



AIR QUALITY/ GAS DETECTION

Veris offers an extensive line of CO, CO₂ and NO₂ sensors. Whether your application requires ventilation of a parking garage or an indoor venue, we have the perfect product for your needs. Comply with OSHA and ASHRAE 62.1 standards for air quality while saving energy by limiting runtime of exhaust fans and HVAC equipment. Ideal for Demand Control Ventilation (DCV) applications.

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AIR QUALITY SELECTION GUIDE

CO₂ SENSORS

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CO SENSORS

FEATURES	Wall Mount	Duct Mount	Remote Mount
Selectable Output 4 to 20 mA/0-5 or 0-10 Vdc	GWN, GWNP pages 95, 97		

NO₂ SENSORS

FEATURES	Wall Mount	Duct Mount	Remote Mount
Selectable Output 4 to 20 mA/0-5 or 0-10 Vdc	GWN, GWNP pages 95, 97		



Simplified CO & NO₂ Gas Monitoring with Communicating, Modular Design



AG01



AG01E



AG02



GWN



AGPE Enclosure
(sold separately)

GWNP Series CO & NO₂ Sensor

Seamless System Integration

Interface to control system via BACnet or Modbus.

Simplified Installation

Modular platform allows for easy in-field sensor replacement.

Status Viewing

Via three colored LEDs – red, yellow, & green.

Removable Terminal Blocks

Add flexibility and freedom to your installation schedule.

Interested in learning more about the innovative GWN & GWNP design?

Contact an Air Quality/Gas Monitoring Specialist today: 800.354.8556 or at sales@veris.com
See Product Specifications on pages 95 & 97



C SERIES

Individual or 3-in-1 CO₂, RH and Temperature



CDL/CWL carbon dioxide (CO₂) sensors maximize energy savings, while helping optimize ventilation. These sensors allow ventilation systems to be controlled by the amount of CO₂ present in a space. The CWL/CDL Series detect fluctuations in CO₂ levels and signal ventilation systems to provide an inlet of fresh air optimal for the space at a given time saving energy and increasing tenant comfort.

SPECIFICATIONS

Input Power	Class 2; 20 to 30 Vdc/24 Vac 50/60 Hz; 100 mA max.
Analog Output	4 to 20 mA (clipped and capped)/0 to 5 Vdc/ 0 to 10 Vdc (selectable)
Operating Temp Range: CDL CWL	0 to 50 °C (32 to 122 °F) No humidity option: 0 to 50 °C (32 to 122 °F); With humidity option: 10 to 35 °C (50 to 95 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High impact ABS plastic
Terminal Block Torque: CDL CWL	0.2 N-m (2.0 in-lbf) max. 0.22 N-m (2.0 in-lbf) max.
Terminal Block Wire Size: CDL CWL	28 to 14 AWG (0.5 to 1.5mm ²) 30 to 18 AWG (0.08 to 0.5mm ²)

CO₂ TRANSMITTER

Sensor Type	Non-dispersive infrared (NDIR), diffusion sampling
Output Range	0 to 2000/5000 ppm (programmable)
Accuracy	±30 ppm ±2% of measured value*
Repeatability	±20 ppm ±1% of measured value
Response Time	<60 seconds for 90% step change

RH TRANSMITTER OPTION

HS Sensor	Fully replaceable, digitally profiled thin-film capacitive (32-bit mathematics) U.S. Patent 5,844,138
Accuracy	±2% from 10 to 80% RH @ 25 °C; NIST traceable multi-point calibration

Microprocessor based

Microprocessor-based design increases accuracy and reduces installation time

Self-calibrating

Innovative self-calibration algorithm...easy to maintain

NDIR

Non-dispersive infrared technology (NDIR) repeatable to ±20 ppm ±1% of measured value...high accuracy measurement

APPLICATIONS

- Controlling ventilation in response to occupancy
- ASHRAE 62.1 air quality standard compliance
- Office buildings, conference rooms, schools, retail stores, etc.

Snap-on faceplate

Snap-on faceplate...no screws required, making installation and service easy

Field-selectable

Field-selectable outputs for operation flexibility

Integrated probe

Integrated transducer and probe...eliminates the need to install a separate pick-up tube

Hysteresis	1.5% typical
Stability	±1% @ 20 °C (68 °F) annually for two years
Output Range	0 to 100% RH
Temperature Coefficient	±0.1% RH/°C above or below 25 °C (typical)

TEMPERATURE TRANSMITTER OPTION

Sensor Type	Solid-state, integrated circuit
Accuracy	±0.5 °C (±1 °F) typical
Resolution	0.1 °C (0.2 °F)
Output Range	10 to 35°C (50 to 95°F)

RELAY CONTACTS

1 Form C (SPDT) (on wall models, relay is only available in units without the setpoint slider option)	1 A@30 Vdc, resistive; 30 W max.
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WARRANTY

Limited Warranty	5 years
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AGENCY APPROVALS



RTD/Thermistors in wall packages are not compensated for internal heating of product. EMC Conformance: Low voltage directive 2014/35/EU and EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements). * Measured at NTP.

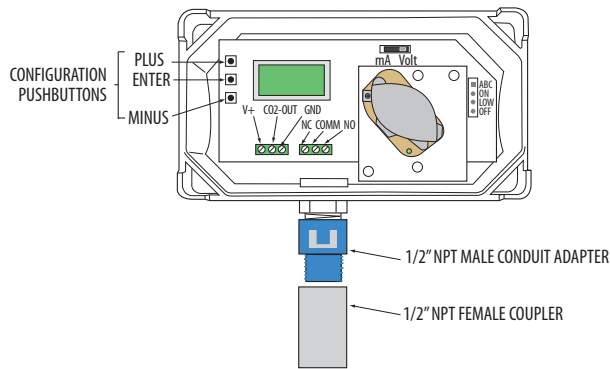
**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

Note: Rough handling and transportation may cause a temporary reduction of CO₂ sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.



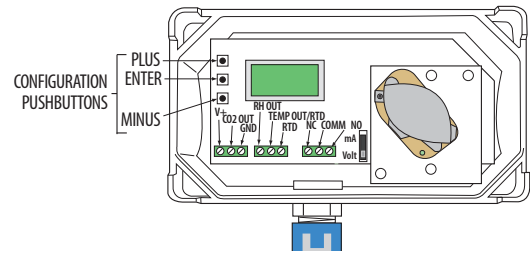
CDL (CO₂ ONLY)

Wiring Diagram



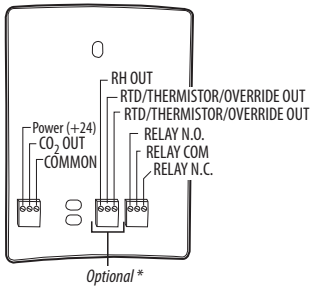
CDL (TEMP AND/OR RH OPTIONS)

Wiring Diagram



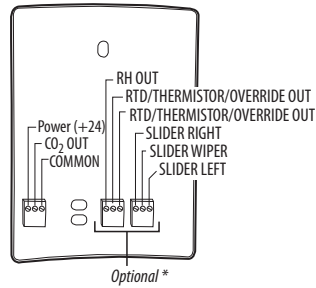
CWL

CO₂, RH, Thermistor, Pushbutton Override, and Relay Options



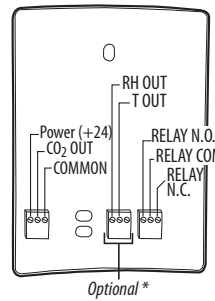
CWL

CO₂, RH, Thermistor, Pushbutton Override, and Setpoint Slider Options



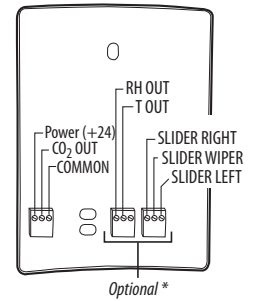
CWL

CO₂, RH, Temperature Transmitter Options, and Relay Options



CWL

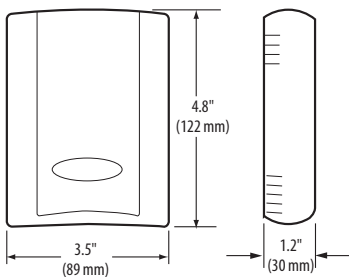
CO₂, RH, Temperature Transmitter, and Setpoint Slider Options



*Connector blocks and headers for optional features are not included with non-option models.

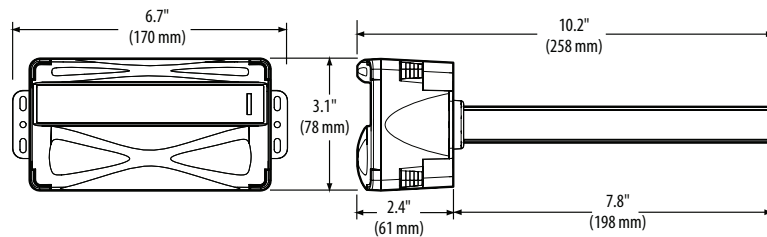
CWL WALL MOUNT

Dimensional Drawing



CDL DUCT MOUNT

Dimensional Drawing



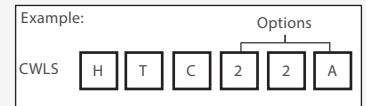
ORDERING INFORMATION

Duct Mount

RH Option	Temp	Sensor Type	Optional Cal Cert
CDLS			
H = RH2% X = No RH	T = Temp X = No Temp (Stop here)	A = Transmitter B = 100R Platinum, RTD C = 1k Platinum, RTD D = 10k T2, Thermistor E = 2.2k, Thermistor F = 3k, Thermistor G = 10k CPC, Thermistor H = 10k T3, Thermistor J = 10k Dale, Thermistor K = 10k w/11k shunt, Thermistor M = 20k NTC, Thermistor N = 1800 ohm, Thermistor R = 10k US, Thermistor S = 10k 3A221, Thermistor T = 100k, Thermistor U = 20k "D", Thermistor W = 10k T2 high accuracy, Thermistor Y = 10k T3 high accuracy, Thermistor	Blank = None 1 = 1 pt Temp Cert** 2 = 2 pt Temp Cert**

Wall Mount

RH Option	Temp.	Sensor Type	Temp Cal Cert	Option	Setpoint Slider Value	Housing
CWLS						
H = RH 2% X = No RH	T = Temp X = No (stop here)	A = Transmitter B = 100R Platinum, RTD C = 1k Platinum, RTD D = 10k T2, Thermistor E = 2.2k, Thermistor F = 3k, Thermistor G = 10k CPC, Thermistor H = 10k T3, Thermistor J = 10k Dale, Thermistor K = 10k w/11k shunt, Thermistor M = 20k NTC, Thermistor N = 1800 ohm, Thermistor R = 10k US, Thermistor S = 10k 3A221, Thermistor T = 100k, Thermistor U = 20k "D", Thermistor W = 10k T2 high accuracy, Thermistor Y = 10k T3 high accuracy, Thermistor	X = No 1 = 1pt Temp Cert** 2 = 2pt Temp Cert**	1 = Push Button Override* 2 = Set Point Slider 3 = Push Button Override*+Set Point Slider	A = 1k F = 10k G = 20k K = 50k M = 100k	Blank = Cloud white B = Black



*The Push Button Override feature is not available with temperature transmitter models. Only resistive temperature models qualify for this feature.
**Not available with W and Y high accuracy thermistors.



CW PROTOCOL SERIES

Individual or 3-in-1 with Modbus or BACnet Protocol



CW Protocol Series is a non-dispersive infrared (NDIR) sensor designed for measuring CO₂ concentration in ventilation systems and indoor living spaces. Its measurement range of 0 to 5000 ppm makes it the premier solution for meeting ASHRAE and other ventilation efficiency standards.

CW Protocol devices feature embedded BACnet and Modbus communication protocols, as well as optional temperature and humidity sensors. An adjustable setpoint relay is provided for direct control and alarm applications, and the optional setpoint slider and pushbutton override offer additional local input.

SPECIFICATIONS

Input Power	Class 2; 12 to 30 Vdc, 24 Vac 50/60 Hz; 100 mA max.
Operating Temp Range	No humidity option: 0 to 50 °C (32 to 122 °F); With humidity option: 10 to 35 °C (50 to 95 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High impact ABS plastic, UL 94 V0
Terminal Block Torque	0.22 N-m (2.0 in-lbf) max.
Terminal Block Wire Size	30 to 18 AWG (0.08-0.5mm ²)
Protocol	BACnet or Modbus (selectable)
Connection	2-wire RS-485
Data Rate	9600, 19200, 38400, 57600 (Modbus), bps (selectable); 9600, 19200, 38400, 76800 (BACnet), bps (selectable)
Parity	None/Odd/Even (selectable-Modbus); None (BACnet)
Address Range	1 to 127
Setpoint Slider Resolution Option	1% full scale
Override Button Option	Remotely readable and resettable

Communicating

Embedded BACnet and Modbus communication protocols...easy systems integration

Feature override

Local feature override capability from the building control system...added control and flexibility

Configurable baud rates

Configurable to multiple baud rates...transfer data at the right speed for the system

Self-calibrating

Innovative self-calibration algorithm...maximizes performance. Field calibratable...minimizes downtime.

CO₂, RH, temp

CO₂, humidity, and temperature sensors in one device at one address...provides more information and maximizes system capacity

NIST or standard

Available with 2% NIST or 2% standard RH

APPLICATIONS

- Controlling ventilation in response to occupancy
- Office buildings, conference rooms, schools, retail stores, etc.

CO₂ TRANSMITTER

Sensor Type	Non-dispersive infrared (NDIR) diffusion sampling
Measurement Range	0 to 5000 ppm
Accuracy*	±30 ppm ±2% of measured value
Repeatability	±20 ppm ±1% of measured value

RH TRANSMITTER OPTION

HS Sensor	Replaceable digitally profiled thin-film capacitive ; (32-bit mathematics); U.S. Patent 5,844,138
Accuracy**	±1% from 12 to 60% RH; ±2% from 10 to 80% RH; NIST traceable multi-point calibration
Reset Rate***	24 hours
Stability	±1% @ 20 °C (68 °F) annually for two years
Hysteresis	1.5% typical
Temperature Coefficient	±0.1% RH/°C above/below 25 °C (typical)

TEMPERATURE TRANSMITTER OPTION

Sensor Type	Solid-state, integrated circuit
Accuracy	±0.5 °C (±1 °F) typical



SPECIFICATIONS, CONT.

Resolution	0.1 °C (0.2 °F)
Range	10 to 35 °C (50 to 95 °F)

RELAY CONTACTS

1 Form C (SPDT)	1 A@30 Vdc, resistive; 30 W max.
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WARRANTY

Limited Warranty	5 years
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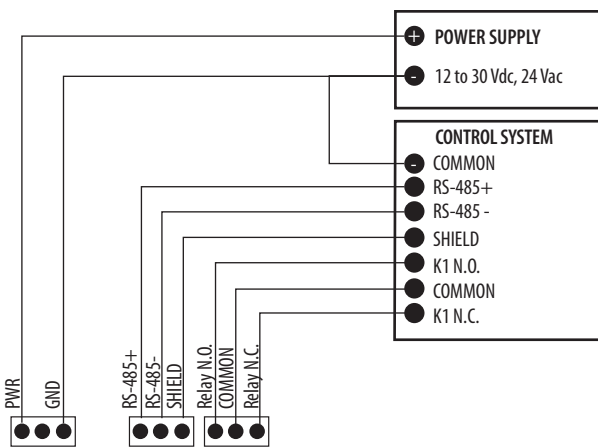
AGENCY APPROVALS



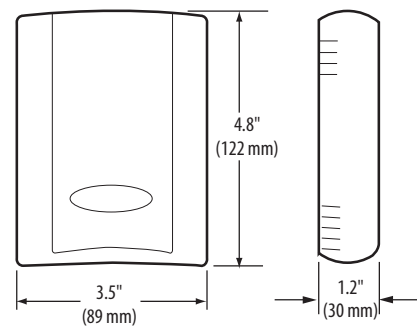
EMC Conformance: Low voltage directive 2014/35/EU and EMC directive 2014/30/EU.
 EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1:2007 specification requirements)

* Measured at NTP
 ** Specified accuracy with 24 Vdc supplied power with rising humidity.
 *** Reset rate is the time required to recover to 50% RH after exposure to 90% RH for 24 hours.
 † The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.
 Note: Rough handling and transportation may cause a temporary reduction of CO₂ sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.

WIRING DIAGRAM



DIMENSIONAL DRAWING



ORDERING INFORMATION

Local Display	Protocol	RH Option	Temp. Option	Temp Cal. Cert.	Option	Housing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L = LCD X = No Display	P = Protocol	X = No RH 2 = RH 2% NIST H = RH 2%	X = No Temp T = Temp Transmitter	X = None 1 = 1 pt. cal. cert.* 2 = 2 pt. cal. cert.*	Blank = None 1 = Pushbutton override 2 = Set point slider 3 = Pushbutton override + setpoint slider	Blank = Cloud white B = Black

Example: CW [L] [P] [H] [T] [X] [3]

*Only available if temperature option is selected.



CDE & CWE SERIES

Field-selectable 4 to 20 mA / 0 to 10 Vdc Output



The CDE and CWE are non-dispersive infrared (NDIR) sensors designed for measuring environmental CO₂ concentration in ventilation systems and indoor living spaces. Their measurement range of 0 to 2000 ppm makes them compliant with ASHRAE and other standards for ventilation control

The CWE/CDE Series provides a user-selectable 4 to 20 mA or 0 to 10 Vdc output for versatility. Microprocessor-based digital electronics and a unique self-calibration algorithm improves long-term stability and accuracy.

SPECIFICATIONS

Input Power	Class 2; 20 to 30 Vdc/24 AC 50/60 Hz; 100 mA max.
Analog Output	4 to 20 mA (clipped & capped)/0 to 10 Vdc (selectable)
Operating Temp. Range	0 to 50 °C (32 to 122 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High impact ABS plastic
Terminal Block Torque:	
CDE	0.5 to 0.6 N-m (4.4 to 5.3 in-lbf) max.
CWE	0.2 N-m (2.0 in-lbf) max.
Terminal Block Wire Size:	
CDE	24 to 12 AWG (0.25 to 2.5mm ²)
CWE	28 to 20 AWG (0.08 to 0.5mm ²)
Sensor Type	Non-dispersive infrared, diffusion sampling
Output Range	0 to 2000 ppm
Accuracy	±30 ppm ±2% of measured value*

Microprocessor based

Microprocessor-based design increases accuracy and reduces installation time

4 to 20 mA/ 0 to 10 Vdc

4 to 20 mA/0 to 10 Vdc output for flexible control system interface

NDIR

Non-dispersive infrared technology (NDIR) repeatable to ±20 ppm ±1% of measured value... high accuracy measurements

Self-calibrating

Innovative self-calibration algorithm...easy to maintain. 5-year calibration interval (recommended)

Sensitivity

Low ambient sensitivity

APPLICATIONS

- Controlling ventilation in response to occupancy
- Facilitating compliance with ASHRAE 62.1 standard for air quality
- Office buildings, conference rooms, schools, retail stores, etc.

Repeatability	±20 ppm ±1% of measured value
Response Time	<60 seconds for 90% step change

WARRANTY

Limited Warranty	3 years
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AGENCY APPROVALS



RTD/Thermistors in wall housings are not compensated for internal heating of product. EMC Conformance: Low voltage directive 2014/35/EU and EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements). * Measured at NTP

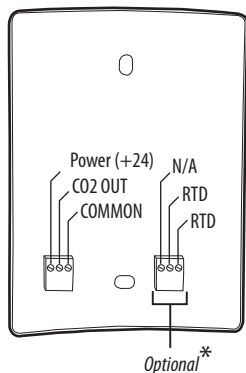
**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

Note: Rough handling and transportation may cause a temporary reduction of CO₂ sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.



CWE WALL MOUNT

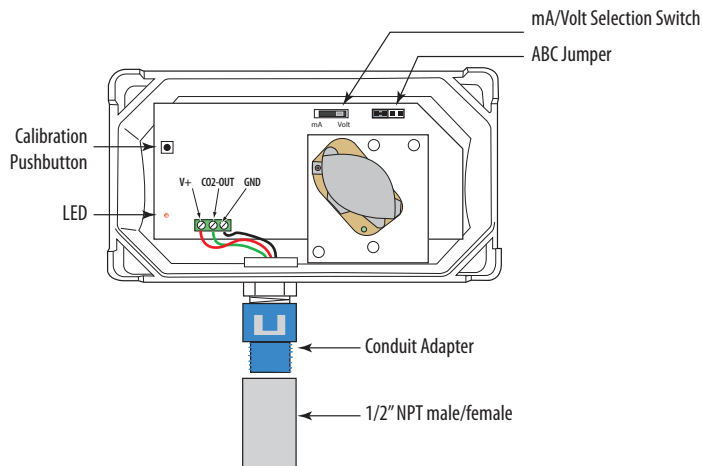
Wiring Diagram



* Note: Connector blocks and headers for optional features are not included with non-option models.

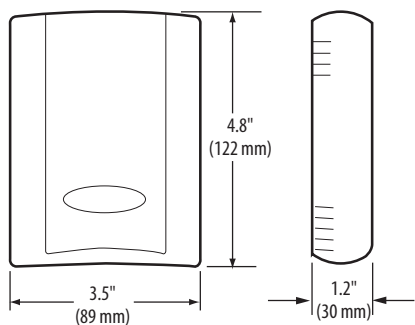
CDE DUCT MOUNT

Wiring Diagram



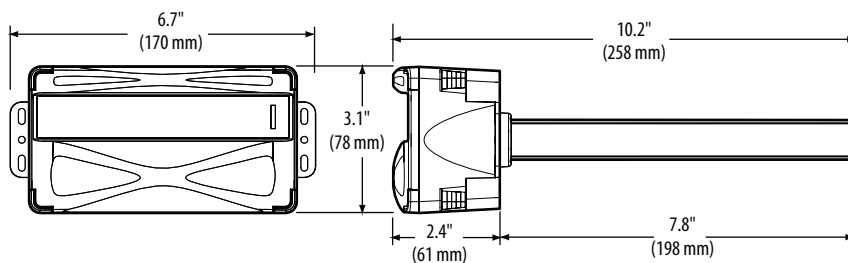
CWE WALL MOUNT

Dimensional Drawing



CDE DUCT MOUNT

Dimensional Drawing



ORDERING INFORMATION

Duct Mount	Wall Mount, Temp. Option	Wall Mount, No Temp. Option
CDE (No Options)	<p>Sensor Type</p> <p>CWE</p> <ul style="list-style-type: none"> SB= 100R Platinum, RTD SC= 1k Platinum, RTD SD= 10k T2, RTD, Thermistor SE= 2.2k, Thermistor SF= 3k, Thermistor SG= 10k CPC, Thermistor SH= 10k T3, Thermistor SJ= 10k Dale, Thermistor SK= 10k with 11k shunt, Thermistor SM= 20k NTC, Thermistor SN= 1800 ohm, Thermistor SR= 10k US, Thermistor SS= 10k 3A221, Thermistor ST= 100k, Thermistor SU= 20k "D" Thermistor SW= 10k T2 high accuracy, Thermistor SY= 10k T3 high accuracy, Thermistor <p>Housing</p> <p>Blank = Cloud white B = Black</p> <p>Example: CWE SH B</p>	<p>Housing</p> <p>CWE</p> <p>Blank = Cloud white B = Black</p> <p>Example: CWE B</p>

CRLSXX

Suitable for Outside Air Measurement Applications



CRL



The CRLSXX remote mount carbon dioxide sensor is designed for use in HVAC control applications. Inside buildings, people are the major source of CO₂. By controlling fresh air based on CO₂ levels, energy can be saved and tenant comfort improved.

The remote capability of the CRLSXX provides flexibility for unique applications.

SPECIFICATIONS

Input Power	Class 2; 20 to 30 Vdc/24 Vac 50/60 Hz; 100 mA maximum
Analog Output	4 to 20mA (clipped & capped)/0 to 5 Vdc/0 to 10 Vdc (selectable)
Operating Temp Range*	0 to 50 °C (32 to 122 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High impact ABS plastic
Terminal Block Torque	0.5 to 0.6 N-m (4.4 to 5.3 in-lbf) max.
Terminal Block Wire Size	24 to 12 AWG (0.25 to 2.5mm ²)

CO₂ TRANSMITTER

Sensor Type	Non-dispersive infrared (NDIR), diffusion sampling
Output Range	0 to 2000/5000 ppm (programmable)
Accuracy**	±30 ppm ±2% of measured value

NDIR

Non-dispersive infrared technology (NDIR) repeatable to ±20 ppm ±1% of measured value...high accuracy

Sensitivity

Low ambient sensitivity

Microprocessor based

Microprocessor-based design reduces long-term drift and calibration requirements

APPLICATIONS

- Controlling HVAC in response to occupancy
- Improving tenant comfort
- Facilitating compliance with ASHRAE 62.1 standard for air quality
- Direct measuring of outside air or sample from other remote area

Self-calibrating

Innovative self-calibration algorithm...easy to maintain. 5-year calibration interval (recommended)

LCD

LCD display for visibility

Field-selectable

Field-selectable 4 to 20 mA/0 to 5 V/0 to 10 V output for system flexibility

Repeatability	±20 ppm ±1% of measured value
Response Time***	<60 seconds for 90% step change

WARRANTY

Limited Warranty	5 years
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AGENCY APPROVALS



EMC Conformance: Low voltage directive 2014/35/EU and EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).

*When directly measuring outside air, ensure the temperature of the air as it reaches the sensor is between 0 and 50 °C.

**Measured at NTP

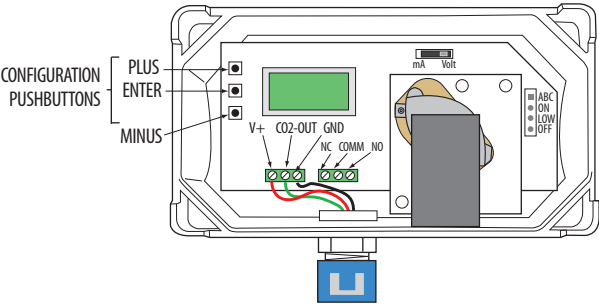
***Response time when used with 3ft long sampling tube, Veris part number AA50.

Note: Rough handling and transportation may cause a temporary reduction of CO₂ sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.

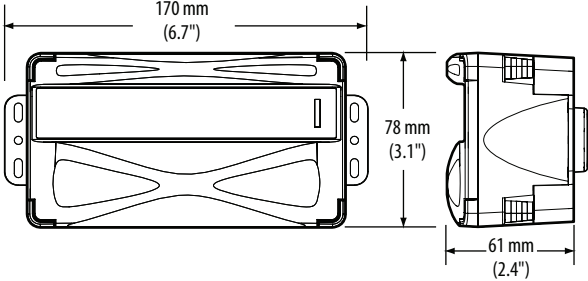
†The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.



WIRING DIAGRAM



DIMENSIONAL DRAWING

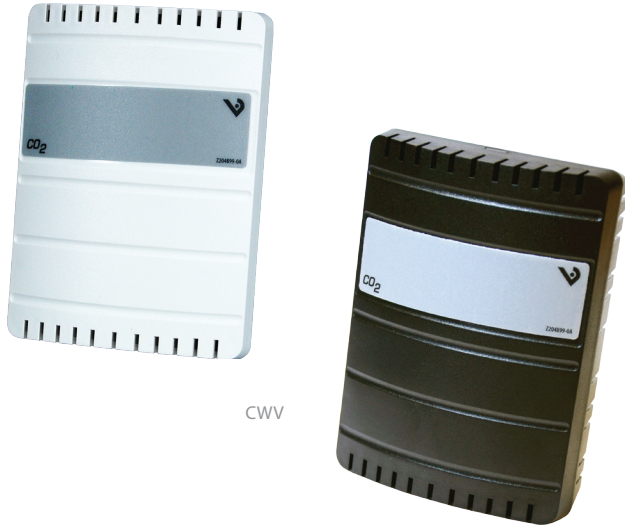


ORDERING INFORMATION

MODEL	DESCRIPTION
CRLSXX	Remote mount CO ₂ sensor.

CWV SERIES

Dual Analog Outputs, Switchable 0 to 3/5/10 Vdc,
4 to 20 mA Output



CWV

The CWV Series is a non-dispersive infrared sensor designed for measuring CO₂ concentration in office and living spaces. Its 2000 ppm measurement range makes it an ideal solution for meeting ASHRAE and other ventilation control standards.

The CWV Series features multiple output options, microprocessor-based digital technology, and a unique self-calibration algorithm which improves long-term stability and accuracy.

SPECIFICATIONS

Input Voltage	Class 2; 20 to 30 Vdc, 24 Vac 50/60 Hz
Analog Output #1	4 to 20 mA (clipped & capped) or 0 to 3 Vdc/ 0 to 5 Vdc/0 to 10 Vdc (jumper selectable)
Analog Output #2	4 to 20 mA (clipped & capped) or 0 to 3 Vdc/ 0 to 5 Vdc/0 to 10 Vdc (jumper selectable)
Sensor Current Draw	200 mA Maximum
Operating Humidity Range	0 to 95% RH non-condensing
Operating Temp Range	0 to 50 °C (32 to 122 °F)
Housing Material	High impact ABS plastic
Terminal Block Torque	0.4 to 0.5 N-m (3.6 to 4.4 in-lbf) max.
Terminal Block Wire Size	24 to 14 AWG (02 to 2.5 mm ²)
Relay Contacts	1 A@30 Vdc, resistive; 30 W max.

CO₂ TRANSMITTER

Sensor Type	Non-dispersive infrared (NDIR), diffusion sampling
Measurement Range	0 to 2000 ppm
Accuracy	±40 ppm ±5.5% of measured value
Repeatability	±30 ppm ±4.5% of measured value
Response Time	<60 seconds for 90% step change

Microprocessor based

Microprocessor-based design reduces long-term drift and calibration requirements

NDIR

Non-dispersive infrared technology (NDIR) repeatable to ±30 ppm ±4.5% of measured value...high accuracy

Self-calibrating

Innovative self-calibration algorithm...easy to maintain. 5-year calibration interval (recommended).

Sensitivity

Low ambient sensitivity

ASHRAE 62.1

Improve comfort and facilitate compliance with ASHRAE 62.1 standard for air quality

DCV

Demand control ventilation (DCV) provides reduction in energy costs...helps with green branding initiatives

APPLICATIONS

- Controlling HVAC in response to occupancy
- Improving tenant comfort
- Schools, museums, airports, commercial buildings, etc.
- OEM applications
- Home automation
- Big-box retail

WARRANTY

Limited Warranty 1 year

AGENCY APPROVALS



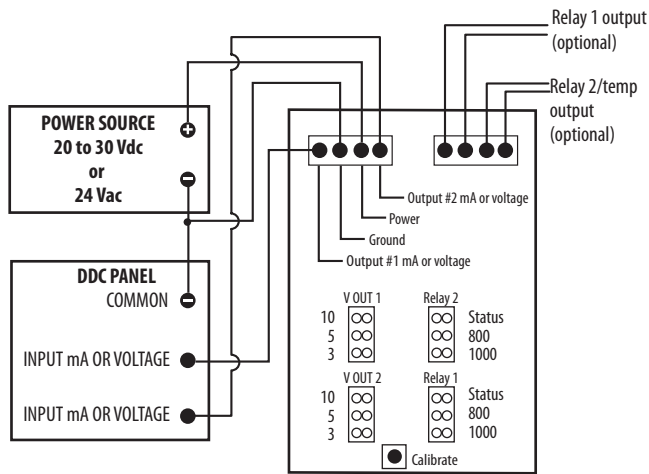
*The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

EMC Conformance: Low voltage directive 2014/35/EU & EMC directive 2014/30/EU.

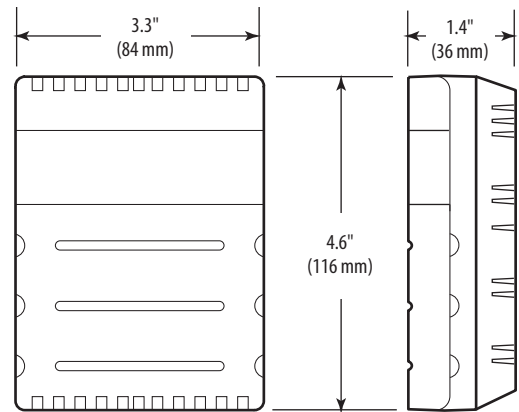
EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).



WIRING DIAGRAM



DIMENSIONAL DRAWING



ORDERING INFORMATION

Outputs	Relay Option	Thermistor/2nd Relay option	Warranty	Housing
CWVS <input type="checkbox"/> 1 = 0-3/5/10VDC and 4-20mA 2 = Dual 4-20mA 3 = Dual 0-3/5/10VDC	<input type="checkbox"/> X = None 1 = Relay	<input type="checkbox"/> X = No option B = 100R Platinum C = 1k Platinum D = 10k T2 E = 2.2k F = 3k H = 10k T3 J = 10k Dale K = 10k w/11k with shunt M = 20k NTC N = 1800 ohm P = 10m V/C R = 10k US S = 10k 3A 221 U = 20k "D", Thermistor W = 10k T2 high accuracy, Thermistor Y = 10k T3 high accuracy, Thermistor 1 = Relay	<input type="checkbox"/> 1 = 1 Year 3 = 3 Years 5 = 5 Years	<input type="checkbox"/> Blank = White/gray B = Black

Example: CWVS 1 1 1 5

GWN

Modular Gas Sensor Platform Accepts AG Series Gas Sensors



GWN

AGAE Enclosure
(sold separately)

GWN Series platform offers a convenient means for sensing gases in the environment. The GWN is mounted to any single-gang electrical box and wired to the building controller. Then, a single AGxx gas sensor (sold separately) is installed in the GWN. With this design, there is no need for a costly new installation when a sensor reaches the end of its life. The GWN platform remains installed, and the installer simply opens the GWN housing to replace the modular sensor inside, reducing labor costs and downtime.

AG Series sensors can be swapped in the GWN platform at any time with minimal effort. The GWN platform converts the signal from the AG sensor into an analog or relay signal compatible with building control systems.

The available AGAE metal enclosure (sold separately) provides a modular solution for applications that require a rugged enclosure along with an integral audible horn and 10 A relay for direct fan control.

SPECIFICATIONS

Input Power	15 to 30 Vdc/24 Vac \pm 20%, Class 2, 50/60Hz, max. 60 mA
Relay Ratings	1A/30 Vac/dc, normally open
Operating Temperature Range	-20 to 50 °C (-4 to 122 °F)
Operating Humidity Range	0 to 90% RH non-condensing
Terminal Block Wire Size	30 to 12 AWG
Terminal Block Torque	0.5 to 0.6 N-m (0.37 to 0.44 in-lbf)
Protection Class (self-evaluated)	IP20

WARRANTY

Limited Warranty	5 years*
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COMPLIANCE INFORMATION

Agency Approvals	Intertek ETL Listed to UL 61010-1
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Modular design

Modular platform accepts Veris AG Series sensors (sold separately)...no need to install a new GWNP when the sensor life wears out

LEDs

Three colored LEDs - red, yellow and green - for easy status viewing

Microprocessor based

Microprocessor controlled... excellent stability operation

APPLICATIONS

- Parking garage ventilation
- Air quality compliance
- Vehicle bays (ambulance/fire/taxi)
- Mechanical rooms
- Sally ports

Wide options

Interface to control system via 4 to 20 mA with relay, 0 to 5 / 0 to 10 Vdc with relay, or relay only options...application flexibility

No calibration

No calibration required...easy maintenance and worry-free

Versatile interface

Interface to DDC systems or direct fan control

The GWN operates only when an AG Series gas sensor is installed (sold separately). Accuracy, sensitivity, setpoints, and measurement range are dependant on the AG Series sensor connected to the GWN platform. See the AG Series sensor installation guide for details.

* The AG Series gas sensors are warranted for two years from the date of manufacture. The AG Series sensors are not included in the five-year GWN warranty.

**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.





AG01 CO Sensor



AG01E CO Sensor



AG02 NO₂ Sensor

SENSOR TYPE	Electrochemical	Electrochemical	Electrochemical
MEASUREMENT RANGE	0 to 300 ppm	0 to 500 ppm	0 to 15 ppm
ACCURACY	±3% of range	±5% of range	±5% of range at 25 °C
ANALOG OUTPUT SCALING	0 to 200 ppm	0 to 200 ppm	0 to 15 ppm
RESOLUTION	1 ppm	1 ppm	0.1 ppm
SENSOR WARRANTY	2 years from manufacture date	1 year from manufacture date	2 years from manufacture date
LOW SETPOINT VALUE	25 or 35 ppm (switch selectable)	25 or 35 ppm (switch selectable)	1 ppm (fixed)
HIGH SETPOINT VALUE	180 ppm (fixed)	180 ppm (fixed)	3 ppm (fixed)
OPERATING TEMPERATURE RANGE	-20 to 50 °C (-4 to 122 °F)	-20 to 50 °C (-4 to 122 °F)	-20 to 50 °C (-4 to 122 °F)
OPERATING HUMIDITY RANGE	0 to 90% RH non-condensing	0 to 90% RH non-condensing	0 to 90% RH non-condensing

ORDERING INFORMATION - PLATFORM

Output: GWN* □ X X

Housing Color: □

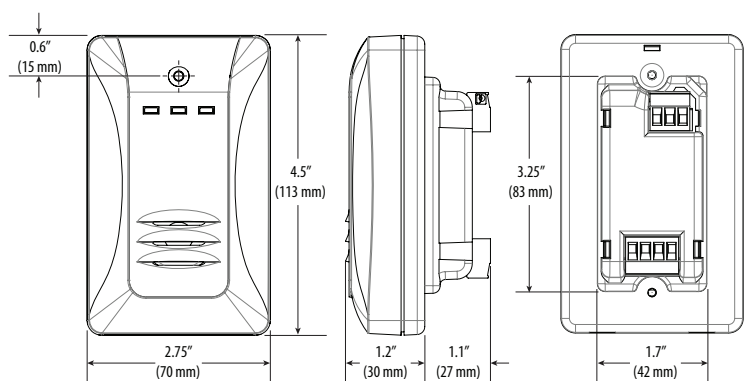
V = Field-selectable, 0-5/0-10 Vdc with relay
 M = 4 to 20 mA with relay
 1 = Relay only

Blank = Black
 W = White

Example: GWN M X X W

*The GWN will not operate without an AG Series sensor installed. Sensors are sold separately.

DIMENSIONAL DRAWING



ORDERING INFORMATION – REQUIRED SENSORS

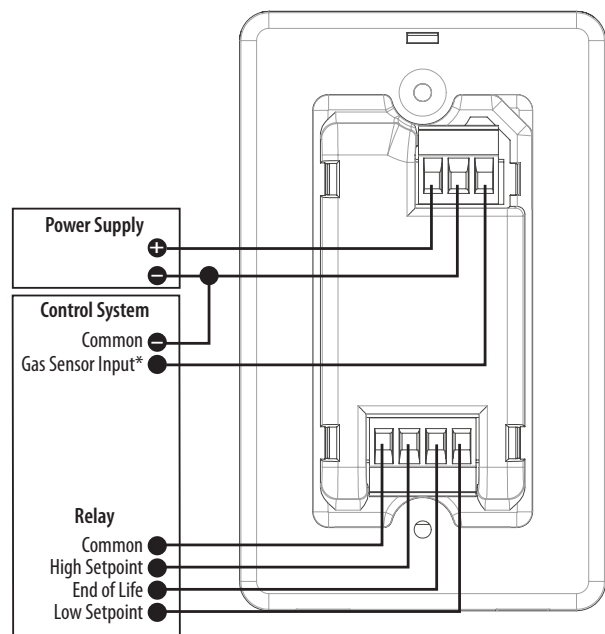
MODEL	DESCRIPTION
AG01	CO sensor, 3% accuracy. CO sources include exhaust from gasoline engines, gasoline powered furnaces, gasoline powered water heaters, gasoline generators.
AG01E	CO sensor, 5% accuracy. CO sources include exhaust from gasoline engines, furnaces, water heaters, generators
AG02	NO ₂ sensor. NO ₂ sources include exhaust from diesel engines and diesel powered generators

Note: See Specifications section for AG sensor warranty details.

ORDERING INFORMATION – ACCESSORY ENCLOSURE

MODEL	DESCRIPTION
AGAE	Metal wall mount enclosure for the GWN gas platform with audible horn and 10 A relay

WIRING DIAGRAM



* Not available on relay only models.



GWNP

Modular Gas Sensor Platform Accepts AG Series Gas Sensors



GWNP



AGPE Enclosure
(sold separately)

GWNP Series protocol communications platform offers a convenient means for sensing gases in the environment. The GWNP is mounted to any single-gang electrical box and wired to the building controller. Then, a single AGxx gas sensor (sold separately) is installed in the GWNP. With this design, there is no need for a costly new installation when a sensor reaches the end of its life. The GWNP platform remains installed, and the installer simply opens the GWNP housing to replace the modular sensor inside, reducing labor costs and downtime.

AG Series sensors can be swapped in the GWNP platform at any time with minimal effort. The GWNP platform converts the signal from the AG sensor into protocol communications compatible with building control systems.

The available AGPE metal enclosure (sold separately) provides a modular solution for applications that require a rugged enclosure along with an integral audible horn and 10 A relay for direct fan control.

SPECIFICATIONS

Input Power	15 to 30 Vdc/24 Vac ±20%, Class 2, 50/60Hz, max. 60 mA
Relay Ratings	1A/30 Vac/dc, normally open
Operating Temperature Range	-20 to 50 °C (-4 to 122 °F)
Operating Humidity Range	0 to 90% RH non-condensing
Terminal Block Wire Size	30 to 12 AWG
Protocol	BACnet and Modbus (selectable)
Terminal Block Torque	0.5 to 0.6 N-m (0.37 to 0.44 in-lbf)
Protection Class (self-evaluated)	IP20

WARRANTY

Limited Warranty	5 years*
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COMPLIANCE INFORMATION

Agency Approvals	Intertek ETL Listed to UL 61010-1
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Communication

Interface to control system via BACnet and Modbus protocols. BTL certified.

Microprocessor based

Microprocessor controlled for excellent stability

Modular platform

Modular platform accepts Veris AG Series sensors (sold separately)... no need to install a new GWNP when the sensor life wears out

No calibration

No calibration required...easy maintenance and worry-free operation

LEDs

Three colored LEDs - red, yellow and green - for easy status viewing

Versatile interface

Interface to DDC systems or direct fan control

APPLICATIONS

- Parking garage ventilation
- Air quality compliance
- Vehicle bays (ambulance/fire/taxi)
- Mechanical rooms
- Sally ports

The GWNP operates only when an AG Series gas sensor is installed (sold separately). Accuracy, sensitivity, setpoints, and measurement range are dependant on the AG Series sensor connected to the GWNP platform. See the AG Series sensor installation guide for details.

* The AG Series gas sensors are warranted for two years from the date of manufacture. The AG Series sensors are not included in the five-year GWNP warranty.

**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.





AG01 CO Sensor



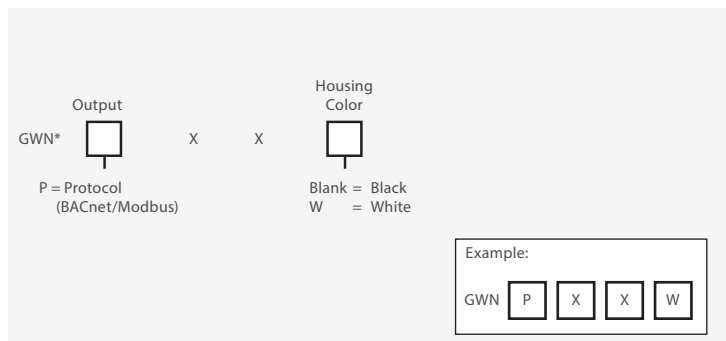
AG01E CO Sensor



AG02 NO₂ Sensor

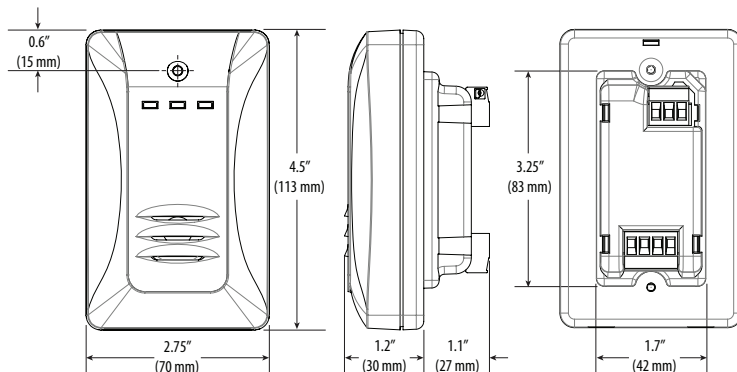
SENSOR TYPE	Electrochemical	Electrochemical	Electrochemical
MEASUREMENT RANGE	0 to 300 ppm	0 to 500 ppm	0 to 15 ppm
ACCURACY	±3% of range	±5% of range	±5% of range at 25 °C
ANALOG OUTPUT SCALING	0 to 200 ppm	0 to 200 ppm	0 to 15 ppm
RESOLUTION	1 ppm	1 ppm	0.1 ppm
SENSOR WARRANTY	2 years from manufacture date	1 year from manufacture date	2 years from manufacture date
LOW SETPOINT VALUE	25 or 35 ppm (switch selectable)	25 or 35 ppm (switch selectable)	1 ppm (fixed)
HIGH SETPOINT VALUE	180 ppm (fixed)	180 ppm (fixed)	3 ppm (fixed)
OPERATING TEMPERATURE RANGE	-20 to 50 °C (-4 to 122 °F)	-20 to 50 °C (-4 to 122 °F)	-20 to 50 °C (-4 to 122 °F)
OPERATING HUMIDITY RANGE	0 to 90% RH non-condensing	0 to 90% RH non-condensing	0 to 90% RH non-condensing

ORDERING INFORMATION - PLATFORM



*The GWNP will not operate without an AG Series sensor installed. Sensors are sold separately.

DIMENSIONAL DRAWING



ORDERING INFORMATION – REQUIRED SENSORS

MODEL	DESCRIPTION
AG01	CO sensor, 3% accuracy. CO sources include exhaust from gasoline engines, gasoline powered furnaces, gasoline powered water heaters, gasoline generators.
AG01E	CO sensor, 5% accuracy. CO sources include exhaust from gasoline engines, furnaces, water heaters, generators
AG02	NO ₂ sensor. NO ₂ sources include exhaust from diesel engines and diesel powered generators

Note: See Specifications section for AG sensor warranty details.

ORDERING INFORMATION – ACCESSORY ENCLOSURE

MODEL	DESCRIPTION
AGPE	Metal wall mount enclosure for the GWNP gas platform with audible horn and 10 A relay

WIRING DIAGRAM

