



# BRASCH

ENVIRONMENTAL TECHNOLOGIES

## GDCP-Touch

### Quick Start Guide



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# 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 13 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 the correct secondary voltage and has the necessary volt-amp rating to power each component in the system. Each control panel requires 0.75 VA, each transmitter requires 2.4 VA, and each expansion pack requires 0.4 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.

Connect the incoming power conductor to 18-24VAC, the return conductor to 18-24RET, and the ground conductor to the green screw.

Refer to page 15 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. A single four-conductor cable may be used but will reduce the maximum distance the system can cover. See figure 10 on page 53 of the manual for details. If possible, choose cables with color-coded conductors that follow the suggested color scheme listed on the drawings.

#### **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.

The transmitters will be shipped with four color-coded wires exiting the top of the housing through a conduit fitting. 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 and 22 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 17 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 18 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 18 of the manual for more information concerning the initial startup.

## **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 19 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.



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