



INGENIERÍA DE SEGURIDAD Y TECNOLOGÍA S.L.

# **Gases Refrigerantes e Inflamables**

Catálogo 2024 - 2025

# Índice

Página

**02**

Sensores Semiconductores

**NISSHA**

Nissha FIS, Inc.

Página

**05**

Sensores de membrana de espectrometría de propiedades moleculares

**NevadaNano**

Página

**08**

MPS Flammable Gas Sensors

**NevadaNano**

Página

**10**

Methane Gas Sensors

**NevadaNano**

Página

**12**

Módulos de Gases Refrigerantes con sensores semiconductores

**NISSHA**

Nissha FIS, Inc.

Página

**21**

Módulos de Gas Co2 con sensores semiconductores

**NISSHA**

Nissha FIS, Inc.

Página

**21**

Módulos de Gas H2 con sensores semiconductores

**NISSHA**

Nissha FIS, Inc.

Página

**22**

Módulos de Gas Ozono con sensores semiconductores

**NISSHA**

Nissha FIS, Inc.

# Introducción

---

## Gases refrigerantes e inflamables

Los refrigerantes son gases utilizados en sistemas de refrigeración y aire acondicionado para [transferir el calor de un lugar a otro](#). Sin embargo, algunos de estos gases pueden ser [perjudiciales](#) para el medio ambiente y la salud humana si se manejan y desechan de manera incorrecta. Por lo tanto, es imprescindible contar con sensores o módulos de detección de gases refrigerantes para [garantizar la seguridad y el cumplimiento normativo](#) en la manipulación de estos gases.

Existen diferentes tipos de sensores y módulos de detección de gases refrigerantes en el mercado:

- Algunos están diseñados para detectar gases específicos, como los [clorofluocarbonados \(CFC\)](#), los [hidrofluorcarbonados \(HFC\)](#), los [freones](#), etc...
- Otros pueden detectar gases específicos de una amplia gama de refrigerantes.

Además, los sensores y módulos pueden [variar en su rango de detección, precisión y capacidad de registro de datos](#).

Estos sensores y módulos pueden utilizarse en una variedad de aplicaciones, como por ejemplo:

- En sistemas de aire acondicionado residenciales y comerciales
- En grandes instalaciones industriales, como plantas de procesamiento de alimentos y productos químicos
- En sistemas de refrigeración industrial, refrigeración de vehículos y en equipos de refrigeración portátiles.

Es importante tener en cuenta que, aunque colocar los sensores y módulos de detección de gases refrigerantes en instalaciones resulta una inversión inicial, estos ayudan a garantizar la [seguridad](#) y el [importante ahorro](#) producido por pérdidas de gases refrigerantes en la industria y el cumplimiento normativo en la manipulación de estos gases. Además, la detección temprana de fugas puede ayudar a [reducir los costos de mantenimiento y aumentar la eficiencia](#) de los sistemas de refrigeración.

Por otra parte, los sensores para gases inflamables y explosivos tienen un gran mercado con todo tipo de aplicaciones en plantas industriales e instalaciones de campo y en el presente catálogo se muestran igualmente una lista de opciones no exhaustiva de las posibilidades de suministro de nuestra empresa.

En conclusión, los sensores y módulos de detección de gases refrigerantes e inflamables o explosivos son una herramienta importante para garantizar la seguridad y el cumplimiento normativo en la manipulación de estos gases.

Si está buscando mejorar la seguridad y la eficiencia de sus sistemas de refrigeración o control de las fugas de gases en instalaciones industriales, considere la inversión en sensores o módulos de detección de gases refrigerantes de alta calidad o de sensores y módulos para gases inflamables o explosivos, como los que encontrará en esta gama de productos que le ofrecemos en Insistec.

# Sensores semiconductores NISSHA FIS

## SB-15B-00



Target Gas	LPG(Propane, Butane), Refrigerant (R290)
Description	Compact, low power consumption, durable sensor with high sensitivity to propane
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 0.9V ± 5% Circuit voltage/less than DC 5V
Power consumption	120mW
Filter	Silica filter
Size	φ9.7 x 15.7mm
Weight	1.1g

## SB-41A-00



Target Gas	LPG(Propane, Butane), Refrigerant (R290)
Description	Compact, low power consumption, durable sensor with high sensitivity to propane
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 0.9V ± 5% Circuit voltage/less than DC 5V
Power consumption	120mW
Filter	Silica filter
Size	φ9.7 x 15.7mm
Weight	1.1g

## SB-42A-00



Target Gas	Refrigerant gas (R32 / R410a / R407C / R1234yf / R454C / R454B / R22)
Description	Compact, low power consumption, durable sensor with high sensitivity to propane
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 0.9V ± 5% Circuit voltage/less than DC 5V
Power consumption	120mW
Filter	Silica filter
Size	φ7.6 x 13.4mm
Weight	0,6g

## SB-43A-00



Target Gas	Refrigerant gas )R32 / R410a / R407C / R1234yf / R454C / R454B / R22)
Description	Compact, low power consumption, durable sensor with high sensitivity to propane
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 0.9V $\pm$ 5% Circuit voltage/less than DC 5V
Power consumption	120mW
Filter	Silica filter
Size	$\phi$ 7.6 x 13.4mm
Weight	0,6g

## SP-41-00



Target Gas	Refrigerant gas (R22)
Description	Highly sensitive to R22. Circuit design is easier than SB-Series.
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 5.0V $\pm$ 4% Circuit voltage/less than DC 5V
Power consumption	400mW
Filter	Not Included
Size	$\phi$ 17.0 x 16.5mm
Weight	1,75g

## SP-42A-00



Target Gas	Refrigerant gas (R32 / R410a / R407C / R1234yf / R454C / R454B / R22)
Description	Excellent response and high sensitivity to various refrigerant gases. Circuit design is easier than SB-Series.
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 5.0V $\pm$ 4% Circuit voltage/less than DC 5V
Power consumption	400mW
Filter	Silica filter
Size	$\phi$ 17.0 x 16.5mm
Weight	1,75g

# Sensores semiconductores NISSHA FIS

## SP-42AF-00



Target Gas	Refrigerant gas (R32 / R410a / R407C / R1234yf / R454C / R454B / R22)
Description	Sensor with high durability and high sensitivity to various refrigerant gases. Circuit design is easier than SB-Series.
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 5.0V ± 4% Circuit voltage/less than DC 5V
Power consumption	400mW
Filter	Silica filter
Size	φ17.2 x 23.3mm
Weight	3.4g

## SP-53B-00



Target Gas	Ammonia
Description	Sensor for detecting high concentration ammonia. Circuit design is easier than SB-Series.
Sensing Principal	Semiconductor Type
Operating Condition	Heater voltage/DC 5.0V ± 4% Circuit voltage/less than DC 5V
Power consumption	400mW
Filter	Not Included
Size	φ17.0 x 16.5mm
Weight	1,75g

# Sensores de membrana de espectrometría de propiedades moleculares™ NevadaNano

## MPS004-MN0505-00



Target Gas	A2L Refrigerant Gas Sensor (R32)
Detection Range	5-100 %LFL
Accuracy at 25 %LFL	±3 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS210-MN05CC-00



Target Gas	A2L Refrigerant Gas Sensor (R32) , Low Limit of Detection (5000 ppm)
Detection Range	5-100 %LFL
Accuracy at 25 %LFL	±3 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS210-MN0509-00



Target Gas	A2L Refrigerant Gas Sensor (R32) , Auto-Start
Detection Range	5-100 %LFL
Accuracy at 25 %LFL	±3 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

# Sensores de membrana de espectrometría de propiedades moleculares™ NevadaNano

## MPS011-MN0505-00



Target Gas	A2L Refrigerant Gas Sensor (R454B)
Detection Range	9-100 %LFL
Accuracy at 25 %LFL	±5 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS230-MN0505-00



Target Gas	A2L Refrigerant Gas Sensor (R454C)
Detection Range	8-100 %LFL
Accuracy at 25 %LFL	±5 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS230-MN0509-00



Target Gas	A2L Refrigerant Gas Sensor (R454C) Auto-Start
Detection Range	8-100 %LFL
Accuracy at 25 %LFL	±5 %LFL
Accuracy ≤ 25 %LFL 20 °C, 50 %RH (UL 60335-2-40)	±2.5 %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa



## MPS004-S40505-EX



Target Gas	A2L Refrigerant Gas Sensor (R32)
Detection Range	5-Pin, UART + Analog Out
Accuracy at 25 %LFL	5-100 %LFL
Accuracy $\leq$ 25 %LFL	$\pm 3$ %LFL
20 °C, 50 %RH (UL 60335-2-40)	$\pm 2.5$ %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS210-S40309-E0



Target Gas	A2L Refrigerant Gas Sensor (R32),
Detection Range	3-Pin, Analog Out + Auto-Start
Accuracy at 25 %LFL	5-100 %LFL
Accuracy $\leq$ 25 %LFL	$\pm 3$ %LFL
20 °C, 50 %RH (UL 60335-2-40)	$\pm 2.5$ %LFL
Resolution	0.1 %LFL
Response time (t90)	< 15 seconds
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

# Soluciones / Gases Refrigerantes

## MPS999-S40000-99 Evaluation Kit Serie S4

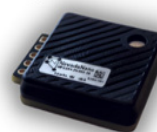
## MPS999-MN0000-99 Evaluation Kit Serie Mini



- MPSTM Sensor Interface Drivers and Software
- PCB evaluation + housing
- Gas supply mask with integrated spikes
- USB A to micro-B cable
- 1/4" Tygon Tubing (McMaster: 6516T17)
- Micro USB connector (not shown, optional)
- MPSTM S4 Flammable Gas Sensor (Sold Separately)



MPS Refrigerant S4



MPS MINI S4

# MPS Flamable Gas Sensor™ Nevada Nano

## MPS003-S40501-EX



Target Gas	Butane, ethane, hydrogen, isobutane, isobutylene, isopropanol, methane, methyl ethyl ketone, octane, pentane, propane, propylene, toluene and xylene
Resolution	5-Pin, UART
Response time (T90)	0.1 %LEL
Calibration	< 20 seconds
Temperature	Factory calibrated
Humidity	-40 to 75 °C
Pressure	0 to 100 %RH
	80 to 120 kPa

Gas	Formula	Detection Range	Accuracy (0-50 %LEL)
butane	C4H10	0-100 %LEL	±5 %LEL
ethane	C2H6	0-100 %LEL	±5 %LEL
hydrogen	H2	0-100 %LEL	±5 %LEL
isobutane	HC(CH3)3	0-100 %LEL	±5 %LEL
isobutylene	C4H8	0-100 %LEL	±5 %LEL
isopropanol	C3H8O	0-100 %LEL	±10 %LEL
methane	CH4	0-100 %LEL	±3 %LEL
methyl ethyl ketone	C4H8O	0-100 %LEL	±5 %LEL
octane	C8H18	0-100 %LEL	±12 %LEL
pentane	C5H12	0-100 %LEL	±7 %LEL
propane	C3H8	0-100 %LEL	±5 %LEL
propylene	C3H6	0-100 %LEL	±5 %LEL
toluene	C7H8	0-100 %LEL	±12 %LEL
xylene	C8H10	0-100 %LEL	±12 %LEL

## MPS003-S40505-EX



Target Gas	Butane, ethane, hydrogen, isobutane, isobutylene, isopropanol, methane, methyl ethyl ketone, octane, pentane, propane, propylene, toluene and xylene
Resolution	5-Pin, UART + Analog Out
Response time (T90)	0.1 %LEL
Calibration	< 20 seconds
Temperature	Factory calibrated
Humidity	-40 to 75 °C
Pressure	0 to 100 %RH
	80 to 120 kPa

## MPS003-S40509-EX



Target Gas	Butane, ethane, hydrogen, isobutane, isobutylene, isopropanol, methane, methyl ethyl ketone, octane, pentane, propane, propylene, toluene and xylene
Resolution	0.1 %LEL
Response time (T90)	< 20 seconds
Calibration	Factory calibrated
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## MPS003-S40309-EX



Target Gas	Butane, ethane, hydrogen, isobutane, isobutylene, isopropanol, methane, methyl ethyl ketone, octane, pentane, propane, propylene, toluene and xylene
Resolution	0.1 %LEL
Response time (T90)	< 20 seconds
Calibration	Factory calibrated
Temperature	-40 to 75 °C
Humidity	0 to 100 %RH
Pressure	80 to 120 kPa

## Soluciones / Gases Flamables

### MPS999-S40000-99 Evaluation Kit Serie S4



- MPSTM Sensor Interface Drivers and Software
- PCB evaluation + housing
- Gas supply mask with integrated spikes
- USB A to micro-B cable
- 1/4" Tygon Tubing (McMaster: 6516T17)
- Micro USB connector (not shown, optional)
- MPSTM S4 Flammable Gas Sensor (Sold Separately)



MPS Refrigerant S4

# MPS Methane Sensor™ Nevada Nano

## MPS005-S40505-EX



Target Gas	Methane
Resolution	5-Pin, UART + Analog Out
Calibration	1 ppm
Temperature	Factory calibrated
Humidity	-40 to 75 °C
Pressure	0 to 100 %RH
Dimensions	80 to 120 kPa
Mass	16.6 mm x 20.0 mm
Operating voltage	8.0 ± 0.5 grams
Current consumption	3.3 - 5.0 ±5% VDC
	Average: 8.9 mA / Operating range: 5.0-21.0 mA

## MPS005-S40509-EX



Target Gas	Methane
Resolution	5-Pin, UART + Analog Out + AutoStart
Calibration	1 ppm
Temperature	Factory calibrated
Humidity	-40 to 75 °C
Pressure	0 to 100 %RH
Dimensions	80 to 120 kPa
Mass	16.6 mm x 20.0 mm
Operating voltage	8.0 ± 0.5 grams
Current consumption	3.3 - 5.0 ±5% VDC
	Average: 8.9 mA / Operating range: 5.0-21.0 mA

## MPS005-S40309-EX



Target Gas	Methane
Resolution	S4, 3-Pin, Analog Out + Auto Start
Calibration	1 ppm
Temperature	Factory calibrated
Humidity	-40 to 75 °C
Pressure	0 to 100 %RH
Dimensions	80 to 120 kPa
Mass	16.6 mm x 20.0 mm
Operating voltage	8.0 ± 0.5 grams
Current consumption	3.3 - 5.0 ±5% VDC
	Average: 8.9 mA / Operating range: 5.0-21.0 mA

# Soluciones / Gas Metano

## MPS999-S40000-99 Evaluation Kit Serie S4



- MPSTM Sensor Interface Drivers and Software
- PCB evaluation + housing
- Gas supply mask with integrated spikes
- USB A to micro-B cable
- 1/4" Tygon Tubing (McMaster: 6516T17)
- Micro USB connector (not shown, optional)
- MPSTM S4 Flammable Gas Sensor (Sold Separately)



MPS Refrigerant S4

# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3062-00NC-20



Target Gas	LPG (Propane, Butane)
Description	Gas calibrated module (mounted SB-15C) without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	Isobutane 0, 300-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3062-00C4-20



Target Gas	LPG (Propane, Butane)
Description	Gas calibrated module (mounted SB-15C) without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	Isobutane 0, 300-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

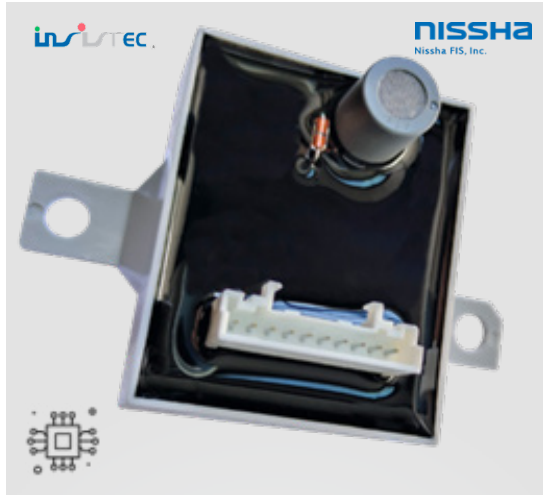
## FIS3082-00NC-50



Target Gas	Refrigerant gas (R410a)
Description	Gas calibrated for R410a without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3082-00C4-50



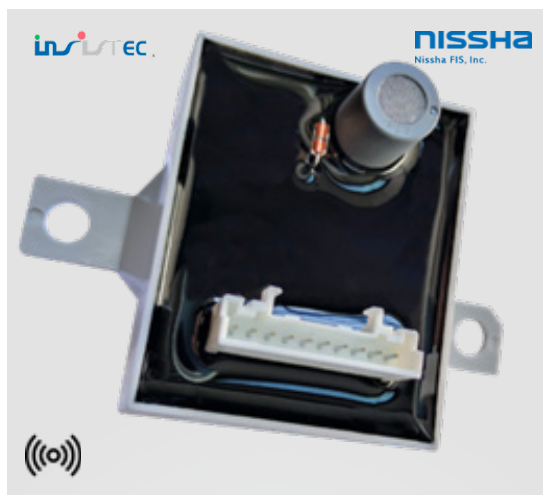
Target Gas	Refrigerant gas (R410a)
Description	Gas calibrated for R410a with waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3083-00NC-20



Target Gas	Refrigerant gas (R22)
Description	Gas calibrated module for R22a without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not Included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3083-00C4-20



Target Gas	Refrigerant gas (R22)
Description	Gas calibrated module for R22a with waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

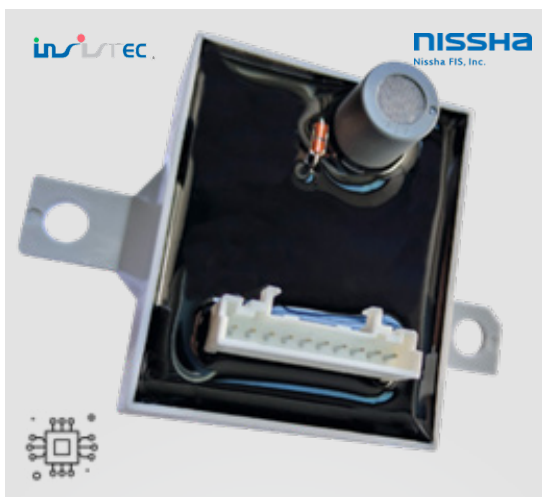
# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3084-00NC-50



Target Gas	LPG (Propane, Butane)
Description	Gas calibrated module (mounted SB-15C) without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	Isobutane 0, 300-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3084-00C4-50



Target Gas	Refrigerant gas (R32)
Description	Gas calibrated module (mounted SB-43A-00) with waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

## FIS3091-00NC-03

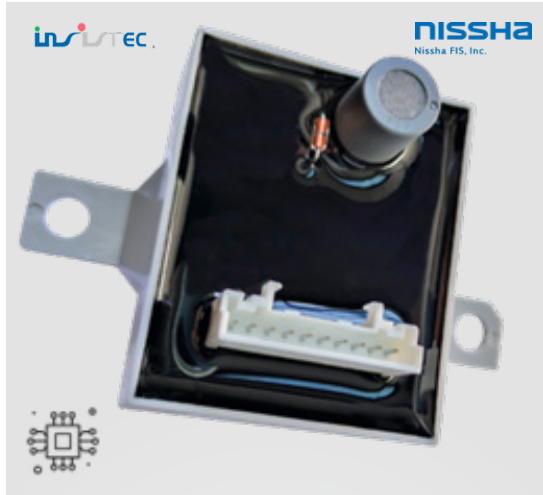


Target Gas	Ammonia
Description	Gas calibrated module (mounted SB-53) without waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g



# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3091-00C4-03



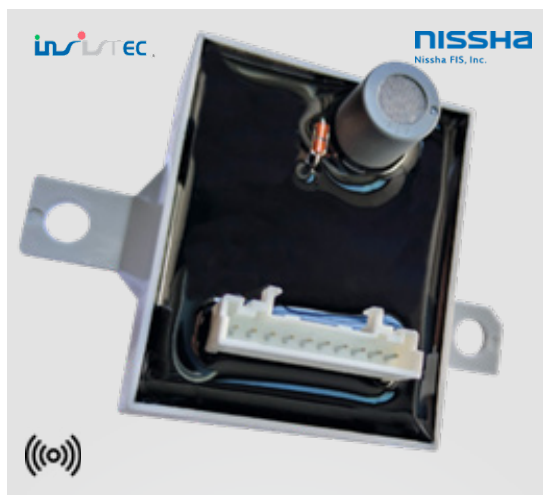
Target Gas	Ammonia
Description	Gas calibrated module (mounted SB-53) with waterproof case. No concentration output.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 30-500 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

## FIS3062-99NC-10/20



Target Gas	LPG (Propane, Butane)
Description	Gas calibrated module (mounted SB-15C) without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	Isobutane 0, 300-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not Included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3062-99C4-10/20



Target Gas	LPG (Propane, Butane)
Description	Gas calibrated module (mounted SB-15C) without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	Isobutane 0, 300-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not Included
Size	28 x 41 x 20 (H) mm
Weight	5g

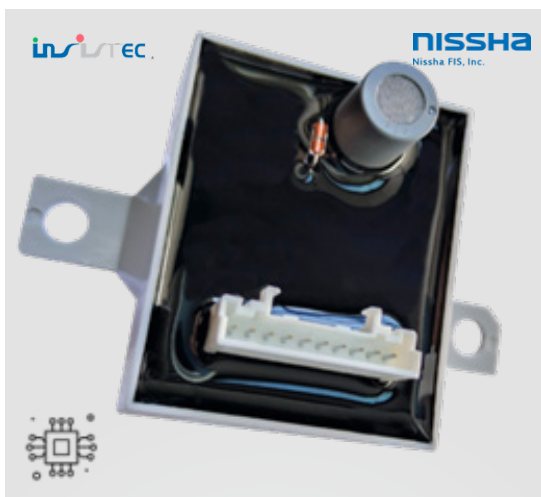
# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3082-99NC-10/50



Target Gas	Refrigerant Gas (R410a)
Description	Gas calibrated module for R410a without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1%
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3082-99C4-10/50



Target Gas	Refrigerant Gas (R410a)
Description	Gas calibrated module for R410a with waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1 %
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

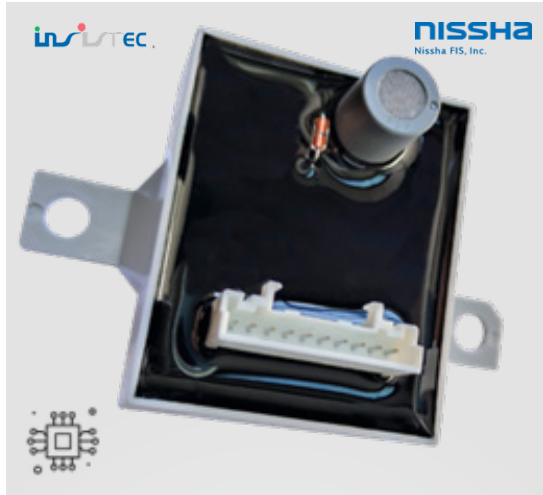
## FIS3083-99NC-10/20



Target Gas	Refrigerant Gas (R22)
Description	Gas calibrated module for R22 without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1 %
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not included
Size	28 x 41 x 20 (H) mm
Weight	5g

# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3083-99C4-10/20



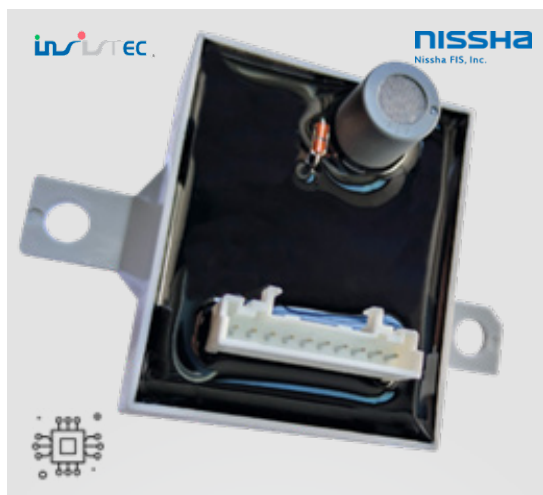
Target Gas	Refrigerant Gas (R22)
Description	Gas calibrated module for R22 with waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1 %
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

## FIS3084-99NC-10/50



Target Gas	Refrigerant Gas (R32)
Description	Gas calibrated module (mounted SB-43A-00) without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1 %
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not Included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3084-99C4-10/50



Target Gas	Refrigerant Gas (R32)
Description	Gas calibrated module (mounted SB-43A-00) with waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 0.03-1 %
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

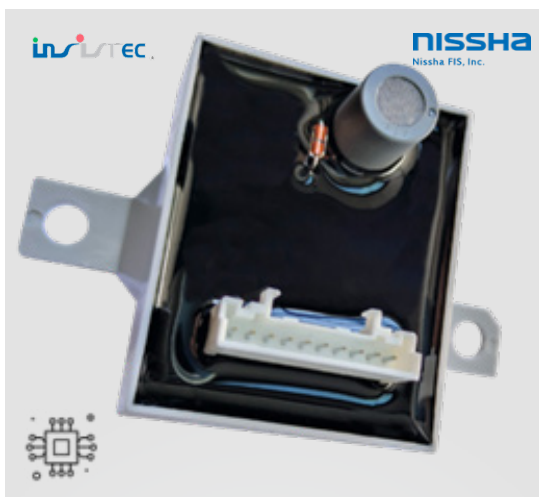
# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS3091-99NC-01/03



Target Gas	Ammonia
Description	Gas calibrated module (mounted SB-53) without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 30-500ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not Included
Size	28 x 41 x 20 (H) mm
Weight	5g

## FIS3091-99C4-01/03



Target Gas	Ammonia
Description	Gas calibrated module (mounted SB-53) with waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 30-500 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	19g

## FIS5084-01NC



Target Gas	Refrigerant gas (R32)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) without waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 2000-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not included
Size	26 x 26 x 20 (H) mm
Weight	5g

# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS5084-01C1



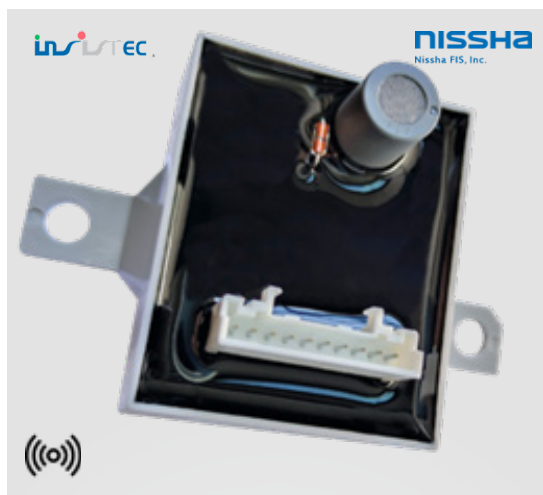
Target Gas	Refrigerant gas (R32)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) with waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0, 2000-10000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	53 x 30 x 23.5 (H) mm
Weight	11g

## FIS5085-13NC



Target Gas	R454B refrigerant gas.
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) without waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0-4.000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 40mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not included
Size	26 x 26 x 20 (H) mm
Weight	5g

## FIS5085-13C1



Target Gas	R454B refrigerant gas.
Description	Gas calibrated module (mounted SB-43A-00) with waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	0-4.000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 40mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	12g

# Módulos de Gases Refrigerantes con sensores semiconductores NISSHA FIS

## FIS5062-13NC



Target Gas	Refrigerant gas (R290)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) without waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0 - 4.000 ppm
Power Supply	5.0VDC $\pm$ 5%
Current consumption	Average current consumption 40mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not included
Size	26 x 26 x 20 (H) mm
Weight	5g

## FIS5062-13C1



Target Gas	Refrigerant gas (R290)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) with waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0-4000 ppm
Power Supply	DC5V $\pm$ 5%
Current consumption	Average current consumption 40mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Included
Size	31 x 44 x 20 (H) mm
Weight	12g

# Módulos de Gases Co2 con sensores semiconductores NISSHA FIS

## SB-AQ6A-01



Target Gas	Carbon dioxide (CO <sub>2</sub> )
Description	Gas calibrated module (mounted SB-53) without waterproof case. Concentration output function included.
Sensing Principal	Semiconductor Type
Mesurament Range	400 to 3000ppm
Power Supply	5VDC ±2%
Current consumption	Average current consumption 35mA
Signal Output	Concentration Sensor Alarm output
Waterproof Case	Not Included
Size	51x37x20mm
Weight	10g

# Módulo de Gas H2 con sensores semiconductores NISSHA FIS

## SB-AQ6A-01



Target Gas	Hydrogen (H <sub>2</sub> )
Detection range	0.1 to 4 vol.%. (40,000 ppm)
Detection method	Catalytic combustion
Initial detection accuracy	±10 % (Over 10,000 ppm at room temperature) For temperature dependency, see below
Start-up time	< 1 second
Response speed	< 3 seconds (T90 : 90% response)
Supply voltage	5V ± 0.25V DC
Power consumption	Approx. under 250 mW (steady state)
Condenser capacity	10µF
Output impedance	100Ω
Operating temperature	-35°C to 85°C (no condensation)
Storage temperature	-40°C to 85°C (no condensation)
Output signal	Analog output 0.5V to 4.5V DC proportional to hydrogen gas concentration
Dimensions	51,5mm x 45,4mm x 20,25mm
Weight	Approx. 25 g

# Módulos de Gas Ozono con sensores semiconductores NISSHA FIS

## A1320301-SP61-01



Target Gas	Ozone (O3)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) without waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0 to 250ppb
Power Supply	5V DC $\pm$ 5%
Current consumption	Lower than 700mW
Signal Output	PNP transistor output, 5V DC output at ON, no delay alarm, auto-reset
Analogue Output	0 to 1V
Waterproof Case	Not Included
Size	51 x 37 x 22 (H) mm
Weight	15g

## A1320301-SP61-02



Target Gas	Ozone (O3)
Description	IEC compliant product. Gas calibrated module (mounted SB-43A) without waterproof case.
Sensing Principal	Semiconductor Type
Mesurament Range	0 to 250ppb
Power Supply	5V DC $\pm$ 5%
Current consumption	Lower than 700mW
Signal Output	PNP transistor output, 5V DC output at ON, no delay alarm, auto-reset
Analogue Output	0 to 5V
Waterproof Case	Not Included
Size	51 x 37 x 22 (H) mm
Weight	15g



# Contacto

---

En INSISTEC S.L., nos preocupamos por la seguridad y el cumplimiento normativo en la manipulación de gases. Por esta razón, ofrecemos una amplia gama de sensores y módulos de detección de gases de alta calidad para ayudar a garantizar la seguridad y eficiencia de los sistemas de refrigeración de diferentes fabricantes y tecnologías.

Los sensores y módulos de detección que conforman nuestro catálogo están diseñados para detectar una amplia gama de gases, desde los típicos que dañan la capa de ozono y el medio ambiente, hasta los más modernos. Además, nuestra tecnología de detección temprana de fugas puede ayudar a reducir los costos de mantenimiento y aumentar la eficiencia de estos sistemas de refrigeración.

Así pues, nos complace ofrecer a nuestros clientes **soluciones personalizadas (custom design)** y de alta calidad para sus necesidades específicas en **detección de gases**. Y se trate de sensores para sistemas de aire acondicionado, residenciales y comerciales, o módulos de detección en grandes instalaciones industriales, nuestros expertos en detección de gases pueden ayudarle a encontrar la solución adecuada.

No arriesgue la seguridad y eficiencia de sus sistemas. [Contacte con INSISTEC S.L. para adquirir la mejor y más avanzada tecnología de sensores y módulos de detección de gases inflamables o explosivos en el mercado fabricados con la tecnología más moderna y fiable.](#)

¡Estamos a su disposición para ayudarle a diseñar la mejor solución para sus sistemas de refrigeración!

[Juan Esteban Ortiz](#)

Director General y CEO

[jeortiz@insistec.net](mailto:jeortiz@insistec.net) | 629 77 54 64





Puigmal nº14 Local  
08396 Sant Cebrià de Vallalta  
Barcelona (Spain)  
Tel.: +34 93 276 46 16  
Mov.: +34 629 77 54 64