TELEDYNE GAS AND FLAME DETECTION
Everywhereyoulook™

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.

Commom 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_2H_4O)	0.64		Heptane (C_7H_{16})	0.42	
Acetone ($(CH_3)_2CO$)	0.60		n-Hexane (C_6H_{14})	0.40	
Acetylene (C_2H_2)	0.63		Hydrogen (H_2)	0.81	
Ammonia (NH_3)	1.43		Isopropyl Alcohol ($(CH_3)_2CHOH$)	0.44	Isopropanol, IPA
Benzene (C_6H_6)	0.45		Methane (CH_4)	1.00	
1,3-Butadiene (C_4H_6)	0.45		Methyl Alcohol (CH_3OH)	0.78	Methanol
n-Butane (C_4H_{10})	0.52		Methylene Chloride (CH_2Cl_2)	1.11	
Isobutane (C_4H_{10})	0.45		Methyl Chloride (CH_3Cl)	0.88	
Isobutylene (C_4H_8)	0.58		Methyl Ethyl Ketone (C_4H_8O)	0.43	MEK
Butyl Acetate ($C_6H_{12}O_2$)	0.40		n-Octane (C_8H_{18})	0.32	
n-Butyl Alcohol (C_4H_9OH)	0.45	Butanol	Pentane (C_5H_{12})	0.51	
Chlorobenzene (C_6H_5Cl)	0.38		Isopentane (C_5H_{12})	0.46	
Cyclohexane (C_6H_{12})	0.46		Propane (C_3H_8)	0.51	
Diethyl ether ($(C_2H_5)2O$)	0.50		Propylene (C_3H_6)	0.62	Propene
n-Decane ($C_{10}H_{22}$)	0.29		Propylene Oxide (C_3H_6O)	0.44	
Ethane (C_2H_6)	0.68		Styrene (C_8H_8)	0.43	
Ethyl Acetate ($C_4H_8O_2$)	0.46		Tetrahydrofuran ($(CH_2)_4O$)	0.47	THF
Ethyl Alcohol (CH_3CH_2OH)	0.63	Ethanol	Toluene (C_7H_8)	0.42	
Ethylbenzene ($C_6H_5CH_2CH_3$)	0.41		Vinyl Chloride (C_2H_3Cl)	0.56	VCM
Ethylene (C_2H_4)	0.63	Ethene	o-Xylene (C_3H_{10})	0.38	Xylene, Xylenes
Ethylene Oxide (C_2H_4O)	0.49				

K-factors may be used two ways:

1. 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.

2. 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 (menthanol)

Ammonia (NH_3) sensor

Meridian ammonia (NH_3) 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	100 ppm NH_3
	300 ppm	1 ppm	100 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 Br_2 HRH) Rock solid sensor

Meridian rock solid bromine, high RH (RS Br_2 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 Br_2 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%.

Carbon Monoxide (CO) Sensor

Meridian carbon monoxide (CO) sensor

Part Number	**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_2S)	
	0	Isopropanol (IPA) ($(CH_3)_2CHOH$)	
	0.5	Methanol (CH_3OH)	
	0	Methyl Mercaptan (CH_3SH)	
	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 CL_2 HRH) rock solid sensor

Meridian chlorine, high RH (RS CL_2 HRH) rock solid sensor

Part Number	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 Cl_2 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 Cl_2 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 CL_2 LRH) rock solid sensor

Meridian chlorine, low RH (RS CL_2 LRH) rock solid sensor

Part Number	**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 Cl_2 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 Cl_2 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 ClO_2 HRH) rock solid sensor

Meridian chlorine Dioxide, high RH (RS ClO_2 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 suflide (H_2S)	
	< 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 ClO_2 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 Cl_2 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 ClO_2 LRH) rock solid sensor

Meridian chlorine dioxide, low RH (RS ClO_2 LRH) rock solid sensor

Part Number	**096-3473-38**		
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 suflide (H_2S)	
	< 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 ClO_2 sensor. Other gases may influence sensor; refer to controlled document 062-0064 for additional cross-sensitivity information			
Recommendations			
Calibration Gas	Chlorine (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 Cl_2 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 F_2 HRH) rock solid sensor

MERIDIAN ROCK SOLID FLUORINE, HIGH RH (RS F_2 HRH) SENSOR

Part Number	**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 F_2 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 F_2 LRH) rock solid sensor

Meridian rock solid fluorine, low RH (RS F_2 LRH) sensor

Part Number	**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 F_2 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 (H_2) Sensor

Meridian hydrogen (H_2) 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%	0.5% 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 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)		
Common Interference Gases	Ratio	Interference Gas	
	0	Ammonia (NH_3)	
	0	Carbon Monoxide (CO)	
	0	Chlorine (Cl_2)	
	2.2	Hydrogen Sulfide (H_2S)	
	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 H_2 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

Part Number	**096-3473-25**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm HCl
	1 ppm	0.01 ppm	5 ppm HCl‡
	25 ppm	0.1 ppm	10 ppm HCl
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_2S)	
	< 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 SO_2 calibration gas is unavailable.		
	§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.		
	¶Cl_2 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, SO_2, acetic acid (vinegar).		

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

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

Part Number	**096-3473-26**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm HCl
	1 ppm	0.01 ppm	5 ppm HCl‡
	25 ppm	0.1 ppm	10 ppm HCl
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_2S)	
	< 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 SO_2 calibration gas is unavailable.		
	§This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.		
	¶Cl_2 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, SO_2, 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	25 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_2H_2)	
	0.05	Carbon Monoxide (CO)	
	6	Hydrogen Sulfide (H_2S)	
	-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 HCl
	1 ppm	0.01 ppm	5 ppm HCl‡
	5 ppm	0.01 ppm	5 ppm HCl‡
	30 ppm	0.1 ppm	10 ppm HCl
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_2S)	
	< 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		
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 SO_2 calibration gas is unavailable.		
	§This sensor is optimized for best performance and longevity in relatively humid conditions. Recommend 70% RH ± 15%.		
	¶Cl_2 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, SO_2, acetic acid (vinegar).		

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

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

Part Number	**096-3473-28**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm default	0.1 ppm	5 ppm HCl
	1 ppm	0.01 ppm	5 ppm HCl‡
	5 ppm	0.01 ppm	5 ppm HCl‡
	30 ppm	0.1 ppm	10 ppm HCl
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_2S)	
	< 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 SO_2 calibration gas is unavailable.		
	§This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 50% RH ± 15%.		
	¶Cl_2 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, SO_2, acetic acid (vinegar).		

Hydrogen Sulfide (low methanol) (H_2S-LM) sensor

Meridian hydrogen sulfide (low methanol) (H_2S-LM) sensor

Part Number	**096-3473-02**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	50 ppm (default)	0.1 ppm	25 ppm H_2S
	10 ppm	0.1 ppm	5 ppm H_2S
	25 ppm	0.1 ppm	10 ppm H_2S
	100 ppm	1 ppm	50 ppm H_2S
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) ($(CH_3)_2CHOH$)	
	0	Methanol (CH_3OH)	
	0	Methyl Mercaptan (CH_3SH)	
	< 0.2	Sulfur Dioxide (SO_2)	

Ratio: 1 ppm of interference gas will appear as the value shown on an H_2S-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_2S)
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 (NO_2) Sensor

Meridian nitrogen dioxide (NO_2) 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	10 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)	
	0	Nitric Oxide (NO)	
	1.4	Ozone (O_3)	
	0	Sulfure Dioxide (SO_2)	

Ratio: 1 ppm of interference gas will appear as the value shown on a NO_2 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 (O_2) Sensor

Meridian oxygen (O_2) sensor

Part Number	**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
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 O_3 HRH) Rock solid sensor

Meridian hydrogen fluoride, low RH (RS O_3 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	
	0.8	Chlorine (Cl_2)	
	0.6	Chlorine Dioxide (ClO_2)	
	0.002	Hydrogen Chloride (HCl)	
	< 0.001	Hydrogen Sulfide (H_2S)	
	0.001	Nitric oxide (NO)	
	0.06	Ntrogen 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¶	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 or O_3 calibration gas is unavailable		
	§This sensor is optimized for best performance and longevity in relatively dry conditions. Recommend 70% RH ± 15%.		

Silane (SiH_4) Sensor

Meridian Silane (SiH_4) Senore

Part Number	**096-3473-09**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	10 ppm (default)	0.1 ppm	5 ppm SiH_4
	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_2H_6)	
	1.6	Germane (GeH_4)	
	0.01	Hydrogen Cyanide (HCN)	
	< 0.001	Isopropanol (IPA) ($(CH_3)_2CHOH$)	
	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.
	‡Use Range-Invariant Calibration feature

Sulfur Dioxide, high RH (SO_2 HRH) sensor

Meridian sulfur dioxide, high RH (SO_2 HRH) sensor

Part Number	**096-3473-05**		
Compatible Instruments	Meridian Universal Gas Detector		
Ranges†	Range	Resolution	Cal Gas
	50 ppm (default)	0.1 ppm	25 ppm SO_2
	10 ppm	0.1 ppm	5 ppm SO_2
	100 ppm	1 ppm	50 ppm SO_2
	500 ppm	1 ppm	50 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_2S)	
	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 > 50 ppm SO_2 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 SO_2 HRH) Rock Solid sensor

Meridian sulfur dioxide, high RH (RS SO_2 HRH) rock solid sensor

Part Number	**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	10 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_2S)	
	< 0.1	Ozone (O_3)	
Ratio: 1 ppm of interference gas will appear as the value shown on a RS SO_2 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 SO_2 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 SO_2 LRH) Rock solid sensor

Meridian sulfur dioxide, low RH (RS SO_2 LRH) rock solid sensor

Part Number	**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	10 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_2S)	
	< 0.1	Ozone (O_3)	

Ratio: 1 ppm of interference gas will appear as the value shown on a RS SO_2 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 SO_2 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 intereferences 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 blue 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
Blue highlight	Indicates target calibration gas or acceptable Surrogate calibration gas

Meridian sensor interference table

SENSORS

INTERFERENCE GASES

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_2)	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_2)	Rock Solid F_2, Hi RH Rock Solid F_2, Lo RH 096-3473-22 096-3473-23 Fluorine (F_2)	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_2S Low Methanol 096-3473-02 Hydrogen Sulfide (H_2S)	Rock Solid SO_2, Hi RH Rock Solid SO_2, Lo RH 096-3473-31 096-3473-32 Sulfur Dioxide (SO_2)
Acetylene (C_2H_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_2H_6)						1	1		0.9
Dichloro-silane (SiH_2Cl_2)	0.2		0					0	
Disilane (Si_2H_6)	0		0.5					0	
Ethanol (C_2H_5OH)	0.2		0					0	
Ethylene Oxide (EtO) (C_2H_4O)	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
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

INTERFERENCE GASES

Meridian Sensor: Part Number: Target Gas:	Ammonia (NH_3) 096-3473-03 Ammonia (NH_3)	Rock Solid Br_2 Hi RH (NH_3) 096-3473-24 Bromine (Br_2)	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_2)	Rock Solid F_2 Hi RH Rock Solid F_2 Lo RH 096-3473-22 096-3473-23 Fluorine (F_2)	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_2S Low Methanol 096-3473-02 Hydrogen Sulfide (H_2S)	Rock Solid SO_2 Hi RH Rock Solid SO_2 Lo RH 096-3473-31 096-3473-32 Sulfur Dioxide (SO_2)
Hydrogen Fluoride (HF)	NEG					1	**1**		
Hydrogen Sulfide (H_2S)	(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 $(CH_3)_2CHOH$	0.3		0					0	
Methanol (CH_3OH)	0.4		0.5					0	
Methyl Iodide (CH_3I)									
Methyl Mercaptan (CH_3SH)	0		0					0	
Monomethyl Hydrazine (MMH) CH_3NHNH_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) $Si(OC_2H_5)_4$									
Trimethyl Silane $(CH_3)_3SiH$									
Tungsten Hexafluoride (WF_6)						3.4	3.4		2.6
Vinyl Chloride Monomer (VCM) (C_2H_3Cl)									

Meridian

Sensor Specifications



Teledyne Gas & Flame Detection' quality assurance programs require continuous assessment and improvement of all our products. Therefore, the information in this leaflet may change without prior notification and should not be considered a product specification. If you require more details, please don't hesitate to contact Teledyne Gas & Flame Detection or one of their representatives.

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