

EC Sense Selection Guide

7 models · downloadable datasheets also available per model on anchorsensor.com

TB420-EC4-Br2 — TB420-EC4-Br2 Bromine Smart Gas Sensor Module

The EC Sense TB420-EC4-Br2 is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Bromine detection with a 0 – 1 ppm range and 0.001 ppm resolution. It converts the sensor's small current si...

Target Gas	Bromine
Detection Range	0 – 1 ppm
Resolution	0.001 ppm
Order No.	04-TB420-EC4-Br2-1-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-Cl2 — TB420-EC4-Cl2 Chlorine Smart Gas Sensor Module

The EC Sense TB420-EC4-Cl2 is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Chlorine detection with a 0 – 5 ppm / 0 – 50 ppm range and 0.001 ppm / 0.01 ppm resolution. It converts the ...

Target Gas	Chlorine
Detection Range	0 – 5 ppm / 0 – 50 ppm
Resolution	0.001 ppm / 0.01 ppm
Order No.	04-TB420-EC4-Cl2-5-01 / 04-TB420-EC4-Cl2-50-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-CIO2 — TB420-EC4-CIO2 Chlorine Dioxide Smart Gas Sensor Module

The EC Sense TB420-EC4-CIO2 is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Chlorine Dioxide detection with a 0 – 5 ppm range and 0.001 ppm resolution. It converts the sensor's small ...

Target Gas	Chlorine Dioxide
Detection Range	0 – 5 ppm
Resolution	0.001 ppm
Order No.	04-TB420-EC4-CIO2-5-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-F2 — TB420-EC4-F2 Fluorine Smart Gas Sensor Module

The EC Sense TB420-EC4-F2 is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Fluorine detection with a 0 – 5 ppm range and 0.001 ppm resolution. It converts the sensor's small current si...

Target Gas	Fluorine
Detection Range	0 – 5 ppm
Resolution	0.001 ppm
Order No.	04-TB420-EC4-F2-5-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-HCl — TB420-EC4-HCl Hydrogen Chloride Smart Gas Sensor Module

The EC Sense TB420-EC4-HCl is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Hydrogen Chloride detection with a 0 – 30 ppm range and 0.001 ppm resolution. It converts the sensor's small...

Target Gas	Hydrogen Chloride
Detection Range	0 – 30 ppm
Resolution	0.001 ppm
Order No.	04-TB420-EC4-HCl-30-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-HF — TB420-EC4-HF Hydrogen Fluoride Smart Gas Sensor Module

The EC Sense TB420-EC4-HF is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Hydrogen Fluoride detection with a 0 – 10 ppm range and 0.001 ppm resolution. It converts the sensor's small ...

Target Gas	Hydrogen Fluoride
Detection Range	0 – 10 ppm
Resolution	0.001 ppm
Order No.	04-TB420-EC4-HF-10-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw

TB420-EC4-NH3 — TB420-EC4-NH3 Ammonia Smart Gas Sensor Module

The EC Sense TB420-EC4-NH3 is a two-wire 4-20 mA smart gas sensor module built on German solid-polymer electrochemical sensing technology, designed for Ammonia detection with a 0 – 100 ppm / 0 – 500 ppm / 0 – 1000 ppm range and 0.01 ppm / 0.1 ppm / 0.1 ppm res...

Target Gas	Ammonia
Detection Range	0 – 100 ppm / 0 – 500 ppm / 0 – 1000 ppm
Resolution	0.01 ppm / 0.1 ppm / 0.1 ppm
Order No.	04-TB420-EC4-NH3-100-01 / 04-TB420-EC4-NH3-500-01 / 04-TB420-EC4-NH3-1000-01
Operating Principle	Solid Polymer Electrochemical Sensing Technology
Accuracy	± 5% (measurement value)
Repeatability	< 2%
Linearity	Linear
Long-Term Drift	< 5% / year
Expected Lifetime	> 5 years
Output Signal	4-20 mA two-wire (convertible to 40-200 mV via an external resistor)
Supply Voltage	9 to 24 V DC, 24 V DC recommended
Supply Current	3 to 22 mA
Power Consumption	< 0.6 W
Maximum Loop Resistance	< 500 Ω @ 24 V DC
Protection	Reverse polarity protection
Operating Temperature	-40 °C to +55 °C
Operating Humidity	15 – 95% RH (non-condensing)
Operating Pressure	Atmospheric pressure ± 10%
Storage Temperature	0 °C to 20 °C
Size (Including Sensor)	45 × 35 × 21.7 mm
Size (Without Sensor)	45 × 35 × 11.9 mm
Weight (Including Sensor)	11.8 g
Weight (Without Sensor)	7.1 g
Certification	Ex ia IIC Ga intrinsic safety (temperature class T6, -40 °C to +55 °C); RoHS
Warranty	12 months

Every module is professionally calibrated with standard gas before shipment and the calibration data is stored in its flash chip, so it can be used without warm-up. EC Sense provides calibration softw