**Temperature Sensors**

1. **BAPI-Com 2, Two-Wire Multifunction Sensor**

Features & Options

* Power and Communication on Just Two Wires
* Available with Temperature Sensing, Temperature Setpoint, Occupant Override and Optional LCD Display
* Thermistor, Voltage, Resistance or Dry Contact Outputs
* Up to 500 Foot Wire Runs — Perfect for Existing Wires
* Multiple Sensor Options on Existing Twin Wires

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| **ROOM SENSOR** | | | | | | | | | | | | | | | | | | | | |
| **Power** | **Wiring** (2 wires, Up to 500ft(new or existing)) | | | | | | | | **Sensor** (Thermistor) | | | **Pole Rate** | | **Options** | | | | | | |
| 18VDC, Supplied from the Communication Module | AWG gauge 26-16AWG | | Twist per foot 5 per ft preferred | | Shielding Preferred (not required) | | Wire spec typical Belden 9841 | | Accuracy (std) ±0.36ºF, (±0.2ºC) | | | 400 ms | | Setpoint Slide or Pushbutton | | | Display LCD | Override Pushbutton | | |
| **COMMUNICATION MODULE** | | | | | | | | | | | | | | | | | | | | |
| **Power in** | **Terminations** | | | | | | | **Outputs (**Three Maximum**)** | | | | | | | **Input (DI)** | **Mounting** 3 EZ mount methods | | | | |
| 24VDC/AC, 30mA | Comm. & PWR 2 wires to the sensor | Power in 2 wires, 12-24 AWG | | Output 2 wires per output,  16-28 AWG | | Override Input 2 wires, 14-28 AWG | | Volts 0-5VDC or 0-10VDC | | Contact 0.5A@24VDC | Resistance 20K span | | Thermistor 10K-2 or 10K-3 | | External Override  Closed = Occupied | 35mm DIN Rail Quick tab release  holes | | | 2.75" Snap Track . 4" length | Screw Mount Four tabs w/0.125" |

1. **BAPI-Stat™ Room Unit**

Features & Options

* Larger Enclosure & Larger Easy-to-Read LCD Display
* Temperature Alone or Combination Temp./Humidity
* Membrane Pushbuttons for Wipedown Applications
* Adjustable Temperature and Humidity Setpoints and Override
* Wide Selection of Temperature Sensing Elements
* Communication Jack (optional)
* 2% RH Accuracy

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| **Power** | | | | **Power Consumption** | | | | **Sensing Elements** | | | **Mounting** | **Environmental Specifications** | | **Wiring** |
| 10 to 35 VDC (15 to 24 VDC recommended) for 4 to 20 mA or 0 to 5 VDC Outputs | 15 to 35 VDC (15 to 24 VDC recommended) for 0 to 10 VDC Output | 12 to 28 VAC (Requires a separate pair of shielded wires) for 4 to 20 mA or 0 to 5 VDC Outputs | 15 VAC to 28 VAC (Requires a separate pair of shielded wires) 0 to 10 VDC Output | 60 mA max. DC: 4 to 20 mA or 0 to 5 VDC Outputs | 10 mA max. DC: 0 to 10 VDC Output | 1.44 VA max. AC; 4 to 20 mA or 0 to 5 VDC Outputs | 0.2 VA max. AC: 0 to 10 VDC Output | Temp. - Semiconductor Band Gap,  Proportional to Absolute Temperature, ±0.3°C | Humidity - Capacitive Polymer, ±1.8% RH Accuracy | Optional Direct Temp. Sensor - Therm., RTD or Semicond | 2” by 4” J-box or drywall mount - screws provided | Temperature: 32 to 122 oF (0 to 50 oC) | Humidity: 0 to 95%, non-condensing | 2 to 4 pair of 16 to 22 AWG |

1. **Decora Style Room Unit**

Features & Options

* LCD Readout of Local Temperature
* Setpoint Adjustment (optional)
* Decora Style Enclosure
* °F or °C Indication (field selectable via setpoint pushbuttons)
* Wide Selection of Temperature Sensing Elements

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| **Power** | **Power Consumption** | **Sensing Element** | **Wiring** | **Mounting** | **Environmental Operation Range** | | **Material** | **Material Rating** |
| 5 VDC ±5% | .5 mA | Thermistor or RTD | 2 to 3 pair of 16 to 22AWG | Standard 2”x4” J-box with Decora Style Trim Plate | Temperature:32 to 122 oF (0 to 50 oC) | Humidity: 0 to 95%, non-condensing | ABS Plastic | UL94, V-0 |

1. **Delphi Air Temperature Sensors**

Features & Options

* High-temperature thermoplastic shell for durability
* Patented, lightweight, and cost-effective pre-mold subassembly
* Design flexibility to match calibration criteria, meet mounting and packaging requirements, and integrate with systems
* Customized packaging of mounting features, sealing options, connection system, and resistance output
* Crimpless conductive path to the negative temperature coefficient thermistor and calibration certification for enhanced reliability and accuracy; also eliminates an electrical interface
* 100 percent resistance calibration verification helps ensure quality and reliability

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| **Specifications for Manifold Air Temperature Sensor** | | | | | |
| **Typical voltage supply** | **Operating temperature** | **Resistance at 25°C** | **Thermal time constant** | **Accuracy (±°C) -40°C to +100°C** | **Accuracy (±°C) +100°C to +150°C** |
| 5 V DC | -40°C to +135°C | 2795 ohms | 60 seconds in dry air stream | 0.56 to 0.77 | 0.77 to 1.24 |
| **Specifications for Intake Air Temperature Sensor** | | | | | |
| **Typical voltage supply** | **Operating temperature** | **Resistance at 25°C** | **Thermal time constant** | **Accuracy (±°C) -40°C to +100°C** | **Accuracy (±°C) +100°C to +150°C** |
| 5 V DC | -40°C to +135°C | 2795 ohms | <15 seconds in dry air stream | 0.56 to 0.77 | 0.77 to 1.24 |

1. **Delphi Transmission Temperature Sensors**

Features & Options

* Simple, lightweight, and cost-effective design
* Design flexibility with customized packaging of:
  + Mounting features
  + Connection system
  + Resistance output
  + Customized to match calibration criteria
* Capable of system integration
* 100 percent resistance calibration verification helps ensure accuracy and reliability
* Crimpless conductive path (sump sensor) enhances reliability and helps assure accuracy

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| **Specifications for Transmission Sump Temperature Sensor** | | | | |
| **Typical voltage supply** | **Operating temperature** | **Resistance at 25°C** | **Thermal time constant** | **Accuracy (±°C)** |
| 5 V DC | -40°C to +135°C | 2795 ohms | 5 seconds in silicone oil | 0.56 to 0.77 (-40°C to +100°C);  0.77 to 1.24 (+100°C to +150°C) |
| **Specifications for Transmission Stator Temperature Sensor** | | | | |
| **Typical voltage supply** | **Operating temperature** | **Resistance at 25°C** | **Thermal time constant** | **Accuracy (±°C)** |
| 5 V DC | -40°C to +200°C (sensor tip); -40°C to +150°C (connector) | 11150 ohms | 10 seconds in silicone oil | 1.8 to 1.1 (-40°C to +135°C);  1.1 to 1.7 (+135°C to +200°C) |

1. **Echelon® Compatible “L-Temp”**

Features & Options

* LCD Readout
* °C or °F Operation (user selectable)
* Onboard Neuron® 3120® Chip
* Optional Setpoint Adjustment & Occupancy Override
* Optional Fan Speed Control
* Standard 4-Wire Termination

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| **ROOM SENSOR** | | | | | | | |
| **Power** | **Power Consumption** | **Sensing Elements** | | **Wiring** | **Communication** | **Environmental Specifications** | |
| 8 to 24VDC (recommended) or 12 to 28VAC | 35 mA maximum DC | Temp. Semiconductor Band Gap, Proportional to Absolute Temperature, ±0.3°C | Optional Humidity  Capacitive Polymer, ±1.8% RH Accuracy | 4 wire, twisted pair 22 AWG minimum | Neuron® 3120®, 78 kbps using FTT-10A transceiver | Temperature: 32 to 122 oF (0 to 50 oC) | Humidity: 0 to 95%, non-condensing |

1. **“X-Combo” Room Unit**

Features & Options

* Robust Tactile Pushbuttons and LCD Readout
* 2% and 3% RH Accuracies
* °C or °F Operation
* Three Configurable Channels (optional)
* Full-range Temperature Compensation of RH Signal
* Setpoint Adjust and Occupancy Override (optional)
* User Adjustable Toggle Rate Between Temperature and Humidity
* Wide Selection of Temperature Sensing Elements

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| **ROOM SENSOR** | | | | | | | |
| **Power** | | **Power Consumption** | **Sensing Elements** | | **Wiring** | **Environmental Specifications** | |
| 12 VDC to 35 VDC (15 to 24 VDC recommended) | 15 to 24 VAC (Requires a separate pair of shielded wires) | 50 mA maximum DC  1.2 VA maximum AC | Temperature - Thermistor or RTD | Optional Humidity  Impedance Type, ±2% or ±3% RH | 2 to 4 pair of 16 to 22 AWG | Temperature: 32 to 122 oF (0 to 50 oC) | Humidity: 0 to 95%, non-condensing |

1. **Room Temperature Sensors (STR100, 200, 600 Series)**

The STR range of room temperature sensors comprises a series of wall modules optimised for public facilities such as office buildings, hotels, hospitals, schools and shopping malls. Their attractive appearance and well-designed interface make them suitable for any contemporary building. They are easy to operate and install. STR wall modules are mounted directly onto the wall or a back-box/ J-box and the base plate is designed to be compatible with any global fixing method.

There are options for compatibility with Vista, I/NET and Satchwell Systems as shown in the following table. Continuum is not available in STR at the moment.

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| **Output** | **Range** | **Accuracy** | | | | | |
| NTC thermistor | 0 to 50 °C, Max. 95% RH | **(100 Series Sensors), e.g. STD100** | | **(200 Series Sensors), e.g. STD200** | | **(600 Series), e.g. STR600** | |
| At temperature | Accuracy | At temperature | Accuracy | At temperature | Accuracy |
| -25 °C/-13 °F | ±0.7 °C/±1.3 °F | -25 °C/-13 °F | ±0.5 °C/±0.9 °F | -25 °C/-13 °F | ±0.6 °C/±1.0 °F |
| ±0 °C/32 °F | ±0.5 °C/±0.9 °F | ±0 °C/32 °F | ±0.2 °C/±0.4 °F | ±0 °C/32 °F | ±0.3 °C/±0.5 °F |
| 25 °C/77 °F | ±0.3 °C/±0.5 °F | 25 °C/77 °F | ±0.2 °C/±0.4 °F | 25 °C/77 °F | ±0.2 °C/±0.4 °F |
| 50 °C/122 °F | ±0.6 °C/±1.1 °F | 50 °C/122 °F | ±0.2 °C/±0.4 °F | 50 °C/122 °F | ±0.2 °C/±0.4 °F |
| 75 °C/167 °F | ±0.9 °C/±1.6 °F | 75 °C/167 °F | ±0.2 °C/±0.4 °F | 75 °C/167 °F | ±0.3 °C/±0.5 °F |
| 100 °C/212 °F | ±1.3 °C/±2.3 °F | 100 °C/212 °F | ±0.5 °C/±0.9 °F | 100 °C/212 °F | ±0.3 °C/±0.5 °F |

**Lighting Sensors**

1. **Outdoor lighting control (41-262) Movement sensor**

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| **Supply voltage** | **Output signal** | **Output voltage** | **Lux range** | **Detection range** | **Range** | **Max. current load** | **Power consump.** | **Power consump.** | **Protection class** | **Ambient temperatur** | **Cable entry** | **Cable lenght** |
| 24 V DC ±10% | On/Off, NPN | 0-10 V | 3...300 lux | 90° | 0,5...15 m | 50 mA (24 V DC) | -worst case <5 mA (24 V DC) | - standby <3 mA (24 V DC) | IP20 | - 20°C ...+50°C | 2 x Ø 5 mm | Max 200 m, 2 x 2 x 0,6 mm |

1. **Indoor lighting control On/Off (41-270) Movement sensor**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supply voltage** | **Output signal** | **Detection range** | **Lux range** | **Range** | **Max. current load** | **Power consump.** | **Power consump.** | **Protection class** | **Ambient temperatur** | **Cable lenght** |
| 24 V DC ±10% | On/Off, NPN | 90°/40° | 3...300 lux | 0,4...5 m | 50 mA (24 V DC) | -worst case <5 mA (24 V DC) | - standby <3 mA (24 V DC) | IP20 | - 20°C ...+50°C | Max 200 m, 2 x 2 x 0,6 mm |

1. **Indoor lighting control On/Off (41-272) Movement sensor**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| **Supply voltage** | **Output signal** | **Detection range** | **Lux range** | **Range** | **Max. current load** | **Power consump.** | **Power consump.** | **Protection class** | **Ambient temperatur** | **Cable entry** | **Cable lenght** |
| 24 V DC ±10% | On/Off, NPN | 90° | 3...300 lux | 0,5...15 m | 50 mA (24 V DC) | -worst case <5 mA (24 V DC) | - standby <3 mA (24 V DC) | IP20 | - 20°C ...+50°C | 2 x Ø 5 mm | Max 200 m, 2 x 2 x 0,6 mm |

1. **Indoor lighting control On/Off (41-274) Movement sensor**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| **Supply voltage** | **Output signal** | **Detection range** | **Lux range** | **Range** | **Max. current load** | **Power consump.** | **Power consump.** | **Protection class** | **Ambient temperatur** | **Cable entry** | **Cable lenght** |
| 24 V DC ±10% | On/Off, NPN | 90° | 3...300 lux | 0,5...15 m | 50 mA (24 V DC) | -worst case <5 mA (24 V DC) | - standby <3 mA (24 V DC) | IP20 | - 20°C ...+50°C | 2 x Ø 5 mm | Max 200 m, 2 x 2 x 0,6 mm |

1. **Indoor lighting control – Dimming (43-197) Light sensor**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Supply voltage** | **Lux range** | **Output voltage** | **Connection** | **Protection class** | **Ambient temperatur** | **Distance to Control** | **Cable** |
| 24 V DC ±10% | 3...300 lux, 30...3K lux  300...30K lux, 600...60K lux | 0-10 V | Screw terminals | IP20 | - 20°C ...+50°C | Max. 100 m | Class II control 0,6 mm |

1. **Outdoor lighting control (43-198) Light sensor**

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| **Supply voltage** | **Output voltage** | **Lux range** | **Connection** | **Protection class** | **Ambient temperatur** | **Distance from Control** | **Cable** | |
| 24 V DC ±10% | 0-10 V | 3...300 lux, 30...3K lux  300...30K lux, 600...60K lux | Screw terminals | IP54 | - 40°C ...+50°C | Max. 100 m | Class I Control 3 x 1,5 mm² | Class II Control 0,6 mm |

**Internal Sounder Sensors**

1. **Soint**

A sleek white low profile louvre-free housing containing either a 16 ohm or 8 ohm speaker, that will blend discreetly into any surrounding setting. Complete with wall and cover tamper.   
  
Features & Options

* SOINT 1/EC 16 Ohm speaker
* SOINT 1/16/WH 16 Ohm speaker, tampered
* SOINT 1/8/WH 8 Ohm speaker, tampered
* SOINT 2/WH Electronically driven speaker with selectable sound output and LED indication

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| **Sounder type** | **Voltage** | **Current** | **Sound output dB(A) at 1m** | **Frequency range** | **Timer** | **Tamper protection** | **Material** | **Visual indication** | **SAB** |
| 8/16 ohm speaker | 6- 15vdc | 250mA | 110 | 1.2 – 1.8 kHz | N/A | Wall/cover | ABS | LED | N/A |

1. **Soint2 Hi-Lo**

The same low profile housing containing a multi tone sounder, with separate inputs for exit time and alarm sound.   
  
Features & Options

* SOINT 2/WH/HI-LO 110dB(A)300mA, Tampered

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| **Sounder type** | **Voltage** | **Current** | **Sound output dB(A) at 1m** | **Frequency range** | **Timer** | **Tamper protection** | **Material** | **Visual indication** | **SAB** |
| 16 ohm speaker | 12- 15vdc | 300mA Hi, 33mA | 110 – Hi, 32mA | 1.2 – 1.8 kHz | N/A | Wall/cover | ABS | LED | N/A |

1. **Somach**

An attractive louvre-effect internal sounder whose two-piece housing clips together and is also available as either a speaker SOMACH1 or sounder SOMACH2.   
  
Features & Options

* SOMACH1/WH/16 16 Ohm speaker
* SOMACH1/WH/16/T 16 Ohm speaker,tampered
* SOMACH 1/WH/8 8 Ohm speaker
* SOMACH1/WH/8/T 8 Ohm speaker,tampered
* SOMACH2/WH Electronically driven speaker with hi-warble 110dB(A) sound output

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| **Sounder type** | **Voltage** | **Current** | **Sound output dB(A) at 1m** | **Frequency range** | **Timer** | **Tamper protection** | **Material** | **Visual indication** | **SAB** |
| 8/16 ohm speaker | 6- 15vdc | 240mA | 110 | 0.6 – 1.2 kHz | N/A | Wall/cover | ABS | LED | N/A |

1. **Pyronix Twin Alert Internal Sounder**

The Pyronix Twin Alert has been designed for operation in all indoor environments.

The Twin Alert provides a remote speaker function with locally adjustable volume. This is in addition to a 100dB(A) siren that overrides the speaker function during an alarm condition.

The alarm trigger can be pre-set to accept all common trigger modes.

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| **Supply voltage** | **Quiescent current** | **Alarm current** | **Tamper switch** | **Sounder** | **Sounder output** | **Dimensions** | **Casing** | **Operation temp.** | **Storage Tem.** |
| 9- 14.5V (13.5 V nominal) | 30mA | 160mA | Case tamper | Piezo electric element | 100 dBA@ 1m | 90\*90\*45mm | 3mm PVC | -10 to 40 C | -20 to 60 C |

1. **CQR Intra External and Internal Sounder with SAB and Strobe White/Blue**

The Intra has a single LED pre-fitted, the flashing LED options are for use with the Decoy Enclosure.

The INTRA represents all that you need in a fully functional siren - in miniature form. Ideal for use either as an external sounder for use in apartment blocks and multi room offices.

Features & Options

* 115dB piezo sounder
* Large strobe area
* 20 minute cut off
* 3mm polycarbonate
* Conformally coated
* Power on LED
* Cover and wall tamper
* Universal connections - compatible with all Control Panels

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| **Sounder type** | **Operation voltage** | **Sounder current** | **Sound output** | **Strobe flash rate** | **Strobe current** | **Fail safe timer** | **NiCad battery** | **Dimensions** | **Standards** |
| Signal piezo | 12- 15Vdc | 240mA | 115dBA | 80-140 per minute | 120mA | 20 minuts | 6 volt | 112\*175\*50mm | EN 50130-4/BS4757 |

**Co2 sensors**

1. **CO2 Sensor C7232A1016**

Features & Options

* Models available with LCD that provides sensor readings and status information.
* Non-Dispersion-Infrared (NDIR) technology used to measure carbon dioxide gas.
* Gold-plated sensor provides long-term calibration stability.
* C7232 provides voltage or current output based on CO2 levels.
* SPST relay output.
* Used for CO2 based ventilation control (Demand Control Ventilation (DCV)).
* Automatic Background Calibration (ABC) algorithm based on long-term evaluation reduces required typical zero-drift check maintenance.

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| **Carbon Dioxide Range** | **Analog Current Output** | **Relay Output** | **Electrical Connections** | **Voltage** | **Frequency** | **Frequency** | **Operating**  **Temperature Range**  **(G)** | **Timing (response)** | **Sensor Type** | **Accuracy** | **Dimensions (mm)** | **Contact Ratings** |
| 0 to 2000 ppm, adjustable | 0/2 - 10 Vdc or 0/4 - 20 mA selectable, w/ one relay output | One: Normally Open SPST | Six leadwires, 20-gauge, 8 in. long | 24 Vac (±20%) | 60 Hz | 5Z -z | 0 C to 50 C | 2 minutes | Non-dispersive Infrared (NDIR) | 5% full scale | 128 mm high x 80 mm wide x 25 mm deep | 1 A @ 50 Vac/24 Vdc |

1. **CO2 Sensor and Detector**

Features & Options

* CO2 monitor/detector is designed for real time monitoring ambiance carbon monoxide
* LCD display detecting CO2 level, as well as  temperature and relative humidity
* NDIR infrared CO2 module inside with special ABC\_Logic Self Calibration System. It makes the CO2 measurement more accurate and more reliable in use.
* Gentlest shape and convenient installation structure
* Particular LCD display with three color (Green/Yellow/Red) backlights
* Two alarm ways: buzzer alarm and backlight colours switch
* Provide optional 1xrelay output to control a ventilator
* Easy touch button for operation
* Provide four CO2 values to be preset to control the relay.
* Optional RS485 communication interface, 15 KV antistatic protection, individual IP address
* Trusty quality with lower prices

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| **Gas detected** | Carbon Dioxide (CO2) |
| **Sensing element** | Non-Dispersive Infrared Detector (NDIR) |
| **Acuracy@25(77** | ±50ppm + 3% of reading |
| **Stability** | <2% of FS over life of sensor (15 yr typical) |
| **Calibration interval** | ABC Logic Self Calibration - 301 Algorithm |
| **NDIR life** | 15 years |
| **Response Time** | <2 minutes for 90% step change |
| **Signal update** | Every 2 seconds |
| **Warm up time** | 24 hours (first time) 5 minutes (operation) |
| **CO2 measuring range** | 02.000ppm |
| **CO2 Display resolution** | 1ppm |
| **Power supply** | 100-240VAC or 10-24VAC/VDC selectable with the order |
| **Consumption** | 3.5 VV max 2.5 W avg |
| **Temperature sensor** | NTC |
| **Humidity sensor** | HS series capacitive sensor |
| **Temperature measuring range** | 050(32122) |
| **Humidity measuring range** | 099%RH |
| **Operation conditions** | 0-50(32-122! 0-95%RH non condensing |
| **Storage conditions** | 40-70(40-153) |
| **Weight** | 200g |
| **Dimensions** | 130mm(H}\*85mmtW)x36 5mm(D) |
| **Installation** | Desktop and wall mounting(6Smm\*65mm or 2\*4wire box) |

1. **CO2 Monitor/Detector**

Features & Options

* special design for room CO2 indicator and alarm
* Suitable for classrooms, offices and other public places
* Real-time detecting and display CO2 level during 0ppm to 20,000ppm CO2 range
* Also detecting room temperature from 5 to 65C
* Optional real-time humidity from 5% RH to 95% RH
* NDIR CO2 sensor technology of infrared self diffusion, 15 years lifetime
* Self calibration algorithm makes it in using without calibration amending
* Specially provide the altitude calibration
* The three measured CO2 ranges for 3 LED indicator lights setup by end users
* 3 LEDs brightness adjustable
* Optional 1 x dry contact output to control a ventilation device
* Optional 1 x 0 to 10V DC output
* Optional the buzzer alert for CO2 level
* Optional RS485 interface to connect to a PC or another system

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| --- | --- |
| **Gas detected** | Carbon Dioxide (CO2) |
| **Sensing element** | Non-Depressive Infrared Detector (NDIR) |
| **Temperature sensor** | NTC |
| **Temperature correction** | Self compensation |
| **C02 NDIR life** | 15 years |
| **Consumption** | 3.5W/ Max 2.5W/Average |
| **Accuracy@25(77)** | ±40ppm + 3% of reading |
| **Stability** | <2% of FS over life of sensor (15 yr typical) |
| **Calibration interval** | ABC Logic Self Calibration Algorithm |
| **CO2 measuring range** | 02000ppm. which is default value 0(1.000-20.000)ppm. programmable selection |
| **CO2 setting & Display resolution** | 1ppm |
| **Temperature measuring range** | 050(32122) |
| **Temperature setting range** | 545(41113) |
| **Option: 1X dry contact output** | Rated currency for contact point: 3A 220VAC/30VDC. resistance load |
| **Option: RS485 communication interface** | 9600/14400/19200(default)/28800/38400bps rates selectable by program.15KV protection for static, independent address setting |
| **Operation condition** | 050 (32122). 095%RH without condensing |
| **Power supply** | 220VAC/110VAC or 24VAC 50'60H2±10% |
| **Weight** | 330g |
| **Dimensions** | 130mmx90mm\*40mm |
| **Connections Interface** | Locate in interface of connection |
| **Installment standard** | 65mmx65mm or 2x4 wire box |
| **Wiring standard** | Wire section area<1.5mm2 |
| **Approval Standard** | CE -Approval |

1. **PPM-1c / Part Per Million CO2 Monitor**

Features & Options

* The PPM-1c is an extremely accurate Part-Per-Million (PPM) CO2 sensor.
* It can measure CO2 from 0-5000 PPM +/- 100PPM.
* It has an easy to read 4-digit LCD display.
* It has an external power supply and a Quick Disconnect or “QD”, which is connected to a CO2-2, CO2-4 Environmental controller or the CGC-1 Complete Greenhouse Controller.
* Once the PPM-1c is connected to either the CO2-2, CO2-4 or the CGC-1, the controller will receive information from the PPM-1c and use it to control the CO2 levels with extreme precision.
* The PPM-1c works in harmony with the Inject and Sample timers on the CO2-2 , CO2-4 or the CGC-1.
* The PPM-1c also has a visual Status indicator, which verifies

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| **Operating principle** | **Measurement range** | **Warm-up time** | **Maximum drift per year** | **Accuracy @ 77’F** | **Operating voltages** | **Operating temperature range** | **Operating humidity range** |
| Single-beam Non-Dispersive Infrared (NDIR) | 0 – 5000 PPM CO2 | Minimum 20 minutes (full accuracy) | +/- 15 PPM | +/- 50 PPM | 18-24volt @ 250ma | 0-50’ C | 0-99% RH (non-condensing) |

1. **PPM-3 / Part Per Million CO2 Monitor**

Features & Options

* The PPM-3 is not just a CO2 monitoring device… it is a CO2 PPM controller.
* Controls the Carbon Dioxide level in your area with Part Per Million accuracy.
* Simple to use and easy to understand.
* Least expensive CO2 / PPM controller available.
* On-board user selectable set point from 0-5000 PPM.
* On-board calibration program allows the user to easily verify the unit is working properly.
* Controls any 120vac valve or CO2 generator.

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| **Operating principle** | **Measurement range** | **Warm-up time** | **Maximum drift per year** | **Accuracy @ 77’F** | **Operating voltages** | **Operating temperature range** | **Operating humidity range** |
| Single-beam Non-Dispersive Infrared (NDIR) | 0 – 5000 PPM CO2 | Minimum 20 minutes (full accuracy) | +/- 15 PPM | +/- 50 PPM | 18-24volt @ 250ma | 0-50’ C | 0-99% RH (non-condensing) |