 0.4 ppm chlorine on a Rock Solid Cl_2 sensor (096-3473-20 or 096-3473-21).

Key for table

Zero	Indicates tested and confirmed no interferences
Blank	Indicates not tested
Neg	Indicates gas produces a negative signal but a stable Ratio has not been defined
Yes	Indicates gas produces a positive signal but a stable Ratio has not been defined
Two values in a cell	Indicates initial peak (in parentheses) and final offset
Dark grey highlight	Indicates target calibration gas or acceptable Surrogate calibration gas

Meridian sensor interference table

SENSORS	SENSORS																	
	Meridian Sensor: Part Number: Target Gas:	Ammonia (NH ₃) 096-3473-03	Rock Solid Br ₂ Hi RH (NH ₃) 096-3473-24	Bromine (Br ₃)	Carbon Monoxide (CO) 096-3473-01	Carbon Monoxide (CO)	Rock Solid Cl ₂ Hi RH Rock Solid Cl ₂ Lo RH 096-3473-20	096-3473-21 Chlorine (Cl ₃)	Rock Solid F ₂ Hi RH Rock Solid F ₂ Lo RH 096-3473-22	096-3473-23 Fluorine (F ₃)	Rock Solid HCl, Hi RH Rock Solid HCl, Lo RH 096-3473-25	096-3473-26 Hydrogen Chloride (HCl)	Rock Solid HF, Hi RH Rock Solid HF, Lo RH 096-3473-27	096-3473-28 Hydrogen Fluoride (HF)	H ₂ S Low Methanol 096-3473-02	Hydrogen Sulfide (H ₂ S)	Rock Solid SO ₂ Hi RH Rock Solid SO ₂ Lo RH 096-3473-31	096-3473-32 Sulfur Dioxide (SO ₂)
INTERFERENCE GASES	Acetylene (C ₂ H ₂)	(0.07) 0.04			0.3										0			
	Ammonia (NH ₃)	1	0		0		0		0						0			
	Arsine (AsH ₃)	(2.7) 1.6			0										0.8			
	Boron Trichloride (BCl ₃)										0.5		0.5				0.4	
	Boron Trifluoride (BF ₃)										0.4		0.4				0.3	
	Bromine (Br ₂)	NEG	1				1		1.1		YES		YES				YES	
	Carbon Monoxide (CO)	0.4			1										0			
	Chlorine (Cl ₂)	(-0.2) -0.09	1		0		1		1.1		1.3		1.3		-0.2		1.7	
	Chlorine Dioxide (ClO ₂)		0.4				0.4		0.4		0.4		0.4				0.5	
	Diborane (B ₂ H ₆)										1		1				0.9	
	Dichloro-silane (SiH ₂ Cl ₂)	0.2			0										0			
	Disilane (Si ₂ H ₆)	0			0.5										0			
	Ethanol (C ₂ H ₅ OH)	0.2			0										0			
	Ethylene Oxide (EtO) (C ₂ H ₄ O)	0			0.5										0			
	Fluorine (F ₂)	YES	0.9				0.9		1		1.6		1.6				1.5	
	Germane (GeH ₄)																	
	Hydrogen (H ₂)	(1) 0.6	0		0.19		0		0		0		0		0		0	0
	Hydrogen Bromide (HBr)	NEG									0.6		0.6				0.6	
	Hydrogen Chloride (HCl)	(-0.2) -0.1	(0.1) 0.01		0		(0.1) 0.01		(0.1) 0.01		1		1		0.01		0.8	
	Hydrogen Cyanide (HCN)	-0.067			0										0			

Meridian sensor interference table

SENSORS

SENSORS

Meridian Sensor:
Part Number:
Target Gas:

Ammonia (NH₃)
096-3473-03
Ammonia (NH₃)

Rock Solid
Br, Hi RH
096-3473-24
Bromine
(Br₂)

Carbon
Monoxide
(CO)
096-3473-01
Carbon Monoxide (CO)

Rock Solid Cl₂, Hi RH
Rock Solid Cl₂, Lo RH
096-3473-20
096-3473-21
Chlorine
(Cl₂)

Rock Solid
F₂, Hi RH
Rock Solid
F₂, Lo RH
096-3473-22
096-3473-23
Fluorine (F₂)

Rock Solid HCl, Hi RH
Rock Solid HCl, Lo RH
096-3473-25
096-3473-26
Hydrogen Chloride
(HCl)

Rock Solid HF, Hi RH
Rock Solid HF, Lo RH
096-3473-27
096-3473-28
Hydrogen Fluoride (HF)

H₂S Low Methanol
096-3473-02
Hydrogen Sulfide (H₂S)

Rock Solid
SO₂, Hi RH
Rock Solid
SO₂, Lo RH
096-3473-31
096-3473-32
Sulfur Dioxide (SO₂)

INTERFERENCE GASES

Hydrogen Fluoride (HF)	NEG					1	1		
Hydrogen Sulfide (H ₂ S)	(0.05) 0.01	0	0	0	0	(-0.001) 0.4	(-0.001) 0.4	1	(-0.002) 0.5
Iodine (I ₂)		0.2		0.2	0.2				
Isopropanol (CH ₃) ₂ CHOH	0.3		0					0	
Methanol (CH ₃ OH)	0.4		0.5					0	
Methyl Iodide (CH ₃ I)									
Methyl Mercaptan (CH ₃ SH)	0		0					0	
Monomethyl Hydrazine (MMH) CH ₃ NHNH ₂	0.5								
Nitric Oxide (NO)	(-0.1) -0.09	<0.001	-0.03	<0.001	<0.001	0.002	0.002	-0.005	0.003
Nitrogen Dioxide (NO ₂)	-0.6	0.02	0	0.02	0.02	0.02	0.02	-0.2	0.03
Ozone (O ₃)	0.7	0.07	0.5	0.07	0.08	0.06	0.06	-0.2	0.08
Phosphine (PH ₃)	(2.8) 1.3		0					0.6	
Silane (SiH ₄)	(3.4) 1.3		0.1					0.1	
Silicon Tetrafluoride (SiF ₄)						2.7	2.7		2
Sulfur Dioxide (SO ₂)	(-0.04) -0.02	(0.01) 0.001	0	(0.01) 0.001	(0.01) 0.001	1.3	1.3	0.1	1
Tetraethyl Orthosilicate (TEOS) Si(OC ₂ H ₅) ₄									
Trimethyl Silane (CH ₃) ₃ SiH									
Tungsten Hexafluoride (WF ₆)						3.4	3.4		2.6
Vinyl Chloride Monomer (VCM) (C ₂ H ₃ Cl)									

NOTES:
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Sensor Specifications



Teledyne Gas & Flame Detection quality assurance programmes demand the continuous assessment and improvement of all our products. Information in this leaflet could thus change without notification and does not constitute a product specification. For more information, please contact us or your company representative.



AMERICAS

4055 Technology Forest Blvd.
The Woodlands,
TX 77381, USA
Tel.: +1-713-559-9200
Fax: +1-713-893-6729

EMEA

ZI Est, Rue Orfila,
CS 20417
62027 ARRAS Cedex, France
Tel.: +33-3-21-60-80-80
Fax: +33-3-21-60-80-00

ASIA PACIFIC

290 Guiqiao Road
Pudong, Shanghai 201206
People's Republic of China
Tel.: +86-21-3127-6373
Fax: +86-21-3127-6365