BRASCH
ENVIRONMENTAL TECHNOLOGIES

Submittal Form

GDCP-Touch

Gas Detector Control Panel and Remote Sensors

Limitless Possibilities

- Fully Configurable Zones, Relays, Setpoints, Delays, and Outputs
- Scalable System Size via Relay Expansion Packs

Increased Control

- On-Demand Ventilation Control by Gas Concentration, Timer Schedule, or User Input
- 7” Full-Color LCD Touch Screen

Maximum Detection

- Monitors up to 128 CO and/or NO_2 Sensors

Enhanced Durability

- NEMA 4X Water and Dust Resistance

Intelligent Connectivity

- BACnet IP and Modbus RTU Communication for BMS Interfacing

Simplified Installation

- Customized Factory Programming and Configuration for Every Job

Technical Specifications

GDCP-Touch

Input Power	24 VAC, 50/60 Hz, 1.0 A Optional: 120 VAC, 50/60 Hz, 0.2 A via GDCP-PowerPack
Installation Category	II (local level, over-voltage transients less than 500V)
Storage Temperature	-50°C to 120°C (-58°F to 248°F)
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Humidity	10% to 90% (non-condensing)
Ventilation Control Relays	125 VAC, 50/60 Hz, 5 A resistive, 250 VA inductive
Internal Alarm	70 dB @ 10 cm, 2.9 kHz piezoelectric element
Display	7.0” LCD, 1024 x 600, 5-point capacitive touch
Sensor Capacity	Up to 30 remote sensors Optional: Up to 128 sensors via GDCP-ExpansionPacks
Relay Capacity	4 internal relays Optional: Up to 32 relays via GDCP-ExpansionPacks
Zone Capacity	4 internal zones Optional: Up to 32 zones via GDCP-ExpansionPacks
Outputs	User-selectable 4-20 mA, 0.2-1 VDC, 1-5 VDC, 2-10 VDC, Modbus RTU, BACnet IP
Dimensions	8.15” W x 9.93” H x 2.70” D (21 cm W x 25 cm H x 7 cm D)
Weight	5.0 lbs (2.27 kg)
Housing	Gray, NEMA 4X, fiberglass/polycarbonate
Compliance	Pending

Technical Specifications

GDCP-XX-Remote

Input Power	24 VAC, 50/60 Hz, 0.2 A
Installation Category	II (local level, over-voltage transients less than 500V)
Storage Temperature	-50°C to 120°C (-58°F to 248°F)
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Humidity	10% to 90% (non-condensing)
Ventilation Control Relays	None
Internal Alarm	None
Front Panel Indicators	Power (green LED) Fault (yellow LED)
Display	None
Selectable Fan Settings	None
Alert Levels	None
Delay Times	None
Dimensions	4.8” W x 4.72” H x 2.16” D (12.2 cm W x 12 cm H x 5.5 cm D)
Weight	1 lbs (0.5 kg)
Housing	Gray, NEMA 3R, polycarbonate plastic
Compliance	ANSI/ISA 92.00.01-2010 (R2015) EN 50270 FCC Part 15 Subpart B RoHS

Technical Specifications

GDCP-PowerPack

Input Power	115 VAC, 50/60 Hz
Output Power	20 VAC, 50/60 Hz, 2.8 A
Installation Category	II (local level, over-voltage transients less than 500V)
Storage Temperature	-50°C to 120°C (-58°F to 248°F)
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Humidity	10% to 90% (non-condensing)
Sensor Capacity	Up to 30 sensors
Additional Capacity	GDCP-Touch, GDCP-ExpansionPack
Dimensions	4.8” W x 4.72” H x 3.16” D (12.2 cm W x 12 cm H x 8.0 cm D)
Weight	2.5 lbs (1.1 kg)
Housing	Gray, NEMA 4X, polycarbonate plastic
Compliance	UL 5085-1 UL 5085-2 RoHS

Technical Specifications

GDCP-ExpansionPack

Input Power	24 VAC, 50/60 Hz, 1.0 A
Installation Category	II (local level, over-voltage transients less than 500V)
Storage Temperature	-50°C to 120°C (-58°F to 248°F)
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Humidity	10% to 90% (non-condensing)
Analog Outputs	4-20 mA, 0.2-1 VDC, 1-5 VDC, 2-10 VDC
Digital Outputs	Modbus RTU, BACnet IP
Sensor Capacity	Up to 30 sensors
Relay Capacity	4 Relays
Zone Capacity	Up to 4 Zones
Dimensions	4.8” W x 4.72” H x 2.16” D (12.2 cm W x 12 cm H x 5.5 cm D)
Weight	1.0 lbs (0.5 kg)
Housing	Gray, NEMA 4X, polycarbonate plastic
Compliance	Pending

Target Gas Specifications

Carbon Monoxide

Full Scale Span:	200 PPM				
Resolution:	1 PPM				
Minimum Accuracy*:	± 10% or 6 PPM				
Factory Default Settings	Alert Level	1	2	3	4
	PPM CO	35	75	100	100
	On Delay (minutes)	1	0	0	15
	Off Delay (minutes)	1	1	1	0
Expected Lifespan	10 years				
Recommended Recalibration Time	2 years				

Nitrogen Dioxide

Full Scale Span:	10 PPM				
Resolution:	0.1 PPM				
Minimum Accuracy*:	± 15% or 0.8 PPM				
Factory Default Settings	Alert Level	1	2	3	4
	PPM NO_2	1.0	3.0	5.0	5.0
	On Delay (minutes)	1	0	0	15
	Off Delay (minutes)	1	1	1	0
Expected Lifespan	10 years				
Recommended Recalibration Time	2 years				

*Allowable tolerance for accuracy and repeatability criteria as defined in Annex A, Item 2 of ANSI/ISA 92.00.01-2010 (R2015)

Mounting Location

The ability of the transmitters to sense the target gas and efficiently control the ventilation system depends greatly upon proper selection of the mounting locations. The transmitters monitor the area around them by sampling the air that passes by the sensors. Since the sensors are mounted inside a housing, air must diffuse through the intake vents and pass by the sensors en route to the exhaust vents. Therefore, the transmitters should be positioned where they can sample air that contains a target gas concentration representative of the average value in that area.

When determining the mounting location, give special consideration to the following guidelines.

- Use one sensor per target gas for each area to be covered.
- Always prioritize locations with the highest occupation density.
- Do not locate any remote transmitters farther than 4000 feet from the nearest repeater.
- The types of gases each unit is designed to monitor have densities approximately equal to that of air. For maximum safety, mount the unit at the average breathing height – approximately 5 to 7 feet from the floor.
- Avoid mounting locations that would not be representative of the average gas value in that area. These include but are not limited to locations near doorways, fans, ventilation inlets and outlets, and areas with air velocities in excess of 3.3 ft/s (1 m/s).
- Avoid locations that would allow direct contact with water. Mounting the unit near outside garage doors may allow rain to hit the unit when the door is open.
- Avoid locations that are directly in the outlet air vents of heaters or air conditioners.
- Avoid mounting locations with normal ambient temperatures below -4°F (-20°C) or above 122°F (50°C).
- Do not allow exhaust from engines to flow directly on the unit. Each unit is designed to sense gas concentrations that are 300 to 1000 times less concentrated than the gas levels found in engine exhaust. Also, engine exhaust contains high levels of other components. These components can shorten the useful life of the sensor if they contact the sensor before being diluted by the room air volume.
- Avoid mounting locations where the unit may be hit by passing vehicles. If the unit must be mounted in these locations, provide a shielding cage around the unit for protection.
- Do not restrict the air flow to the unit housing.
- Do not mount the unit in a corner.
- Do not mount the unit near containers of chemicals such as gasoline, kerosene, alcohol, or other cleaning fluids. High level concentrations of these chemicals may be mistaken as the target gas by the sensor and cause false readings. Also, some welding gases may cause false readings.

Typical Wiring Diagrams

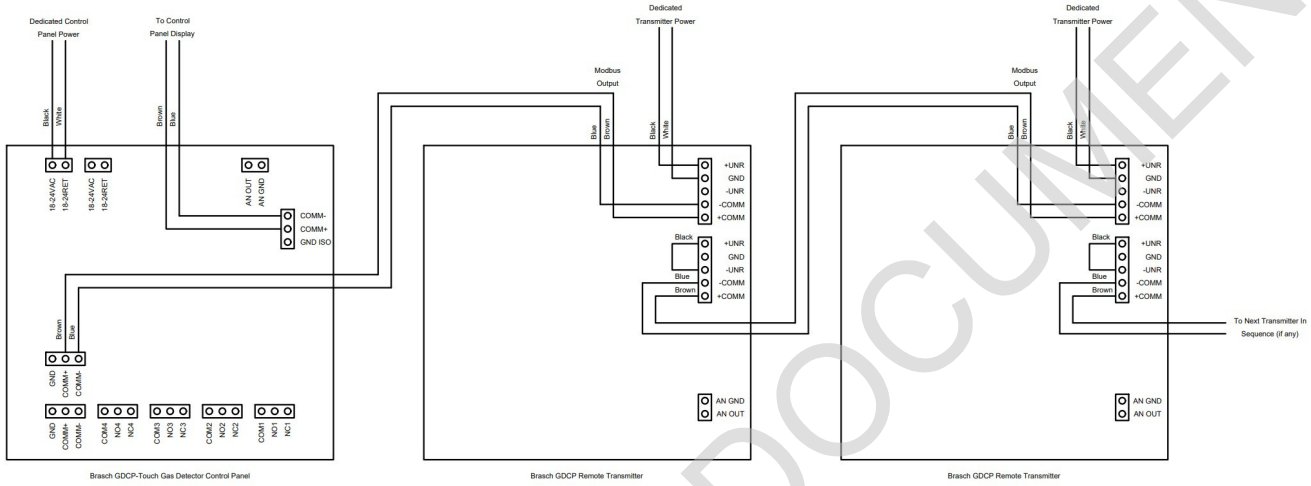

Figure 1: Wiring – Transmitter Connection

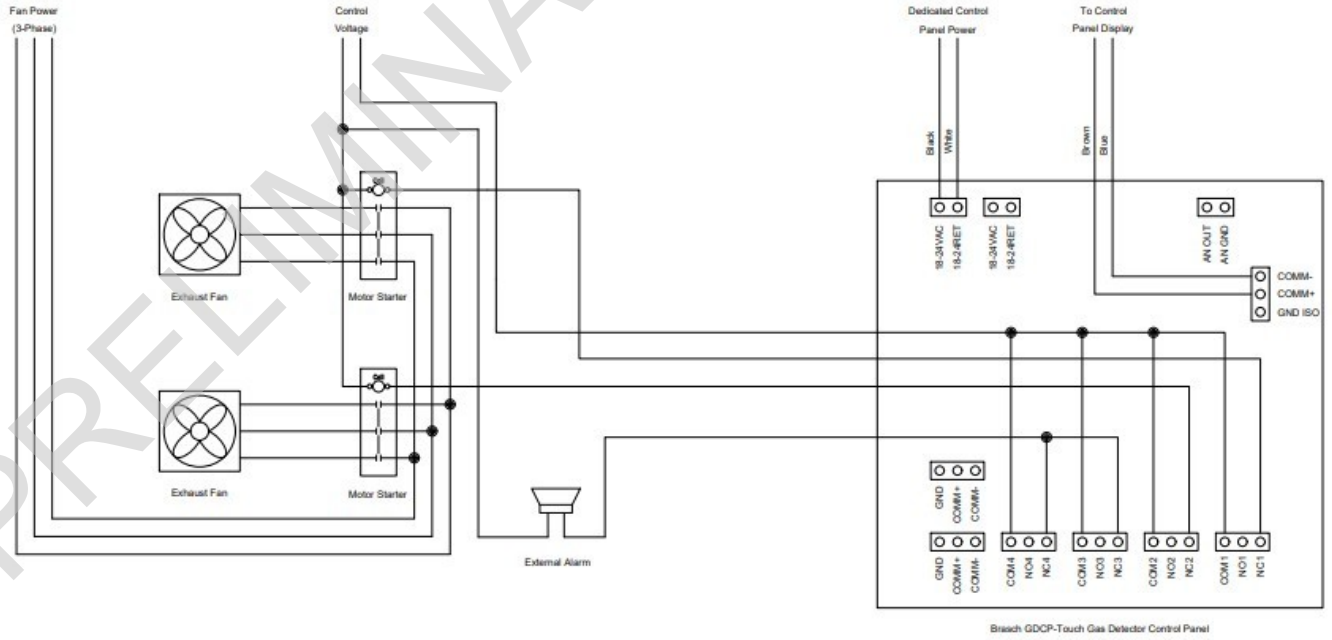

Figure 2: Wiring – Two Fan Ventilation System with Common Alarm