



BRASCH

ENVIRONMENTAL TECHNOLOGIES

GDCP-Touch

Quick Start Guide



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This product comes with free installation and startup training. See back cover for details.

Quick Start Guide

Please read the entire manual before attempting to install and operate this control panel. This guide is only intended to provide the basic steps necessary for installation and operation. Each step will reference the portion of the manual where more complete information can be obtained.

Step 1 – Mounting

Determine the location for mounting your panel and transmitters. The locations may be indicated on the architectural drawing. Also, the owner or designer of the facility may be consulted. Mounting guidelines can be found on page 14 of the manual.

Step 2 – Input Wiring

WARNING

This control panel may require the use of voltage levels high enough to cause fatal injuries. Proper procedures must be followed any time work is performed on this unit.

Only qualified personnel should attempt to install, maintain, or service this equipment.

Provide a dedicated circuit at the required 24 VAC operating voltage at each panel mounting location. Follow all national and local wiring codes. A conductor connected to earth ground should also be provided. The circuit must include a disconnect switch located within easy reach of the panel.

Ensure that the step-down transformer provides 24 VAC and has the necessary volt-amp rating to power each component in the system. Each control panel requires 18 VA, each transmitter requires 2.4 VA, and each expansion pack requires 9.6 VA.

CAUTION

Operating these devices with the incorrect voltage and power requirements can cause internal electrical components to overheat and fail. Operation with the wrong power requirement will void the manufacturer's warranty and the installer will be responsible for any damage that occurs.

Contact Brasch Environmental Technologies, LLC before connecting power to the control panel or transmitters if you are unsure of the correct power requirement.

This device uses an EMI power line filter to reduce unwanted noise. Connect the incoming power conductors to the line side of the filter. The load side of the filter is already wired to the input power terminals on the relay board. Be sure to ground the control panel at the green screw.

Refer to page 16 of the manual for further information.

Step 3 – Remote Transmitter Wiring

The control panel does not supply power to the remote transmitters. However, power may be daisy chained through the control panel to the transmitters. Use a two-conductor cable with color-coded conductors of at least 18 AWG to connect the power. Use a shielded, twisted pair cable with color-coded conductors of at least 24 AWG to connect communication. See the table below for recommended wire gauges. A single four-conductor cable may be used but will reduce the maximum distance the system can cover. See figure 10 on page 54 of the manual for details. If possible, choose cables with color-coded conductors that follow the suggested color scheme listed on the drawings. While a star wiring configuration may be achievable, it is not recommended. Use a straight daisy chain configuration for best results.

Power			Communication		
AWG	Feet	Meters	AWG	Feet	Meters
18	250	80	24	200	60
16	400	125	22	350	100
14	650	200	20	500	150
12	1000	320	18	850	215

CAUTION

- It is very important that the power and signal connections between each transmitter and between the transmitters and the control panel be correct. If the connections are wired incorrectly, damage to both the transmitters and the control panel will occur.
- Use a cable with color-coded conductors and make sure that the same conductor connects to the same terminal on each transmitter and the control panel.
- Do not apply power to the transmitter or control panel unless you are sure that the connections are correct.

Single transmitters will be shipped with four color-coded wires exiting the top of the housing through a conduit fitting. Dual transmitters will be shipped with an extra twisted pair to maintain a true daisy chain. If you have chosen color-coded conductors that match the wire

colors, connect the cable conductors to the wires of the same color. If your cable conductors do not match the wire colors, assign a cable conductor color to each wire and make a list of this assignment. Follow this color assignment when connecting any other transmitters in the system. All transmitters share the same conductors back to the panel. Therefore, a four-conductor cable can be connected from transmitter to transmitter, or from transmitter to panel, as the situation dictates. Follow the wiring diagrams on page 21 through 23 of the manual to determine the proper connections at the panel.

Step 4 – Relay Wiring

The relay board inside the control panel has four relays with connections for both normally open (NO) and normally closed (NC) operation. These connection points are labeled on the silkscreen next to the terminal blocks as well as in the diagram on page 54 of the manual. The relay state is labeled for the physical state of the relay when the control panel is not powered. In the default configuration, all relays will operate independently of one another. To use multiple-speed fans, you will need to assign different relay levels in the settings and invert the wiring connections to avoid damaging ventilation equipment.

Do not exceed the specified voltage and power limits of the relays (see page 7 of the manual). Most installations require motor starters or larger relays to provide the necessary power requirements for the ventilation components.

For more information concerning ventilation system operation, read page 18 of the manual.

Step 5 – External Alarms

Determine if the installation requires an external alarm. If so, provide the proper wiring and connect the wires to the required voltage source. Any relay may be used to trigger an external alarm. To synchronize the internal control panel alarm with external alarms, make sure the setpoints and delay times are the same in both the *Zone Settings Screen* and *Relay Settings Screen*.

Refer to page 19 of the manual for more information concerning the alarm feature.

Step 6 – Applying Power

Once you are sure that the wiring connections are correct, apply power to the control panel circuit. When power is first applied to the transmitters, they will begin a 150 second warm-up period. During this time, the control panel will display "--" in place of gas concentration values on the *Zone Screen* and *Relay Screen*. Once the warm-up has finished, the gas concentration values will appear.

See page 19 of the manual for more information concerning the initial startup.

CAUTION

Misconnected or disconnected power wires can cause damage in properly connected communication wires. Disconnecting communication wires at the control panel to check that system components are operating properly and at the correct voltage when power is applied may reduce the risk of catastrophic failure. Once power has been applied and verified, remove power, connect communication wires, and reapply power for best results.

Step 7 – Testing the System

The manual overrides on this control panel can be used to open and close the relays to verify that ventilation and warning equipment is connected properly. This feature can be accessed from the individual *Relay Settings* screens.

Page 20 of the manual contains a more complete procedure for testing the system.

At this point, the control panel and transmitters are now ready to monitor for the presence of the target gas(es) and control the ventilation system to efficiently remove the gas from the protected area.

Typical Installation Diagrams

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

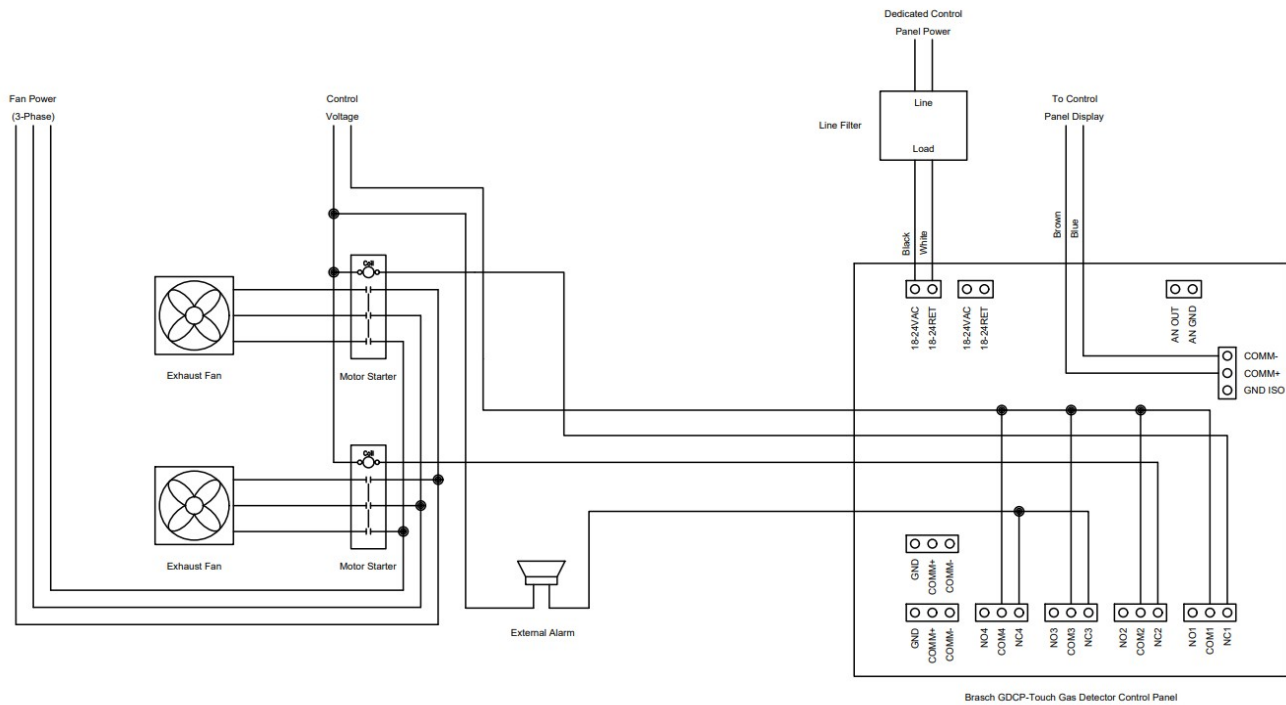


Figure 1: Wiring – Two Fan Ventilation System with Common Alarm

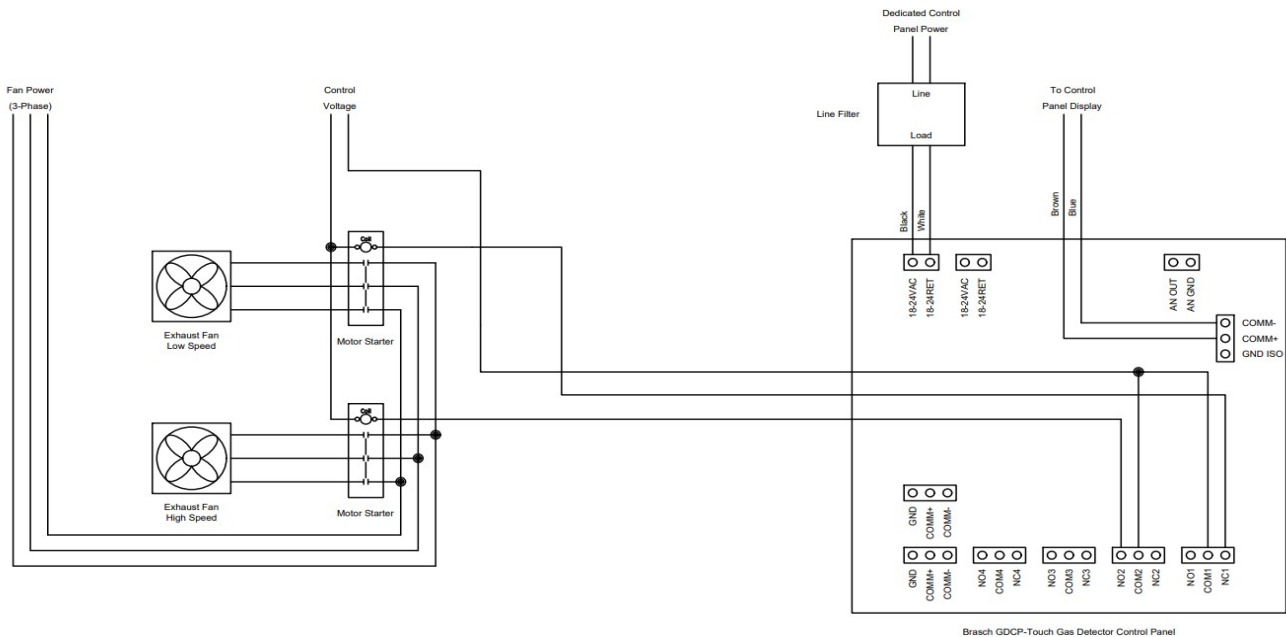


Figure 2: Wiring – Two-Speed Fan Ventilation System

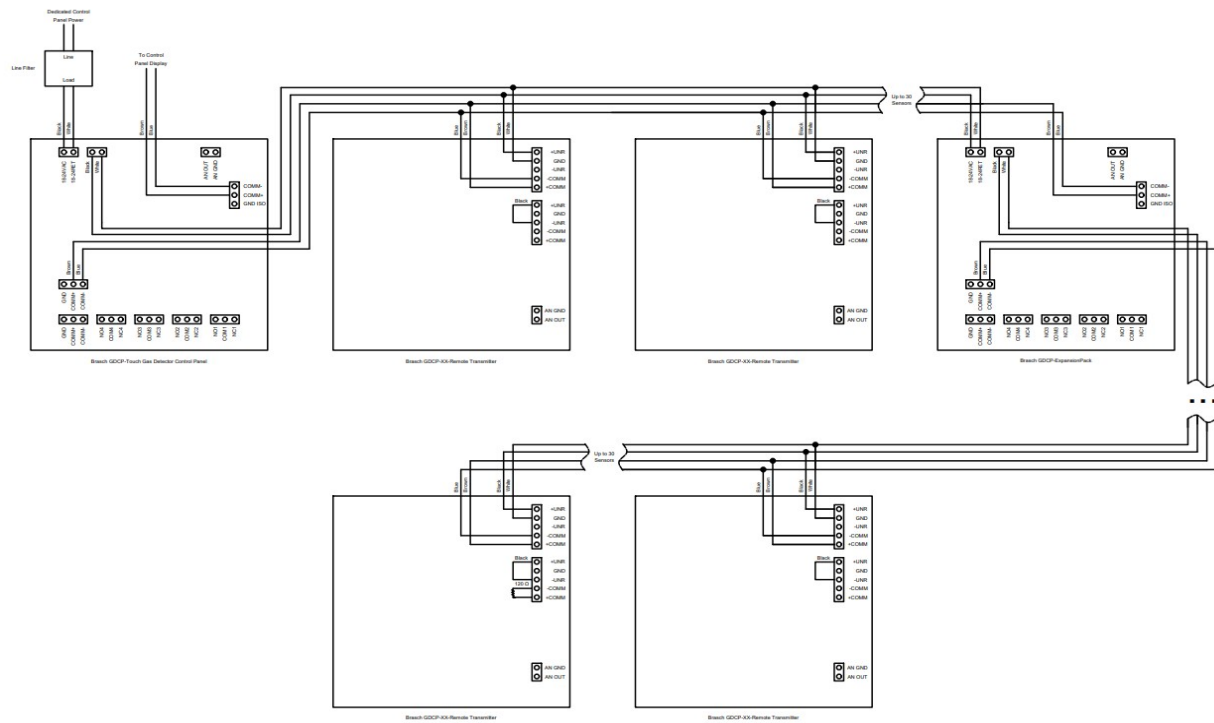


Figure 3: Wiring – Transmitter Connection – Daisy Chain (Dedicated Power)

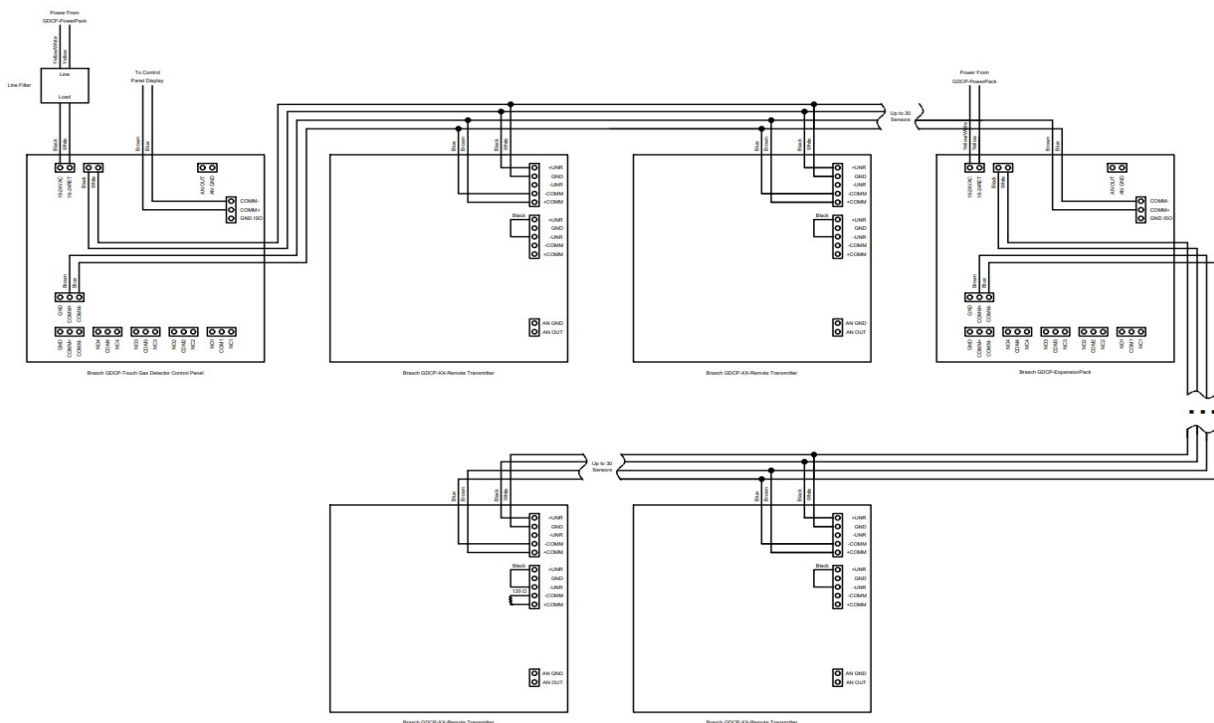


Figure 4: Wiring – Transmitter Connection – Daisy Chain (GDGP-PowerPack)

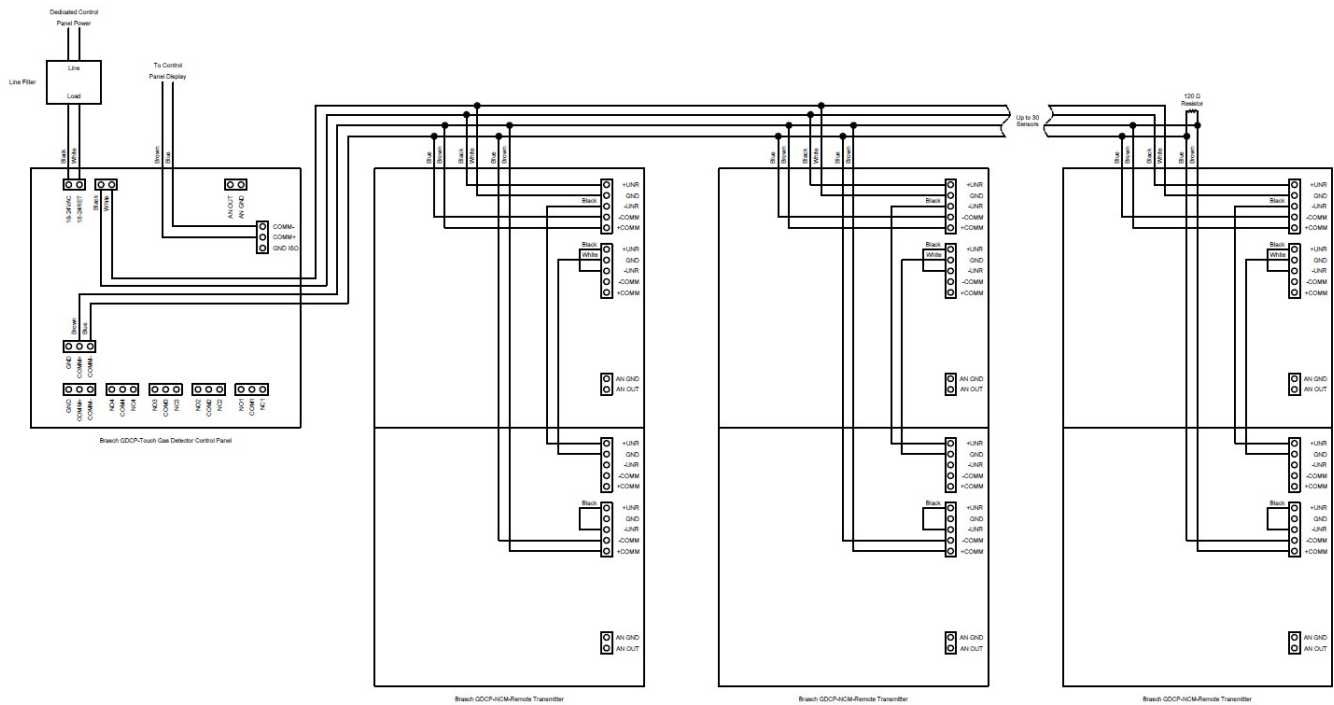


Figure 5: Wiring – Transmitter Connection – Dual Transmitter

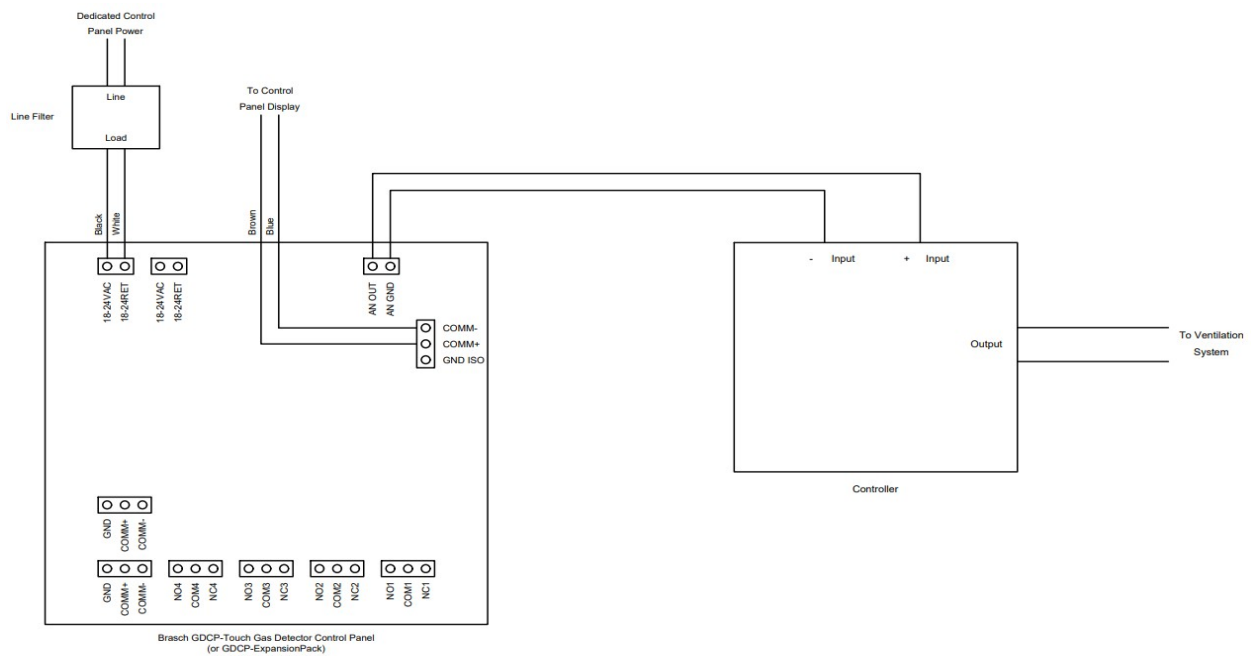


Figure 6: Wiring – Analog Output

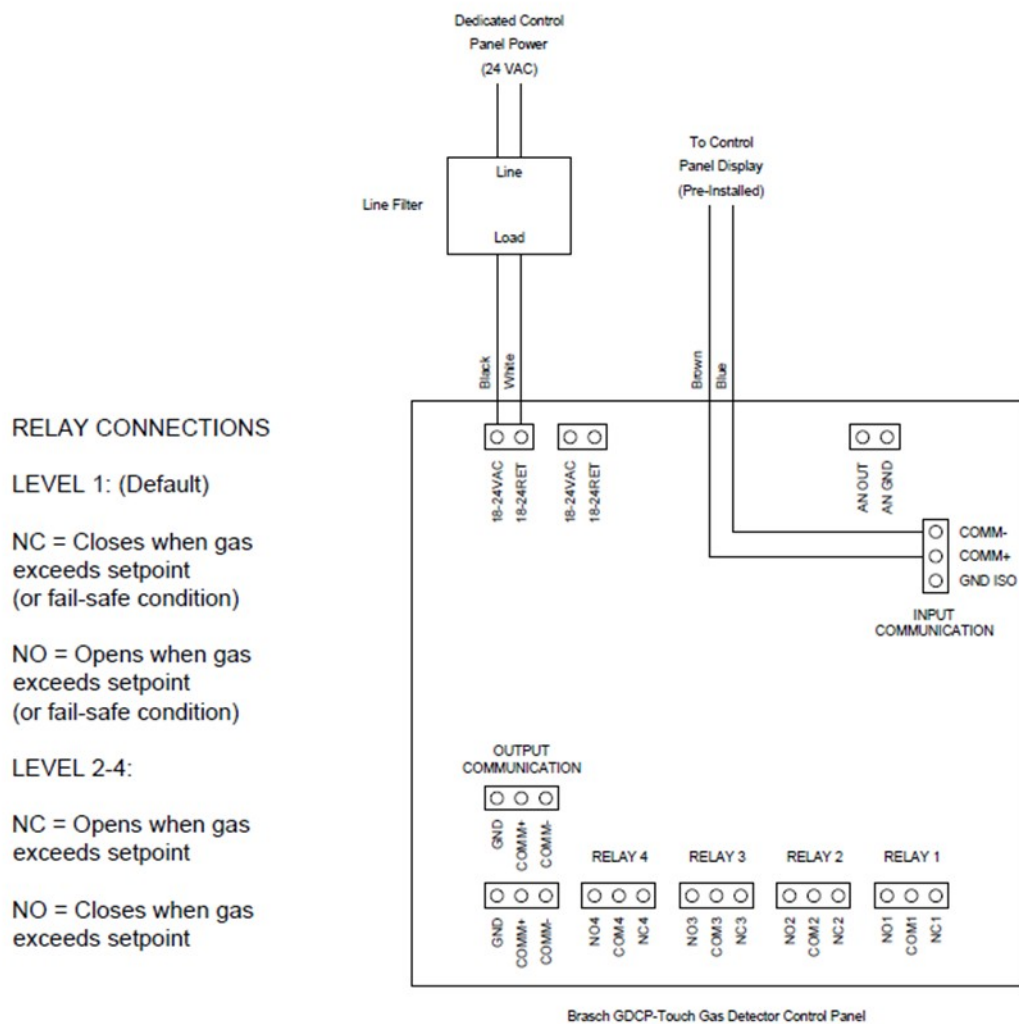


Figure 7: Wiring – Relay Connections

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>



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