

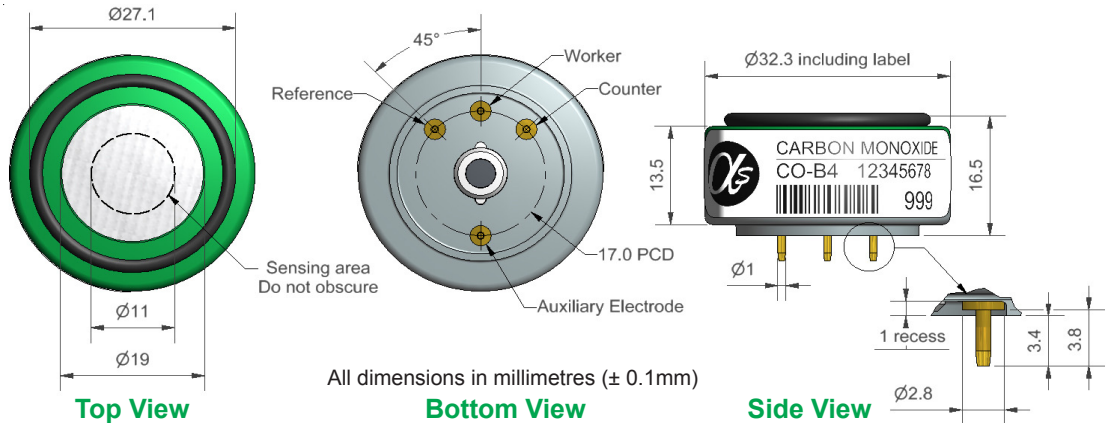


CO-B4 Carbon Monoxide Sensor 4-Electrode



PATENTED

Figure 1 CO-B4 Schematic Diagram



All dimensions in millimetres ($\pm 0.1\text{mm}$)

PERFORMANCE	Parameter	Specification	Range
	Sensitivity	nA/ppm at 2ppm CO	420 to 650
	Response time	t_{90} (s) from zero to 10ppm CO	< 25
	Zero current	nA in zero air at 20°C	+30 to -130
	Noise*	± 2 standard deviations (ppb equivalent)	4
	Range	ppm limit of performance warranty	1000
	Linearity	ppb CO error at full scale, linear at zero, 500ppm CO	20 to 35
	Overgas limit	maximum ppm for stable response to gas pulse	2000

* Tested with Alphasense ISB low noise circuit

LIFETIME	Parameter	Specification	Range
	Zero drift	ppb equivalent change/year in lab air	< ± 100
	Sensitivity drift	% change/year in lab air, monthly test	< 10
	Operating life	months until 50% original signal (24 month warranted)	> 36

ENVIRONMENTAL	Parameter	Specification	Range
	Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 5ppm CO	40 to 70
	Sensitivity @ 50°C	(% output @ 50°C/output @ 20°C) @ 5ppm CO	110 to 125
	Zero @ -20°C	nA	-30 to +30
	Zero @ 50°C	nA	-50 to -200

CROSS SENSITIVITY

Parameter	Specification	Range
Filter capacity	ppm·hrs	250,000
H ₂ S sensitivity	% measured gas @ 5ppm	< 1
NO ₂ sensitivity	% measured gas @ 5ppm	< 1
Cl ₂ sensitivity	% measured gas @ 5ppm	< 1
NO sensitivity	% measured gas @ 5ppm	< -3
SO ₂ sensitivity	% measured gas @ 5ppm	< 0.1
H ₂ sensitivity	% measured gas @ 100ppm	< 10
C ₂ H ₄ sensitivity	% measured gas @ 100ppm	< 1
NH ₃ sensitivity	% measured gas @ 20ppm	< 0.1

KEY SPECIFICATIONS	Parameter	Specification	Range
	Temperature range	°C	-30 to 50
	Pressure range	kPa	80 to 120
	Humidity range	% rh continuous	15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)	6
	Load resistor	Ω (ISB circuit is recommended)	33 to 100
	Weight	g	< 13



At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions.

NOTE: all sensors are tested at ambient environmental conditions, with 10 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.



CO-B4 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

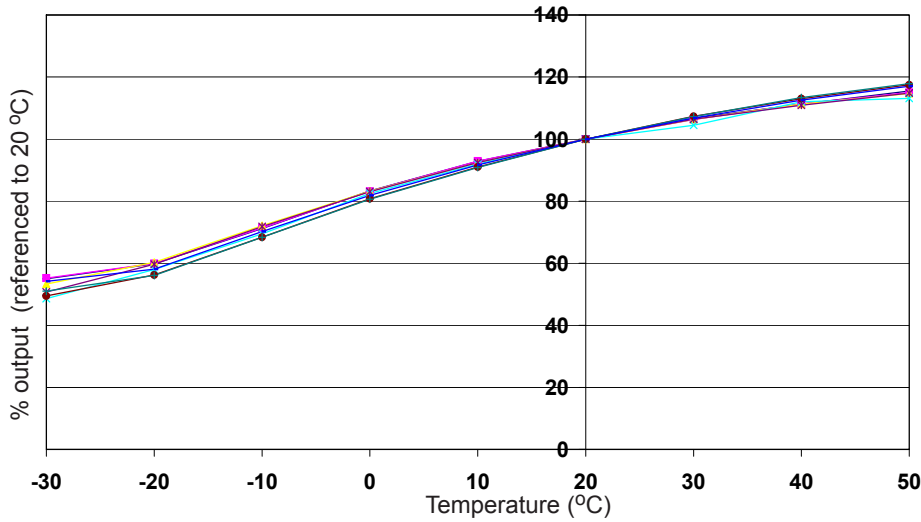


Figure 2 shows the temperature dependence of sensitivity at 2ppm CO.

This data is taken from a typical batch of sensors.

Figure 3 Zero Current Temperature Dependence (corrected)

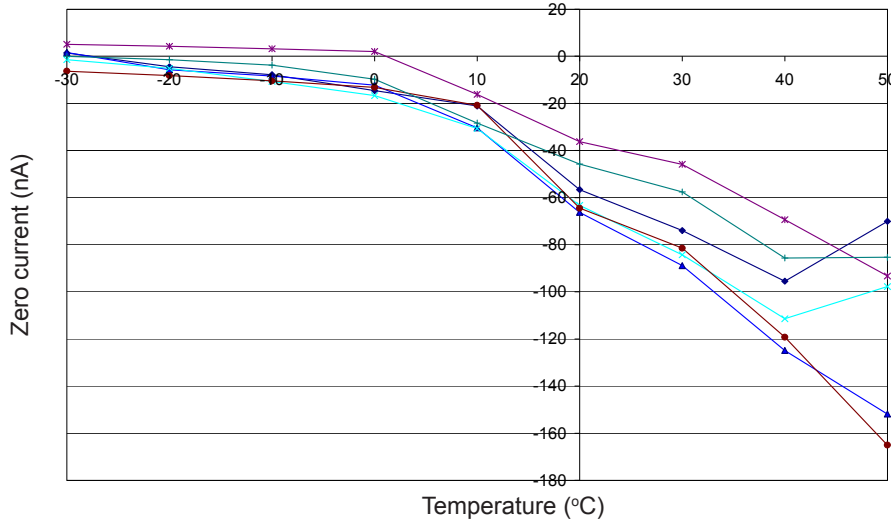


Figure 3 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Response to 0 to 1ppm CO

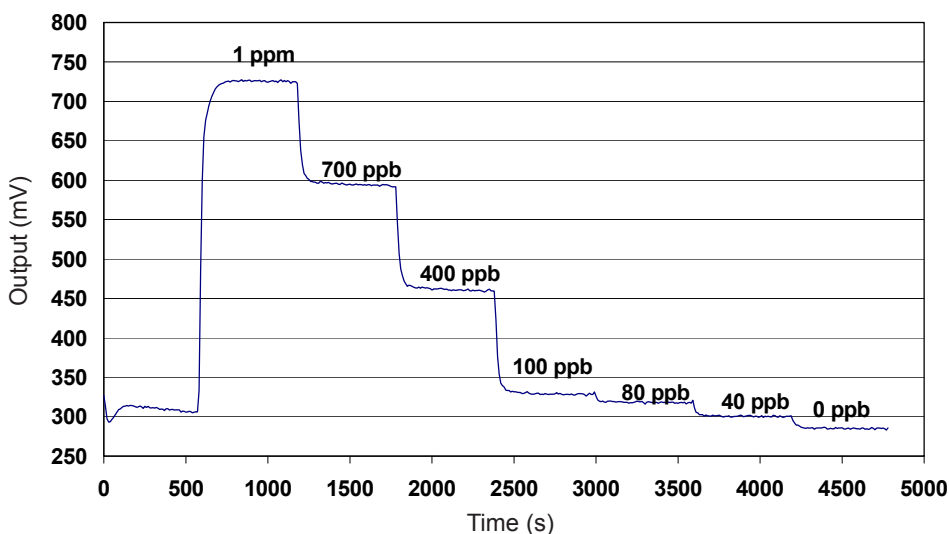


Figure 4 shows response from 0 to 1ppm CO.

Use of Alphasense ISB circuit reduces noise to 4ppb, with the opportunity of digital smoothing to reduce noise even further

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

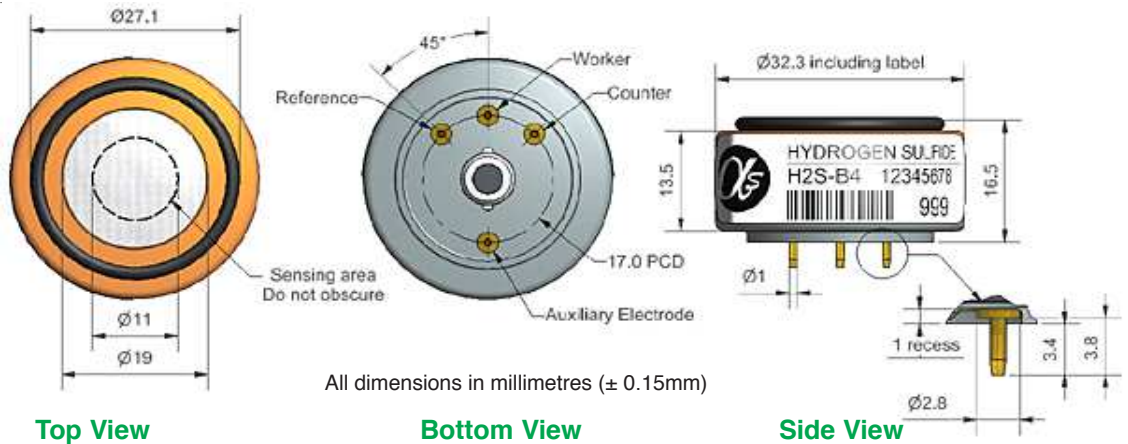
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H2S-B4 Hydrogen Sulfide Sensor 4-Electrode



Figure 1 H2S-B4 Schematic Diagram



Technical Specification

PERFORMANCE	Parameter	Value	Range
	Sensitivity	nA/ppm at 2ppm H ₂ S	1450 to 2150
	Response time	t ₉₀ (s) from zero to 2ppm H ₂ S	< 5s
	Zero current	nA in zero air at 20°C	-250 to 200
	Noise*	±2 standard deviations (ppb equivalent)	-
	Range	ppm H ₂ S limit of performance warranty	100
	Linearity	ppb error at full scale, linear at zero and 40ppm H ₂ S	< ±1%
	Overgas limit	maximum ppm for stable response to gas pulse	200

* Tested with Alphasense ISB low noise circuit

LIFETIME	Parameter	Value	Range
	Zero drift	ppb equivalent change/year in lab air	< ±10%
	Sensitivity drift	% change/year in lab air, monthly test	< 2%
	Operating life	months until 50% original signal (24 month warranted)	> 24

ENVIRONMENTAL	Parameter	Value	Range
	Sensitivity @ -20°C (% output @ -20°C/output @ 20°C) @ 2ppm H ₂ S	77 to 90	77 to 90
	Sensitivity @ 50°C (% output @ 50°C/output @ 20°C) @ 2ppm H ₂ S	100 to 110	100 to 110
	Zero @ -20°C	nA change from 20°C	50 to 60
	Zero @ 50°C	nA change from 20°C	-120 to -160

CROSS SENSITIVITY	Gas	Sensitivity	Value
	NO ₂	sensitivity % measured gas @ 5ppm	< -1%
	Cl ₂	sensitivity % measured gas @ 5ppm	< -1%
	NO	sensitivity % measured gas @ 5ppm	< 1%
	SO ₂	sensitivity % measured gas @ 5ppm	< 2%
	CO	sensitivity % measured gas @ 5ppm	< 1%
	H ₂	sensitivity % measured gas @ 100ppm	< 0.5%
	C ₂ H ₄	sensitivity % measured gas @ 100ppm	< 0.5%
	NH ₃	sensitivity % measured gas @ 20ppm	< 0.5%
	CO ₂	sensitivity % measured gas @ 5%	< 0.5%

KEY SPECIFICATIONS	Parameter	Value	Range
	Temperature range	°C	-30 to 50
	Pressure range	kPa	80 to 120
	Humidity range	% rh	15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)	6
	Load resistor	Ω (ISB circuit is recommended)	33 to 100
	Weight	g	< 1g



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H2S-B4 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

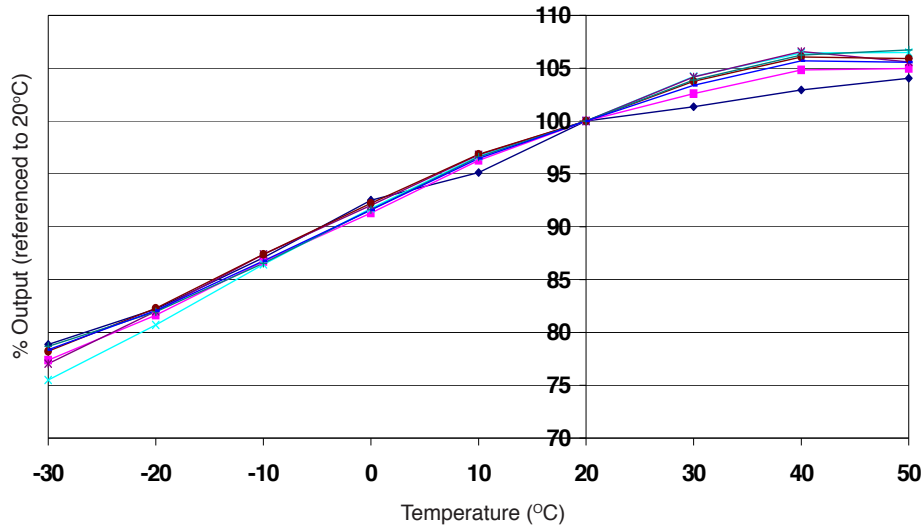


Figure 2 shows the temperature dependence of sensitivity at 2ppm H₂S.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

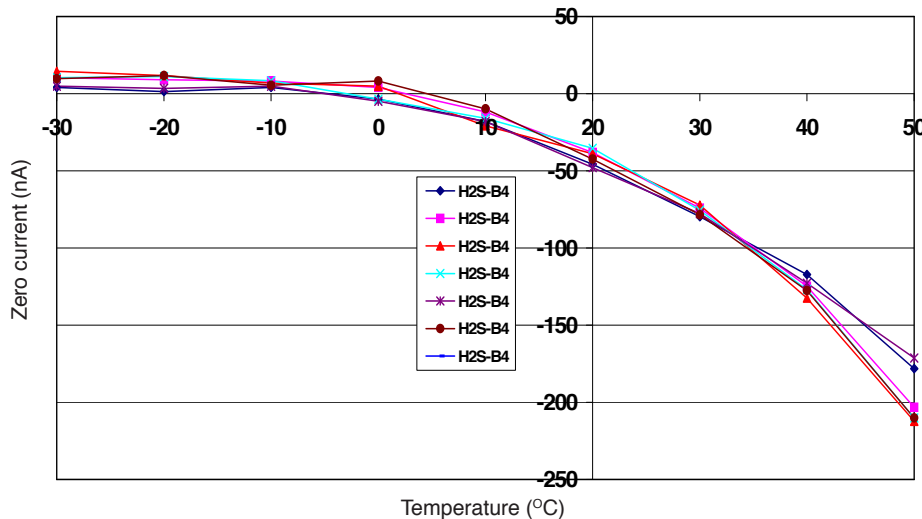


Figure 3 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Linearity to 200 ppb H₂S

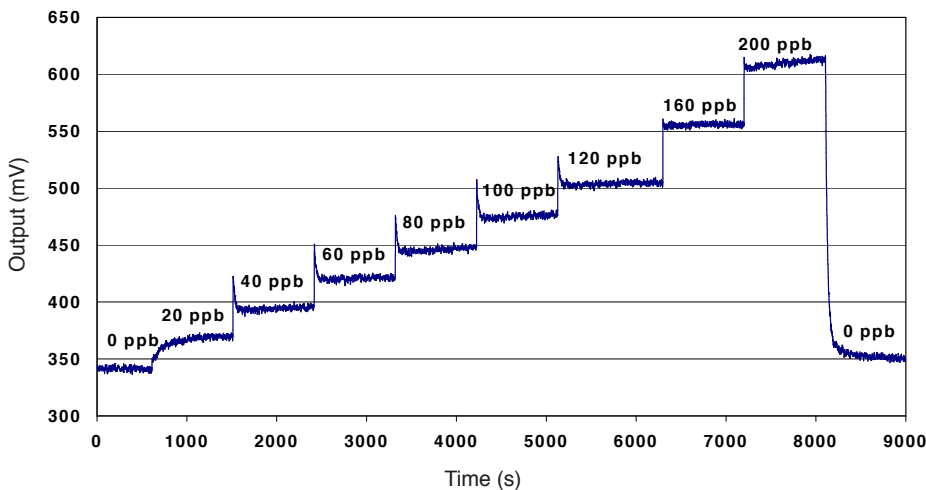


Figure 4 shows response to 200ppb H₂S.

Use of Alphasense ISB circuit reduces noise to 1ppb, with the opportunity of digital smoothing to reduce noise even further.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

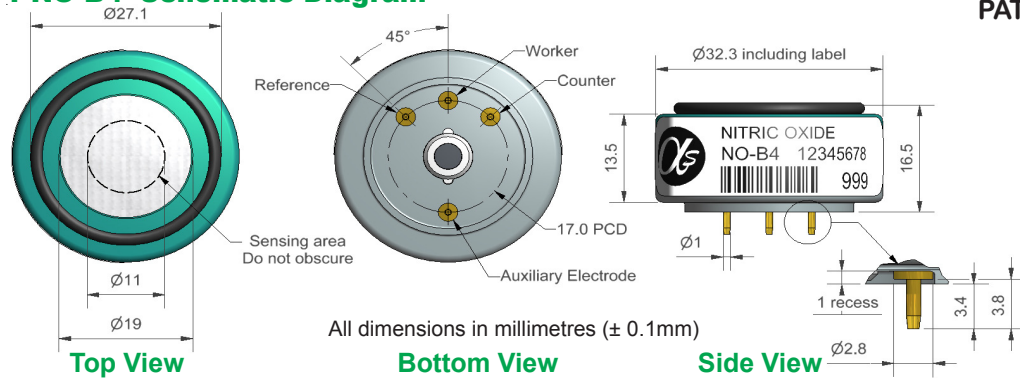
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NO-B4 Nitric Oxide Sensor 4-Electrode



Figure 1 NO-B4 Schematic Diagram



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PERFORMANCE

Sensitivity	nA/ppm at 2ppm NO	500 to 850
Response time	t_{90} (s) from zero to 2ppm NO	< 4s
Zero current	nA in zero air at 20°C	30 to 140
Noise*	± 2 standard deviations (ppb equivalent)	1%
Range	ppm NO limit of performance warranty	20
Linearity	ppb error at full scale, linear at zero and 5ppm NO	< $\pm 1\%$
Overgas limit	maximum ppm for stable response to gas pulse	50

* Tested with Alphasense ISB low noise circuit

LIFETIME

Zero drift	ppb equivalent change/year in lab air	0 to 50
Sensitivity drift	% change/year in lab air, monthly test	0 to -20
Operating life	months until 50% original signal (24 month warranted)	> 24

ENVIRONMENTAL

Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 2ppm NO	60 to 90
Sensitivity @ 40°C	(% output @ 50°C/output @ 20°C) @ 2ppm NO	97 to 110
Zero @ -20°C	nA	0 to 30
Zero @ 40°C	nA	100 to 200

CROSS SENSITIVITY

H ₂ S sensitivity	% measured gas @ 5ppm	H ₂ S (after 3 minutes)	< 1%
NO ₂ sensitivity	% measured gas @ 5ppm	NO ₂ (after 3 minutes)	< 1%
Cl ₂ sensitivity	% measured gas @ 5ppm	Cl ₂	< 1%
SO ₂ sensitivity	% measured gas @ 5ppm	SO ₂	< 1%
H ₂ sensitivity	% measured gas @ 100ppm	H ₂	< 0.1%
CO sensitivity	% measured gas @ 5ppm	CO	< 0.1%
NH ₃ sensitivity	% measured gas @ 5ppm	NH ₃	< 0.1%
CO ₂ sensitivity	% measured gas @ 5% Vol	CO ₂	< 0.1%
O ₃ sensitivity	% measured gas @ 100ppb	O ₃	< 1%
Halothane sensitivity	@ 100ppm	Halothane	< 0.1%

KEY SPECIFICATIONS

Bias voltage	mV (working electrode potential is above reference electrode)	+200
Temperature range	°C	-30 to 40
Pressure range	kPa	80 to 120
Humidity range	% rh continuous	15 to 85
Storage period	months @ 3 to 20°C (stored in sealed pot)	6
Load resistor	Ω (ISB circuit is recommended)	33 to 100
Weight	g	< 1g



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NO-B4 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

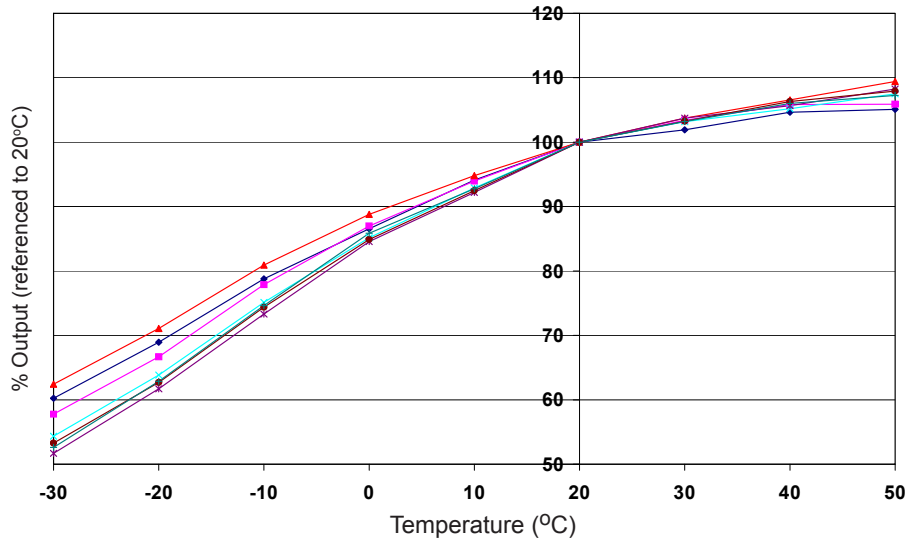


Figure 2 shows the temperature dependence of sensitivity at 2ppm NO.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

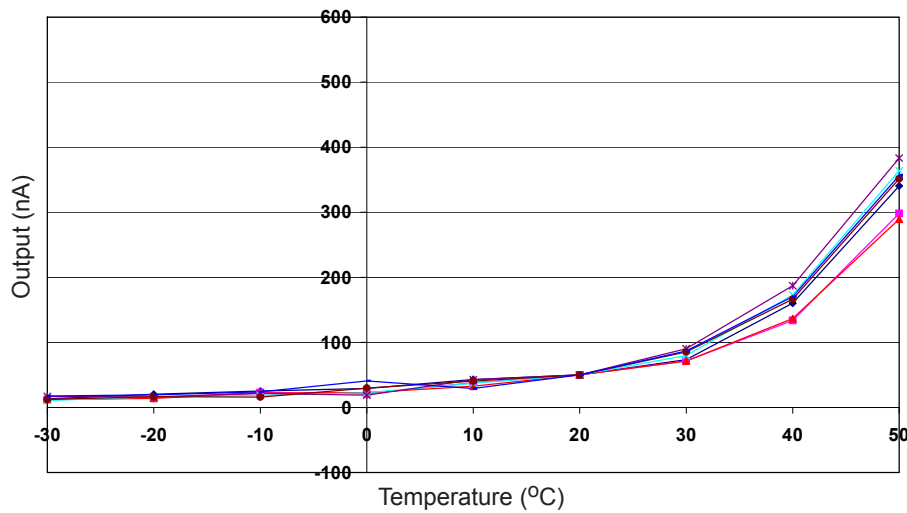


Figure 3 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Response to 200ppb NO

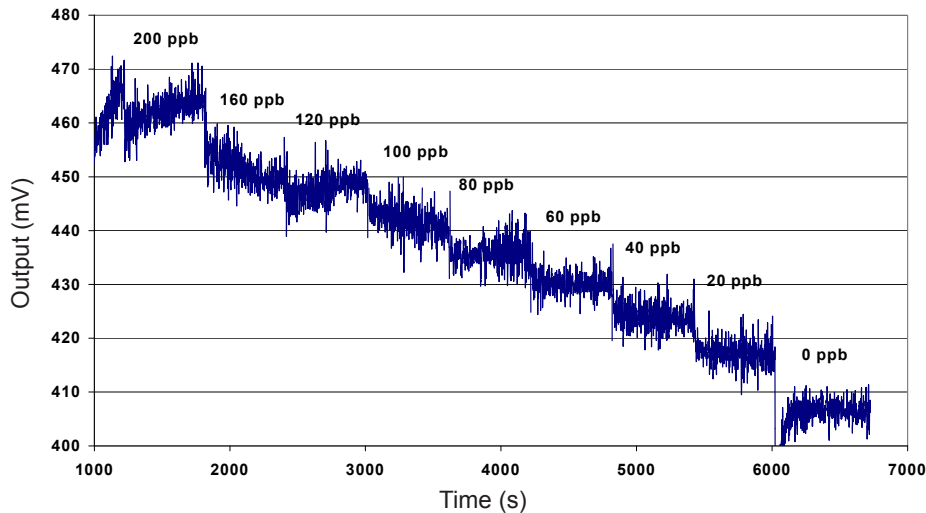


Figure 4 shows response to 200ppb NO.

Use of Alphasense ISB circuit reduces noise to 15ppb with the opportunity of digital smoothing to reduce noise even further

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

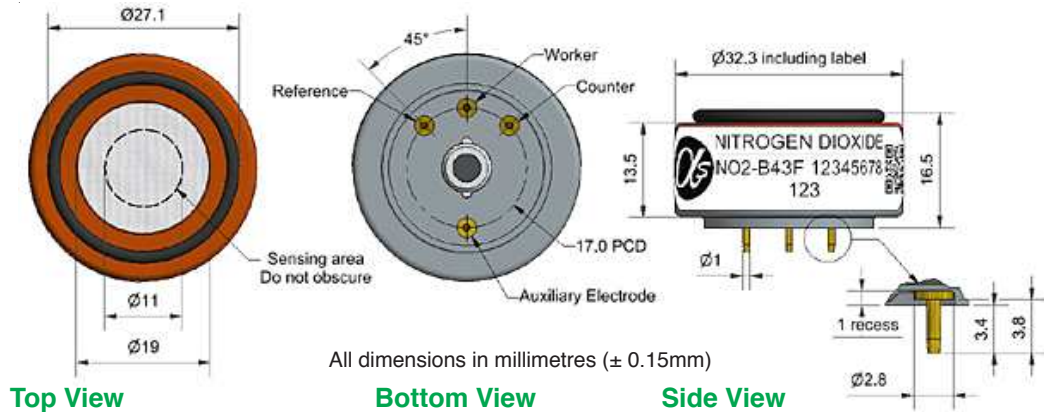
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NO₂-B43F Nitrogen Dioxide Sensor 4-Electrode



Figure 1 NO₂-B43F Schematic Diagram



All dimensions in millimetres (± 0.15mm)

Top View

Bottom View

Side View

PERFORMANCE

Sensitivity	nA/ppm at 2ppm NO ₂	-175 to -450
Response time	t ₉₀ (s) from zero to 2ppm NO ₂	< 60
Zero current	nA in zero air at 20°C	-50 to +70
Noise*	±2 standard deviations (ppb equivalent)	1!
Range	ppm NO ₂ limit of performance warranty	20
Linearity	ppb error at full scale, linear at zero and 5ppm NO ₂	< ±0.!
Overgas limit	maximum ppm for stable response to gas pulse	50

* Tested with Alphasense ISB low noise circuit

LIFETIME

Zero drift	ppb equivalent change/year in lab air	0 to 20
Sensitivity drift	% change/year in lab air, monthly test	-20 to -40
Operating life	months until 50% original signal (24 month warranted)	> 2!

ENVIRONMENTAL

Sensitivity @ -20°C (% output @ -20°C/output @ 20°C) @ 2ppm NO ₂	60 to 80
Sensitivity @ 40°C (% output @ 40°C/output @ 20°C) @ 2ppm NO ₂	95 to 11!
Zero @ -20°C	nA
Zero @ 40°C	nA

CROSS SENSITIVITY

O ₃	Filter capacity (ppm.hr)	@ 2ppm	O ₃	> 500
H ₂ S	sensitivity % measured gas	@ 5ppm	H ₂ S	< -80
NO	sensitivity % measured gas	@ 5ppm	NO	< !
Cl ₂	sensitivity % measured gas	@ 5ppm	Cl ₂	< 80
SO ₂	sensitivity % measured gas	@ 5ppm	SO ₂	< !
CO	sensitivity % measured gas	@ 5ppm	CO	< !
H ₂	sensitivity % measured gas	@ 100ppm	H ₂	< 0.!
C ₂ H ₄	sensitivity % measured gas	@ 100ppm	C ₂ H ₄	< 0.!
NH ₃	sensitivity % measured gas	@ 20ppm	NH ₃	< 0.!
CO ₂	sensitivity % measured gas	@ 5% Vol	CO ₂	< 0.!
Halothane	sensitivity % measured gas	@ 100ppm	Halothane	nc

KEY SPECIFICATIONS

Temperature range	°C	-30 to 40
Pressure range	kPa	80 to 120
Humidity range	% rh continuous	15 to 8!
Storage period	months @ 3 to 20°C (stored in sealed pot)	!
Load resistor	Ω (ISB circuit is recommended)	33 to 100
Weight	g	< !



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NO2-B43F Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

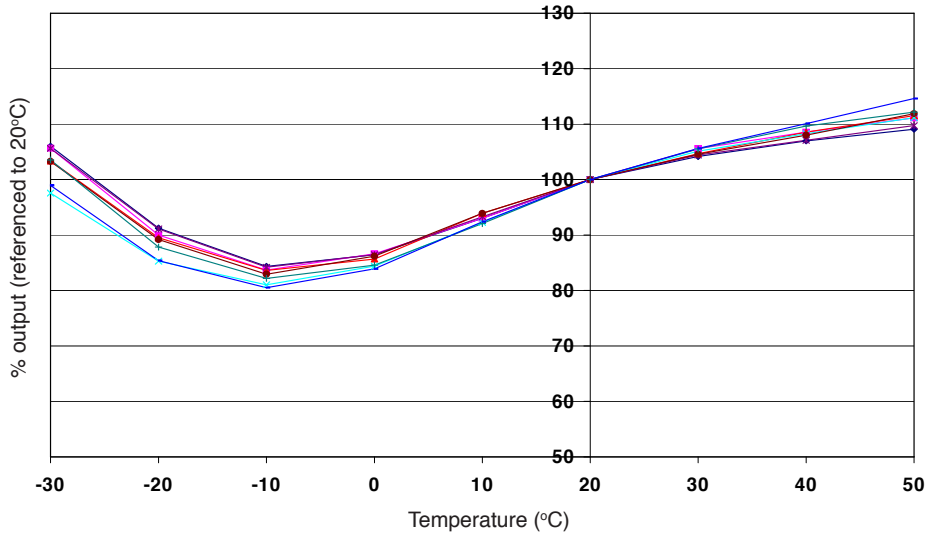


Figure 2 shows the temperature dependence of sensitivity at 2ppm NO₂. This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

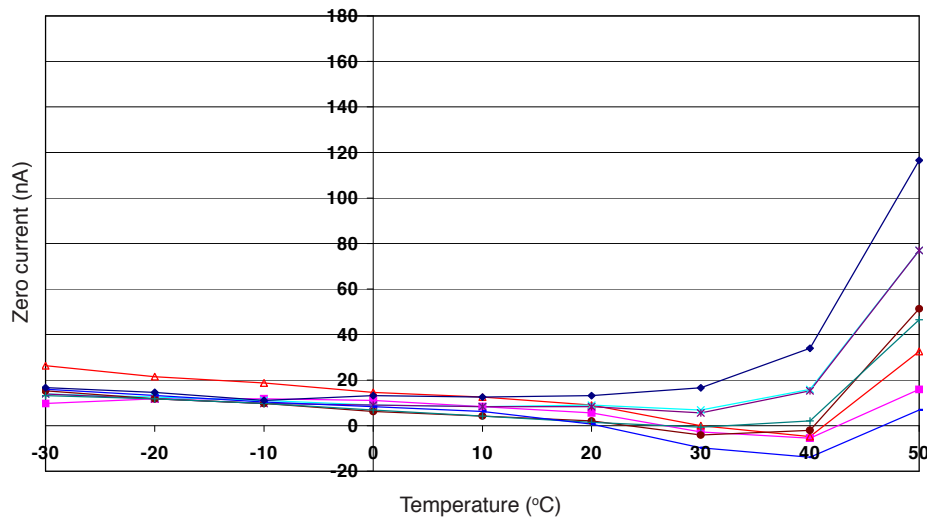
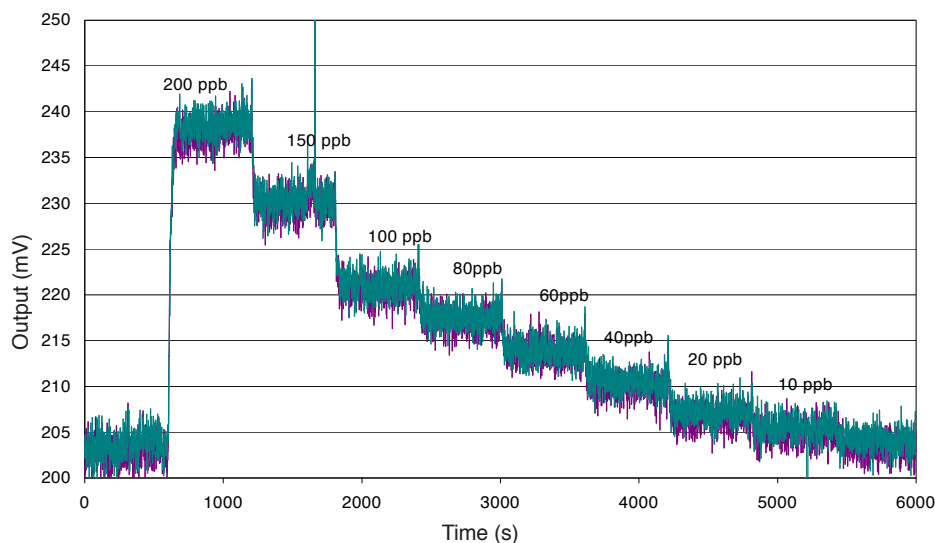


Figure 3 shows the variation in zero output of the working electrode caused by change in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Response to 200 ppb NO₂



With a 33 Ω load resistor, the NO₂-B43F shows excellent resolution, even at the ppb level: ideal for outdoor air environmental testing.

Use of Alphasense ISB circuit reduces noise to 15ppb, with the opportunity of digital smoothing to reduce noise even further.

Offset voltage is due to intentional ISB circuit electronic offset.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

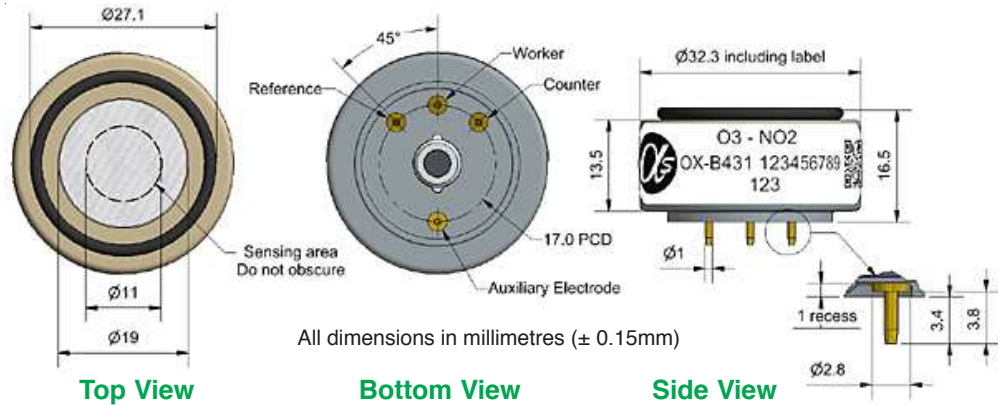


OX-B431 Oxidising Gas Sensor Ozone + Nitrogen Dioxide 4-Electrode



Patented

Figure 1 OX-B431 Schematic Diagram



Technical Specification

Specification O₃ Sensing

PERFORMANCE

Sensitivity	nA/ppm at 1 ppm O ₃	-225 to -650
Response time	t ₉₀ (s) from zero to 1 ppm O ₃	< 4s
Zero current	nA in zero air at 20°C	-50 to 70
Noise*	±2 standard deviations (ppb equivalent)	1%
Range	ppm O ₃ limit of performance warranty	20
Linearity	ppm error at full scale, linear at zero and 20ppm O ₃	< ±0.5%
Overgas limit	maximum ppm for stable response to gas pulse	50

* Tested with Alphasense AFE low noise circuit

LIFETIME

Zero drift	ppb equivalent change/year in lab air	0 to 2%
Sensitivity drift	% change/year in lab air, monthly test	< -20 to -4%
Operating life	months until 50% original signal (24 month warranted)	> 24

ENVIRONMENTAL

Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 2ppm O ₃	70 to 90%
Sensitivity @ 40°C	(% output @ 40°C/output @ 20°C) @ 2ppm O ₃	95 to 125%
Zero @ -20°C	nA	0 to 2%
Zero @ 40°C	nA	5 to 10%

CROSS SENSITIVITY

H ₂ S	sensitivity % measured gas @ 5ppm	H ₂ S	< 17%
NO	sensitivity % measured gas @ 5ppm	NO	< 5%
Cl ₂	sensitivity % measured gas @ 5ppm	Cl ₂	< 9%
SO ₂	sensitivity % measured gas @ 5ppm	SO ₂	< 7%
CO	sensitivity % measured gas @ 5ppm	CO	< 0.1%
C ₂ H ₄	sensitivity % measured gas @ 100ppm	C ₂ H ₄	< 0.1%
NH ₃	sensitivity % measured gas @ 20ppm	NH ₃	< 0.1%
H ₂	sensitivity % measured gas @ 100ppm	H ₂	< 0.1%
CO ₂	sensitivity % measured gas @ 5% Vol	CO ₂	0.1%
Halothane	sensitivity % measured gas @ 100ppm	Halothane	< 0.1%

KEY SPECIFICATIONS

Temperature range	°C	-30 to 40
Pressure range	kPa	80 to 120
Humidity range	% rh continuous	15 to 85
Storage period	months @ 3 to 20°C (stored in sealed pot)	6
Load resistor	Ω (AFE circuit recommended)	33 to 100
Weight	g	< 6

NOTE: all sensors are tested at ambient environmental conditions, with 47 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements



OX-B431 Performance Data

Technical Specification

Figure 2 Sensitivity temperature dependence to 1ppm O₃

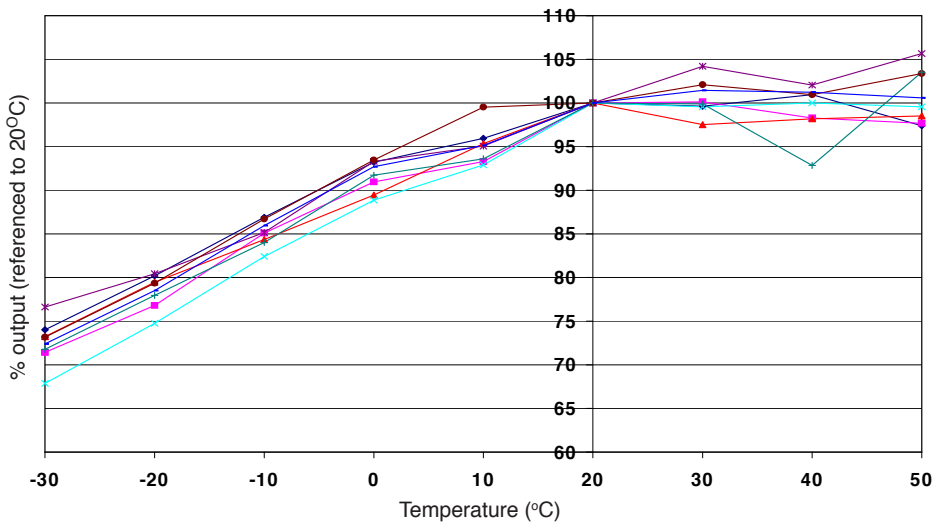


Figure 2 shows the temperature dependence of sensitivity at 1ppm O₃.

This data is taken from a typical batch of sensors.

Figure 3 Zero temperature dependence

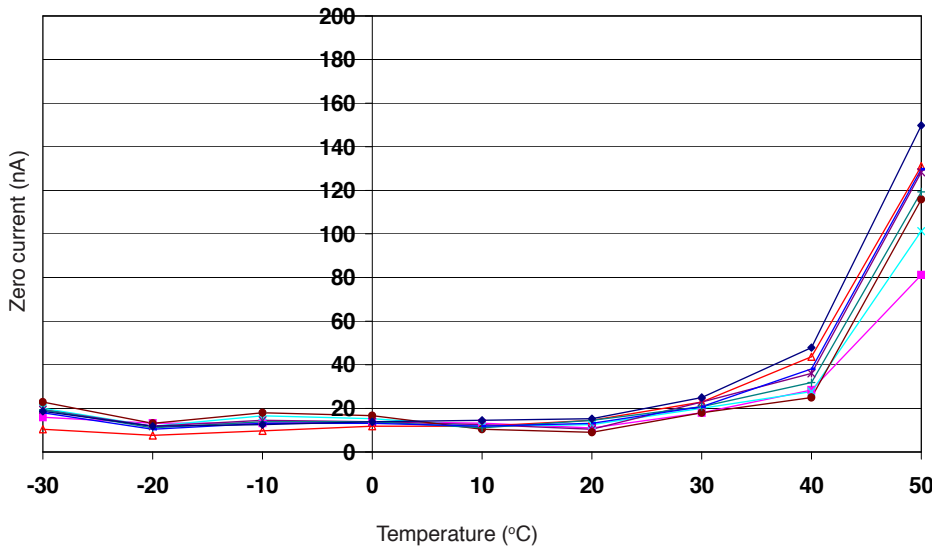


Figure 3 shows the variation in zero output of the working electrode caused by change in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Response from 200 ppb to 0 ppb O₃

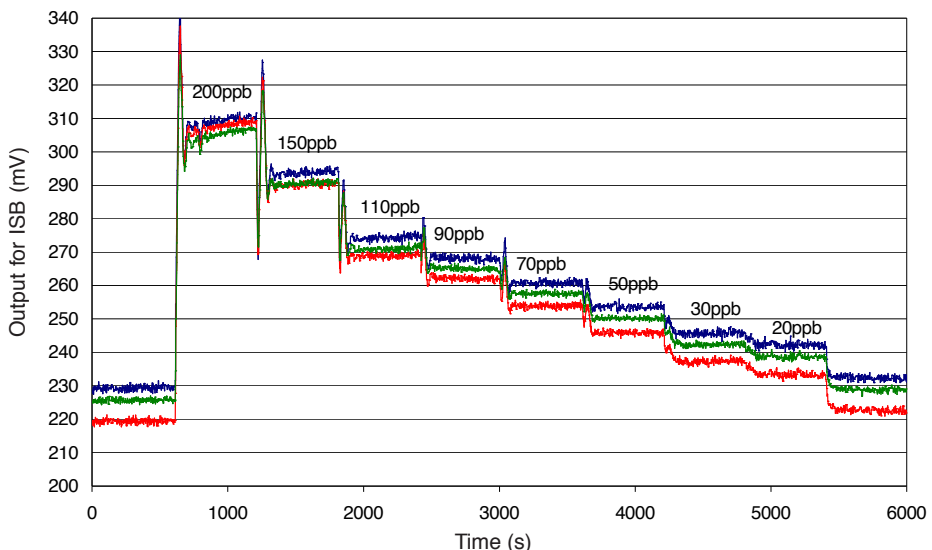


Figure 4 shows response from 200ppb O₃ to 0ppb O₃.

Use of Alphasense AFE circuit reduces noise to 15ppb, with the opportunity of digital smoothing to reduce noise even further.

Offset voltage is due to intentional ISB circuit electronic offset.



OX-B431 Oxidising Gas Sensor

Ozone + Nitrogen Dioxide

4-Electrode



Patented

The OX-B431 detects both ozone and nitrogen dioxide ($O_3 + NO_2$). The NO2-B43F measures only nitrogen dioxide, filtering out ozone. Using these sensors together allows you to calculate the O_3 concentration by subtracting the corrected NO2-B43F concentration from the corrected OX-B431 concentration.

Before subtracting to determine ozone concentration, ensure that the signals from the two sensors have been corrected for electronic zero offset, sensor zero offset and temperature dependence, an sensitivity (nA/ppm) calibration and temperature dependence.

Specification NO_2 Sensing

PERFORMANCE

Sensitivity to NO_2	nA/ppm at 2ppm NO_2	-250 to -65
Response time	t_{90} (s) from zero to 2ppm NO_2	< 3
Zero current	nA in zero air at 20°C	-50 to +7
Noise*	±2 standard deviations (ppb equivalent)	1
Range	ppm NO_2 limit of performance warranty	2
Linearity	ppm error at full scale, linear at zero and 20ppm NO_2	< ±0.1
Overgas limit	maximum ppm for stable response to gas pulse	5

* Tested with Alphasense AFE low noise circuit

LIFETIME

Zero drift	ppb equivalent change/year in lab air	0 to 2
Sensitivity drift	% change/year in lab air, monthly test	< -20 to -4
Operating life	months until 50% original signal (24 month warranted)	> 2

ENVIRONMENTAL

Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 2ppm NO_2	70 to 9
Sensitivity @ 40°C	(% output @ 50°C/output @ 20°C) @ 2ppm NO_2	95 to 11
Zero @ -20°C	nA	0 to 2
Zero @ 40°C	nA	5 to 5

CROSS SENSITIVITY

H_2S	sensitivity % measured gas @ 5ppm	H_2S	< 17
NO	sensitivity % measured gas @ 5ppm	NO	<
Cl_2	sensitivity % measured gas @ 5ppm	Cl_2	< 9
SO_2	sensitivity % measured gas @ 5ppm	SO_2	<
CO	sensitivity % measured gas @ 5ppm	CO	< 0.1
C_2H_4	sensitivity % measured gas @ 100ppm	C_2H_4	< 0.1
NH_3	sensitivity % measured gas @ 20ppm	NH_3	< 0.1
H_2	sensitivity % measured gas @ 100ppm	H_2	< 0.1
CO_2	sensitivity % measured gas @ 5% Vol	CO_2	0
Halothane	sensitivity % measured gas @ 100ppm	Halothane	< 0.1

KEY SPECIFICATIONS

Temperature range	°C	-30 to 4
Pressure range	kPa	80 to 12
Humidity range	% rh continuous	15 to 8
		<



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OX-B431 Performance Data

Technical Specification

Figure 5 Sensitivity temperature dependence to 2ppm NO₂

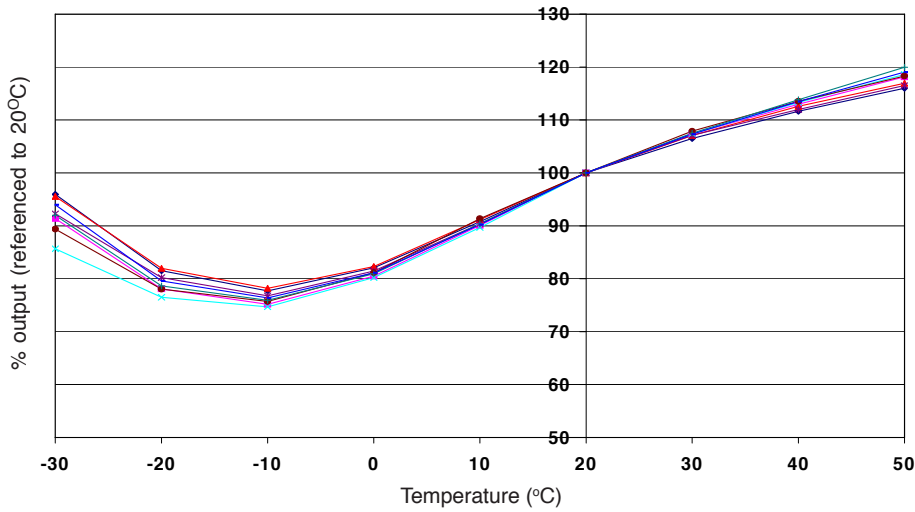


Figure 5 shows the temperature dependence of sensitivity at 2ppm NO₂.

This data is taken from a typical batch of sensors.

Figure 6 Response to 50ppb NO₂

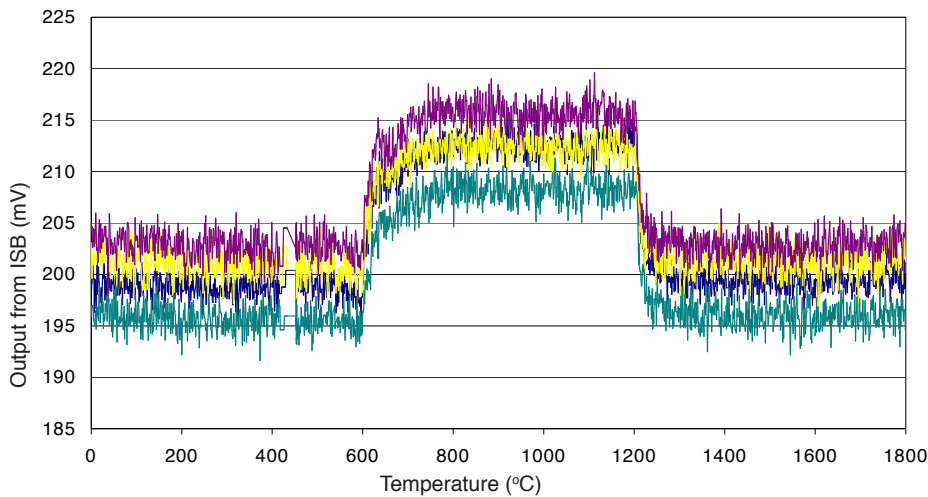


Figure 6 shows the fast response and good baseline recovery of the OX-B431 to 50ppb NO₂.

Figure 7 Response from 200 ppb to 0 ppb NO₂

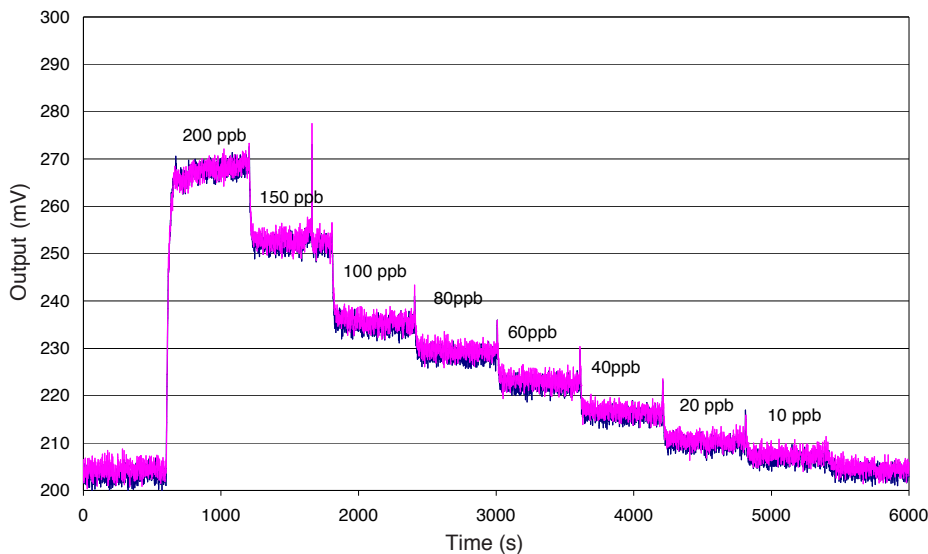


Figure 7 shows response from 200ppb NO₂ to 0ppb NO₂.

Use of Alphasense AFE circuit reduces noise to 15ppb, with the opportunity of digital smoothing to reduce noise to less than ± 5ppb.

Offset voltage is due to intentional ISB circuit electronic offset.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

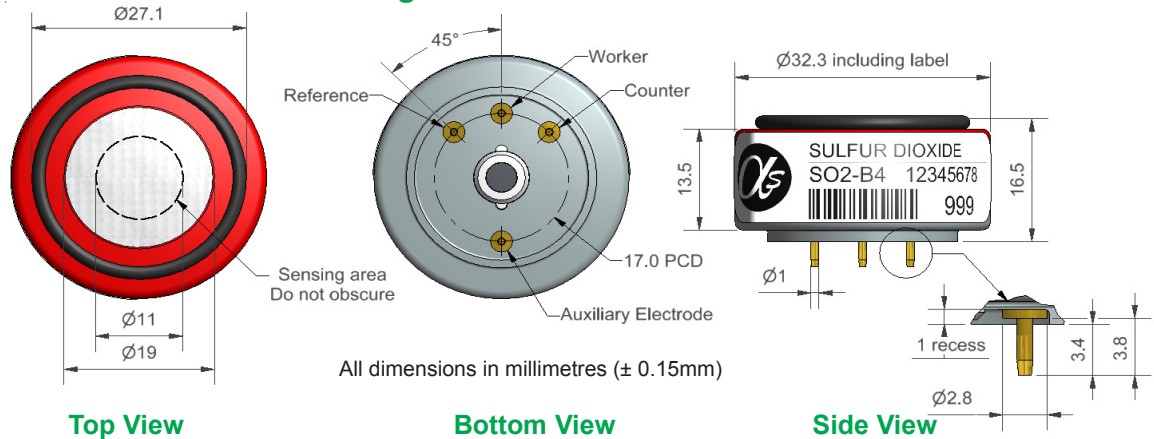
In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for information only.



SO₂-B4 Sulfur Dioxide Sensor 4-Electrode



Figure 1 SO₂-B4 Schematic Diagram



Technical Specification

PERFORMANCE	Parameter	Specification	Range
	Sensitivity	nA/ppm at 2ppm SO ₂	275 to 475
	Response time	t ₉₀ (s) from zero to 2ppm SO ₂	< 30
	Zero current	nA in zero air at 20°C	-80 to +80
	Noise*	± 2 standard deviations (ppb equivalent)	< 1
	Range	ppm limit of performance warranty	100
	Linearity	ppb error at 100ppm SO ₂ , linear at zero and 10ppm SO ₂	0 to -1
	Overgas limit	maximum ppm for stable response to gas pulse	200

* Tested with Alphasense ISB low noise circuit

LIFETIME	Parameter	Specification	Range
	Zero drift	ppb equivalent change/year in lab air	< ± 2
	Sensitivity drift	% change/year in lab air, monthly test	< ± 1
	Operating life	months until 50% original signal (24 month warranted)	> 30

ENVIRONMENTAL	Parameter	Specification	Range
	Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 2ppm SO ₂	70 to 80
	Sensitivity @ 50°C	(% output @ 50°C/output @ 20°C) @ 2ppm SO ₂	95 to 110
	Zero @ -20°C	nA change from 20°C	0 to -10
	Zero @ 50°C	nA change from 20°C	10 to 30

CROSS SENSITIVITY	Filter capacity	ppm·hrs	Range
	H ₂ S sensitivity	% measured gas @ 5ppm	< 1
	NO ₂ sensitivity	% measured gas @ 5ppm	< -16
	Cl ₂ sensitivity	% measured gas @ 5ppm	< -4
	NO sensitivity	% measured gas @ 5ppm	< -1
	CO sensitivity	% measured gas @ 5ppm	< 1
	H ₂ sensitivity	% measured gas @ 100ppm	< 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 100ppm	< 0.1
	NH ₃ sensitivity	% measured gas @ 20ppm	< 0.1
	CO ₂ sensitivity	% measured gas @ 5%	< 0.1

KEY SPECIFICATIONS	Parameter	Specification	Range
	Temperature range	°C	-30 to 50
	Pressure range	kPa	80 to 120
	Humidity range	% rh continuous (see note below)	15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)	3 to 24
	Load Resistor	Ω (ISB circuit is recommended)	33 to 100
	Weight	g	< 1

Note: Above 85% rh and 40°C a maximum continuous exposure period of 10 days is warranted. Where such exposure occurs the sensor will recover normal electrolyte volumes when allowed to rest at lower % rh and temperature levels for several days.



At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions.

NOTE: all sensors are tested at ambient environmental conditions, with 47 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements



SO2-B4 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

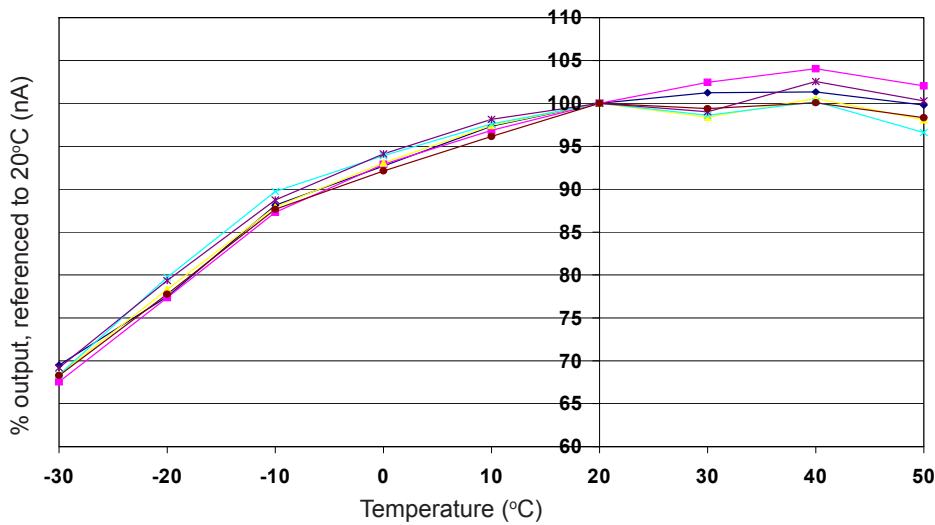


Figure 2 shows the temperature dependence of sensitivity at 2ppm SO₂.

This data is taken from a typical batch of sensors.

Figure 3 Zero Temperature Dependence

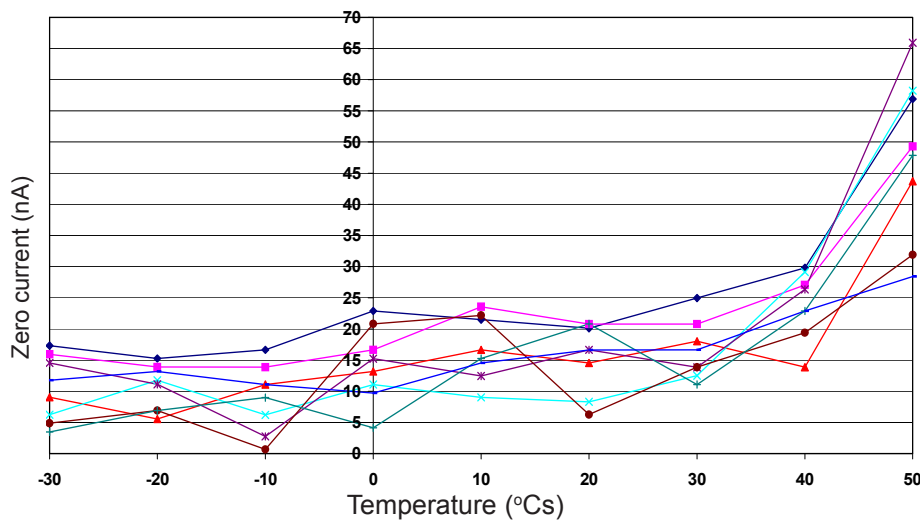


Figure 3 shows the variation in zero output of the working electrode caused by change in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for further information on zero current correction.

Figure 4 Response to 200ppb SO₂

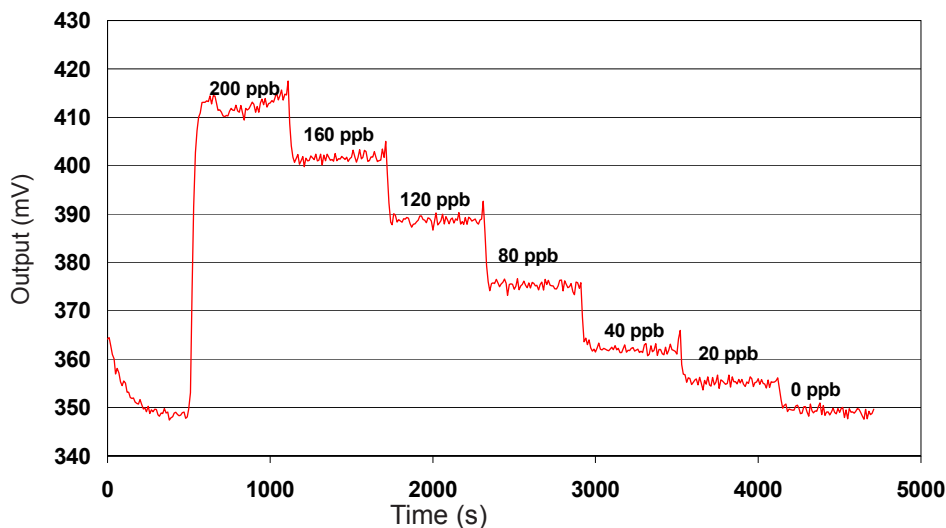


Figure 4 shows response from 20 to 200ppb SO₂.

Use of Alphasense ISB circuit reduces noise to 5ppb, with the opportunity of digital smoothing to reduce noise even further.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".

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