BRASCH
ENVIRONMENTAL TECHNOLOGIES

Submittal Form

GDCP-Touch

Gas Detector Control Panel and Remote Transmitters

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, NO_2, CH_4, C_3H_8, H_2, and/or O_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, 0.75 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	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 60 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	8.72” W x 10.50” H x 2.90” D (22 cm W x 27 cm H x 7 cm D)
Weight	5.0 lbs (2.27 kg)
Housing	Gray, NEMA 4X, polycarbonate plastic
Compliance	ANSI/ISA 92.00.01-2010 (R2015) [CO/NO_2 Only] EN 50270 FCC Part 15 Subpart B RoHS

Technical Specifications

GEN2-XX-Remote

Input Power	24 VAC, 50/60 Hz, 0.2 to 0.35 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	15% to 90% (non-condensing)
Ventilation Control Relays	None
Internal Alarm	None
Analog Outputs	4-20 mA, 0.2-1 VDC, 1-5 VDC, or 2-10 VDC with zero offset enable/disable
Digital Output	Modbus RTU
Front Panel Indicators	Power (green LED) Fault (yellow LED)
Dimensions	4.98” W x 4.98” H x 2.18” D (12.6 cm W x 12.6 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) [CO/NO_2 Only] EN 50270 FCC Part 15 Subpart B RoHS

Model Designation

XX=	CM	ND	NCM	ME	PR	HY	OX
Formula	CO	NO_2	CO + NO_2	CH_4	C_3H_8	H_2	O_2
Name	Carbon Monoxide	Nitrogen Dioxide	Carbon Monoxide & Nitrogen Dioxide	Methane	Propane	Hydrogen	Oxygen

Technical Specifications

GDCP-ExpansionPack

Input Power	24 VAC, 50/60 Hz, 0.4 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 60 sensors
Relay Capacity	4 Relays
Zone Capacity	Up to 4 Zones
Dimensions	4.98” W x 4.98” H x 2.18” D (12.6 cm W x 12.6 cm H x 5.5 cm D)
Weight	1.0 lbs (0.5 kg)
Housing	Gray, NEMA 4X, polycarbonate plastic
Compliance	ANSI/ISA 92.00.01-2010 (R2015) [CO/NO_2 Only] EN 50270 FCC Part 15 Subpart B RoHS

Target Gas Specifications

Performance	**CO**	**NO_2**	**CH_4**	**C_3H_8**	**H_2**	**O_2**
Range	0-200 PPM	0-10.0 PPM	0-100% LEL	0-100% LEL	0-100% LEL	0-25% V/V
Resolution	1 PPM	0.1 PPM	1% LEL	1% LEL	1% LEL	0.1% V/V
Calibration Point	100 PPM	5.0 PPM	50% LEL	50% LEL	50% LEL	20.9% V/V
Max Overload	2,000 PPM	200 PPM	N/A	N/A	N/A	30% V/V
T90 Response Time	< 30 seconds	< 50 seconds	< 20 seconds	< 20 seconds	< 20 seconds	< 10 seconds
Coverage Radius	50 ft.	50 ft.	40 ft.	40 ft.	40 ft.	30 ft.
Coverage Area	7,500 sq. ft.	7,500 sq. ft.	5,000 sq. ft.	5,000 sq. ft.	5,000 sq. ft.	3,000 sq. ft.
Technology	Electrochemical	Electrochemical	Catalytic Bead	Catalytic Bead	Catalytic Bead	Electrochemical
Lifespan						
Long Term Output Drift	< 5% per year	< 2% per month	< 5% per month	< 5% per month	< 5% per month	< 1% per year
Expected Sensor Life	> 7 Years	> 5 Years	2 Years	2 Years	2 Years	> 5 Years
Average Calibration Duration	2 Years	1 Year	N/A	N/A	N/A	2 Years
Factory Default Setpoints						
Relay 1	35 PPM	1.0 PPM	10% LEL	10% LEL	10% LEL	18.5% V/V
Relay 2	75 PPM	3.0 PPM	25% LEL	25% LEL	25% LEL	17% V/V
Relay 3	100 PPM	5.0 PPM	50% LEL	50% LEL	50% LEL	16% V/V
Relay 4	100 PPM	5.0 PPM	75% LEL	75% LEL	75% LEL	16% V/V

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 varying densities. For CO, NO_2, and O_2, mount the unit at the average breathing height – approximately 5 to 7 feet from the floor. For CH_4 and H_2, mount the unit at or near the ceiling. For C_3H_8, mount the unit 12 to 18 inches above 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

Full resolution diagrams available at https://www.arcat.com/arcatcos/cos52/arc52580.html.

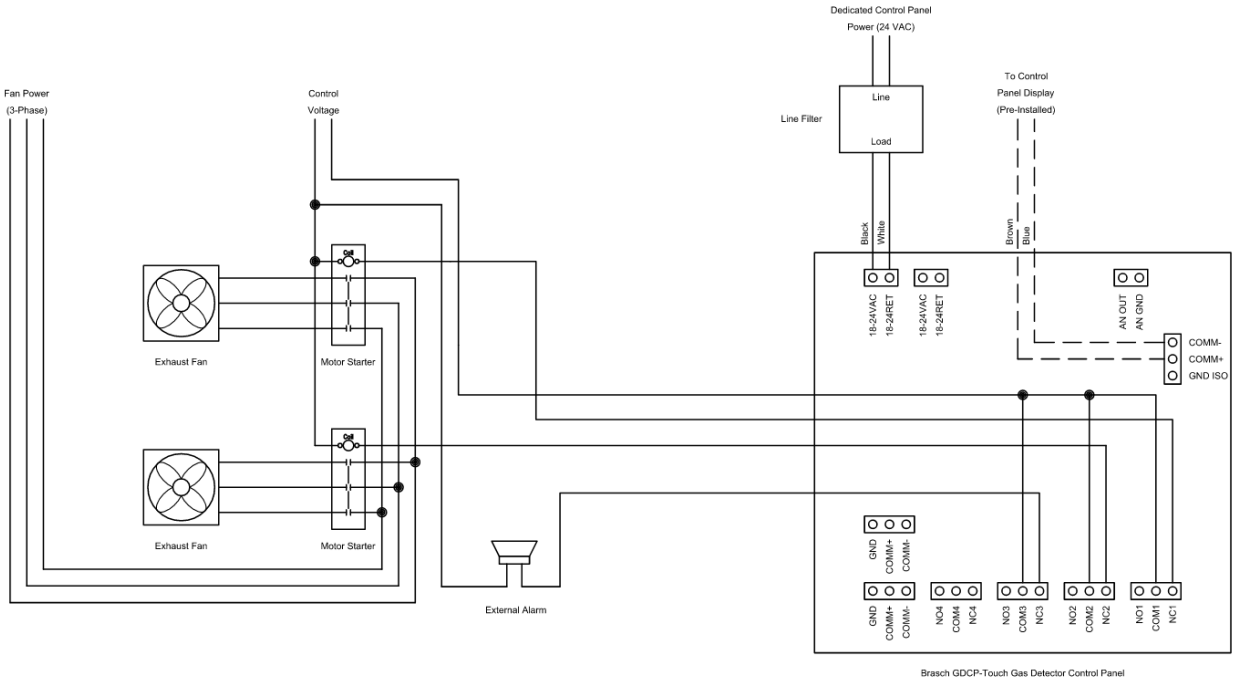

Figure 1: Wiring – Two Fan Ventilation System with Common Alarm

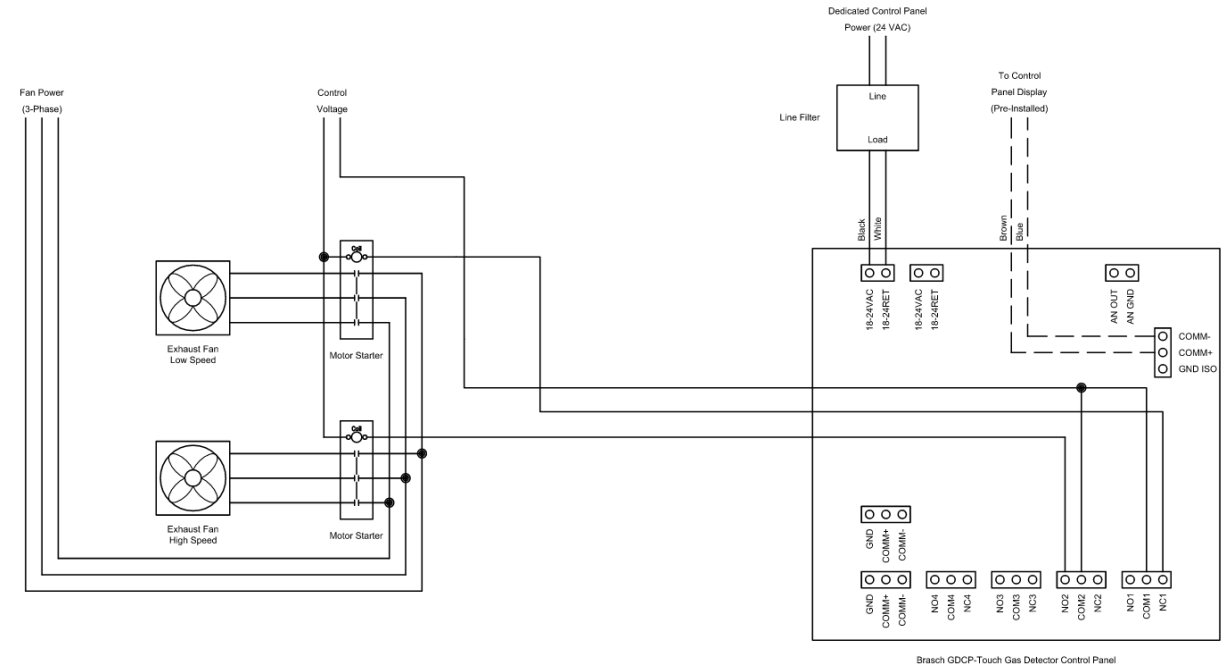

Figure 2: Wiring – Two-Speed Fan Ventilation System

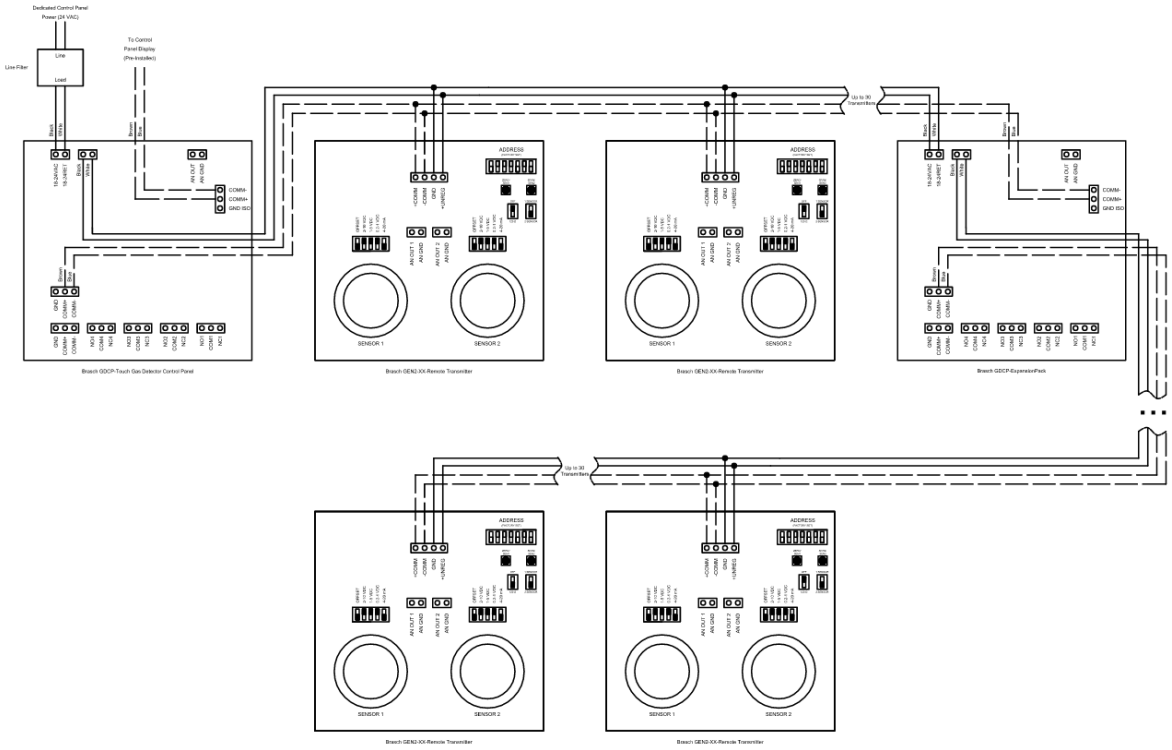

Figure 3: Wiring – Transmitter Connection – Daisy Chain

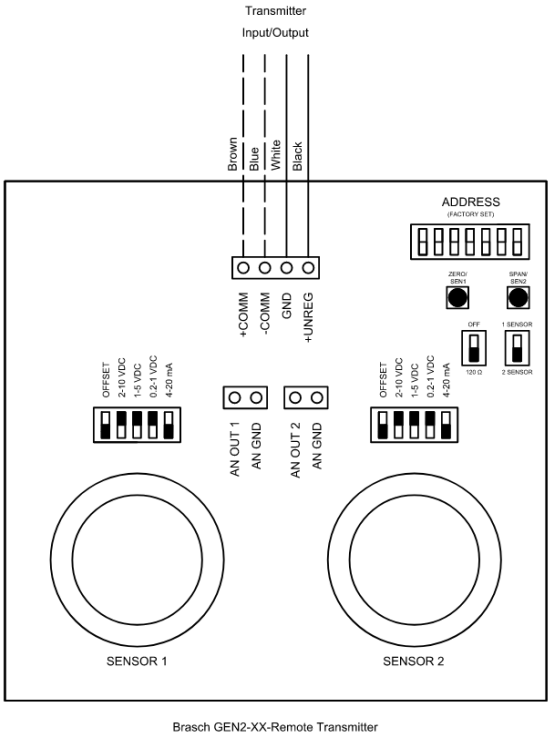

Figure 4: Wiring – Transmitter Connection – Single View

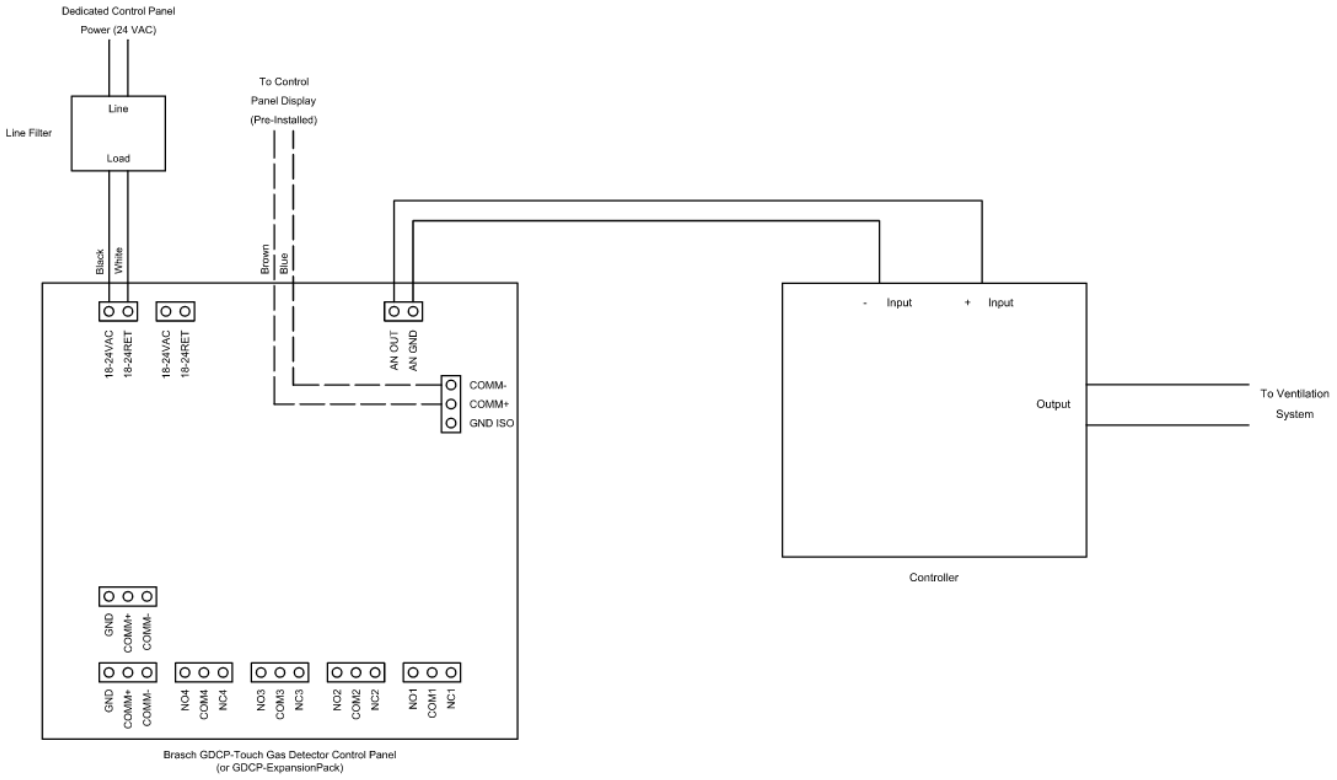

Figure 5: Wiring – Analog Output

RELAY CONNECTIONS

LEVEL 1: (Default)

NC = Closes when gas exceeds setpoint (or fail-safe condition)

NO = Opens when gas exceeds setpoint (or fail-safe condition)

LEVEL 2-4:

NC = Opens when gas exceeds setpoint

NO = Closes when gas exceeds setpoint

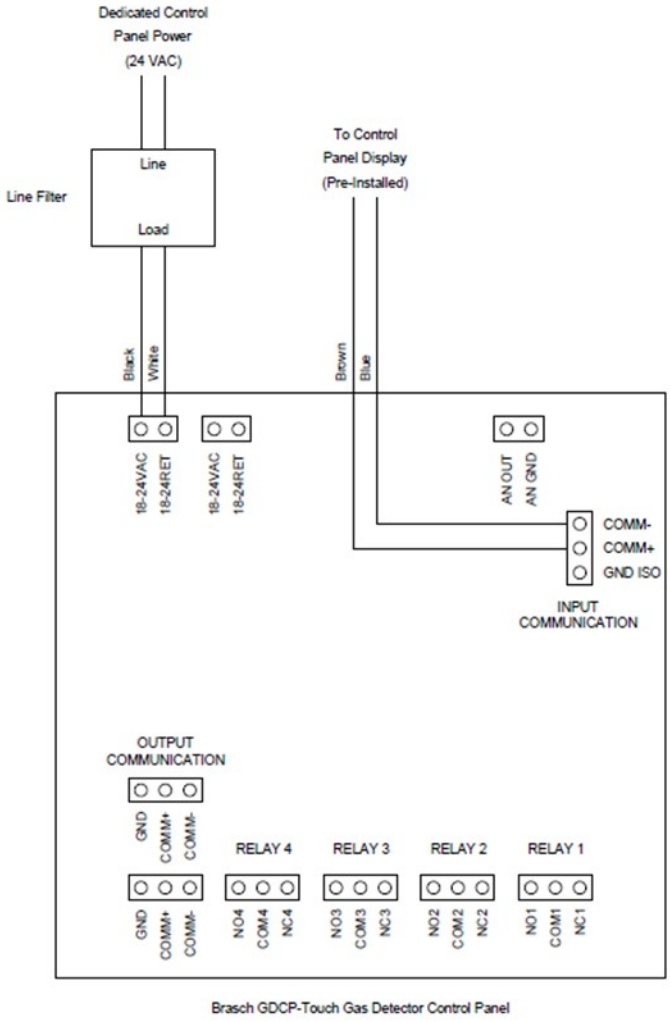

Figure 6: Wiring – Relay Connections

Free Installation and Startup Training

Brasch offers a complimentary online installation and startup training session for your new GDCP-Touch control panel system. It is free and covers everything you need to know to get the system running.

Sessions are every Tuesday at 10 AM CT and Thursday at 2 PM CT. Scan the QR code or visit the link to book your training.

https://t.ly/wzYC

Warranty Statement

Brasch Environmental Technologies, LLC warrants gas transmitters, gas detectors, control panels, and accessories for a period of two years from the date of shipment against defects in material or workmanship. Should any evidence of defects in material or workmanship occur during the warranty period, Brasch Environmental Technologies will repair or replace the affected product, at its own discretion, without charge. The company shall not be held responsible for any charges incurred with removal or replacement of allegedly defective equipment, nor for incidental or consequential damages. If any equipment has not been installed per Brasch instructions, this warranty is void. The cost to repair, replace, or service any component is not the responsibility of Brasch. Any replacement parts or service necessary must be paid in full prior to shipment or performance.

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