# EC Sense Selection Guide

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

## TB200B-ES1-PH3-100 — TB200B-ES1-PH3-100 Phosphine Detection Module

The EC Sense TB200B-ES1-PH3-100 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 100 ppm range and 0.01 ppm resolution. The module uses the compact ES1 electrochemical sensor (40 × 30 × 12 mm including sensor, u…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 100 ppm |
| **Resolution** | 0.01 ppm |
| **Sensor Packaging** | ES1 |
| **Order No. (UART)** | 04-TB200B-ES1-PH3-100-01 |
| **Order No. (I²C)** | 04-TB200B-ES1-PH3-100-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 12 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 15 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES1-PH3-20 — TB200B-ES1-PH3-20 Phosphine Detection Module

The EC Sense TB200B-ES1-PH3-20 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 20 ppm range and 0.01 ppm resolution. The module uses the compact ES1 electrochemical sensor (40 × 30 × 12 mm including sensor, und…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 20 ppm |
| **Resolution** | 0.01 ppm |
| **Sensor Packaging** | ES1 |
| **Order No. (UART)** | 04-TB200B-ES1-PH3-20-01 |
| **Order No. (I²C)** | 04-TB200B-ES1-PH3-20-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 12 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 15 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES1-PH3-2000 — TB200B-ES1-PH3-2000 Phosphine Detection Module

The EC Sense TB200B-ES1-PH3-2000 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 2000 ppm range and 0.1 ppm resolution. The module uses the compact ES1 electrochemical sensor (40 × 30 × 12 mm including sensor, …

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|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 2000 ppm |
| **Resolution** | 0.1 ppm |
| **Sensor Packaging** | ES1 |
| **Order No. (UART)** | 04-TB200B-ES1-PH3-2000-01 |
| **Order No. (I²C)** | 04-TB200B-ES1-PH3-2000-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 12 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 15 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES1-PH3-5 — TB200B-ES1-PH3-5 Phosphine Detection Module

The EC Sense TB200B-ES1-PH3-5 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 5 ppm range and 0.001 ppm resolution. The module uses the compact ES1 electrochemical sensor (40 × 30 × 12 mm including sensor, unde…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 5 ppm |
| **Resolution** | 0.001 ppm |
| **Sensor Packaging** | ES1 |
| **Order No. (UART)** | 04-TB200B-ES1-PH3-5-01 |
| **Order No. (I²C)** | 04-TB200B-ES1-PH3-5-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 12 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 15 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES4-PH3-100 — TB200B-ES4-PH3-100 Phosphine Detection Module

The EC Sense TB200B-ES4-PH3-100 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 100 ppm range and 0.01 ppm resolution. The module uses the standard ES4 electrochemical sensor (40 × 30 × 22.45 mm including senso…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 100 ppm |
| **Resolution** | 0.01 ppm |
| **Sensor Packaging** | ES4 |
| **Order No. (UART)** | 04-TB200B-ES4-PH3-100-01 |
| **Order No. (I²C)** | 04-TB200B-ES4-PH3-100-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 22.45 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 25 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES4-PH3-20 — TB200B-ES4-PH3-20 Phosphine Detection Module

The EC Sense TB200B-ES4-PH3-20 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 20 ppm range and 0.01 ppm resolution. The module uses the standard ES4 electrochemical sensor (40 × 30 × 22.45 mm including sensor,…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 20 ppm |
| **Resolution** | 0.01 ppm |
| **Sensor Packaging** | ES4 |
| **Order No. (UART)** | 04-TB200B-ES4-PH3-20-01 |
| **Order No. (I²C)** | 04-TB200B-ES4-PH3-20-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 22.45 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 25 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES4-PH3-2000 — TB200B-ES4-PH3-2000 Phosphine Detection Module

The EC Sense TB200B-ES4-PH3-2000 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 2000 ppm range and 0.1 ppm resolution. The module uses the standard ES4 electrochemical sensor (40 × 30 × 22.45 mm including sens…

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 2000 ppm |
| **Resolution** | 0.1 ppm |
| **Sensor Packaging** | ES4 |
| **Order No. (UART)** | 04-TB200B-ES4-PH3-2000-01 |
| **Order No. (I²C)** | 04-TB200B-ES4-PH3-2000-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 22.45 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 25 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat

## TB200B-ES4-PH3-5 — TB200B-ES4-PH3-5 Phosphine Detection Module

The EC Sense TB200B-ES4-PH3-5 is an industrial-safety-grade smart digital gas sensor module for Phosphine detection, with a 0 – 5 ppm range and 0.001 ppm resolution. The module uses the standard ES4 electrochemical sensor (40 × 30 × 22.45 mm including sensor, …

| | |
|---|---|
| **Target Gas** | Phosphine |
| **Detection Range** | 0 – 5 ppm |
| **Resolution** | 0.001 ppm |
| **Sensor Packaging** | ES4 |
| **Order No. (UART)** | 04-TB200B-ES4-PH3-5-01 |
| **Order No. (I²C)** | 04-TB200B-ES4-PH3-5-I2C-01 |
| **Operating Principle** | Solid Polymer Electrochemical Sensing Technology |
| **Accuracy** | ± 5% (measurement value) |
| **Repeatability** | 1% |
| **Linearity** | Linear |
| **Long-Term Drift** | < 5% / year |
| **Expected Lifetime** | > 5 years |
| **Output Signal** | UART (TTL 3.3 V) or I²C digital signal |
| **UART Parameters** | Baud rate 9600, 8 data bits, 1 stop bit; VCC red / GND black / RX yellow / TX green |
| **I²C Parameters** | Frequency ≤ 20 kHz, signal voltage 3.3 V; VCC red / GND black / SDA yellow / SCL green |
| **Communication Mode** | Active-upload and question-answer modes; Q&A is the default on power-up |
| **Built-in Temperature Sensor** | -20 ℃ to +70 ℃, ± 0.2 ℃ (typical) |
| **Built-in Humidity Sensor** | 0 – 100% RH, ± 2% (typical) |
| **Working Temperature** | -40 ℃ to +55 ℃ |
| **Working Humidity** | 15 – 95% RH (non-condensing) |
| **Working Pressure** | Atmospheric pressure ± 10% |
| **Size (Including Sensor)** | 40 × 30 × 22.45 mm |
| **Size (Without Sensor)** | 40 × 30 × 5.6 mm |
| **Weight** | < 25 g (including sensor) |
| **Cable Length** | 100 mm, special length by request |
| **Warranty** | 12 months from the date of shipment |

Every module is professionally calibrated with standard gas before shipment, with the calibration data stored in its flash chip — plug-and-play, no secondary gas calibration required. Refer to the dat