



BRASCH

ENVIRONMENTAL TECHNOLOGIES

GDCP-Touch Installation and Startup

Step 1 – Mounting

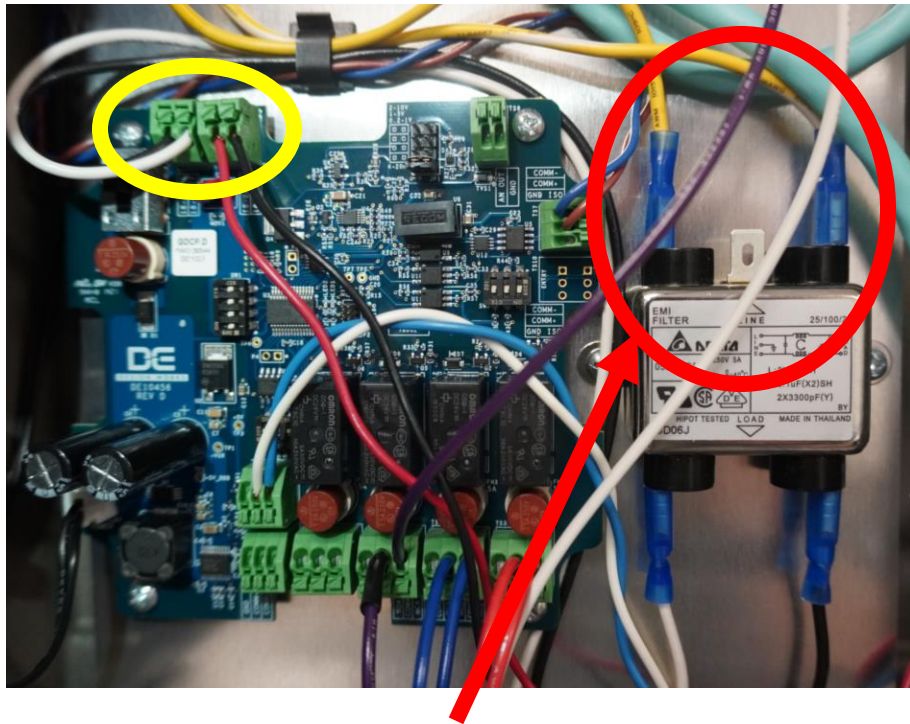
- Determine the location for mounting your panel, transmitters, and accessories.
 - The locations should be indicated on the architectural drawing.
 - If not, the owner or designer of the facility may be consulted.
- Full mounting guidelines can be found on page 14 of the IOM.
- General Guidelines
 - Locate the panel in a convenient, easy-to-access location
 - Mount all transmitters 5-7 ft. AFF
 - Use junction boxes where possible and do not modify enclosures
 - Space expansion packs evenly to maximize signal strength

Step 2 – Input Wiring

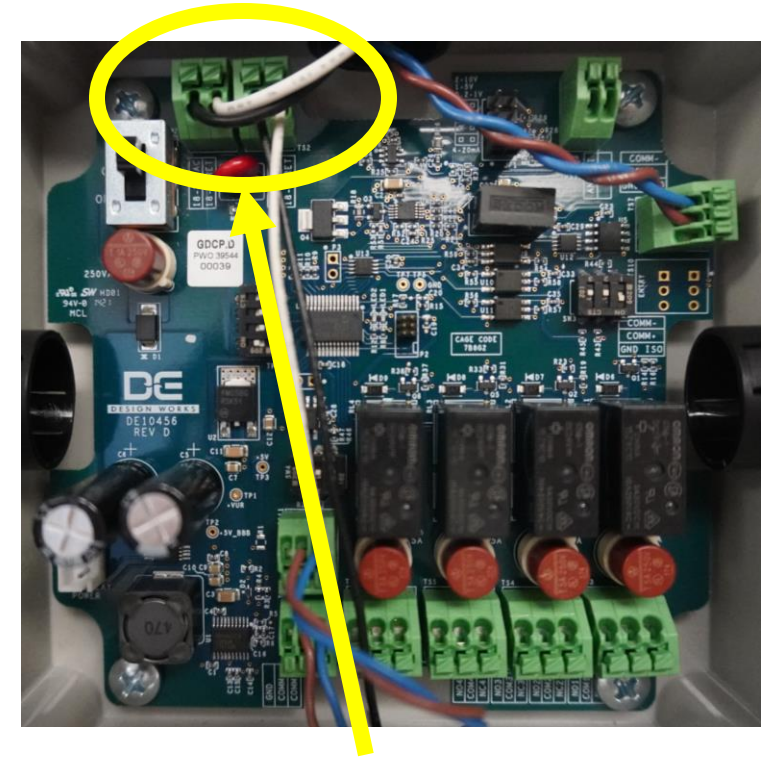
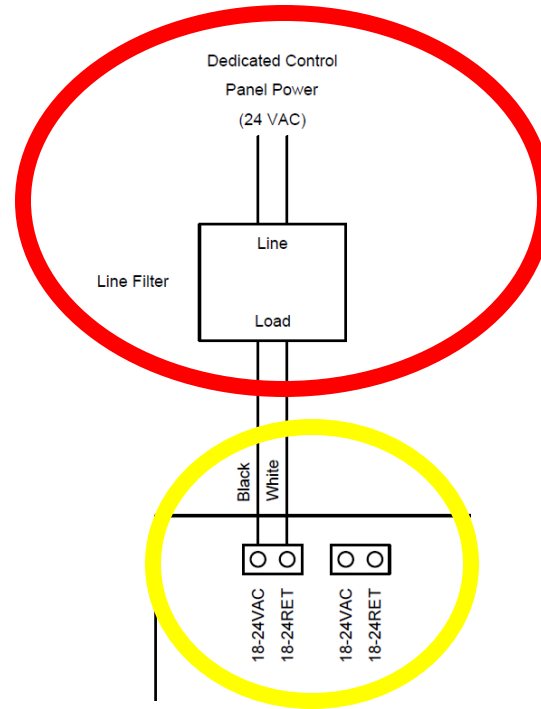
- Provide a dedicated circuit at **24 ± 3 VAC**
 - Power requirements are:
 - GDCP-Touch: 18 VA
 - GDCP-XX-Remote: 2.4 VA
 - GDCP-NCM-Remote: 4.8 VA
 - GDCP-ExpansionPack: 9.6 VA
 - The GDCP-PowerPack provides 96 VA and can accommodate a maximum of (1) GDCP-Touch and (30) GDCP-XX-Remotes
- Include a conductor to Earth ground
- Note: this panel uses an EMI line filter inside the panel



Step 2 – Input Wiring

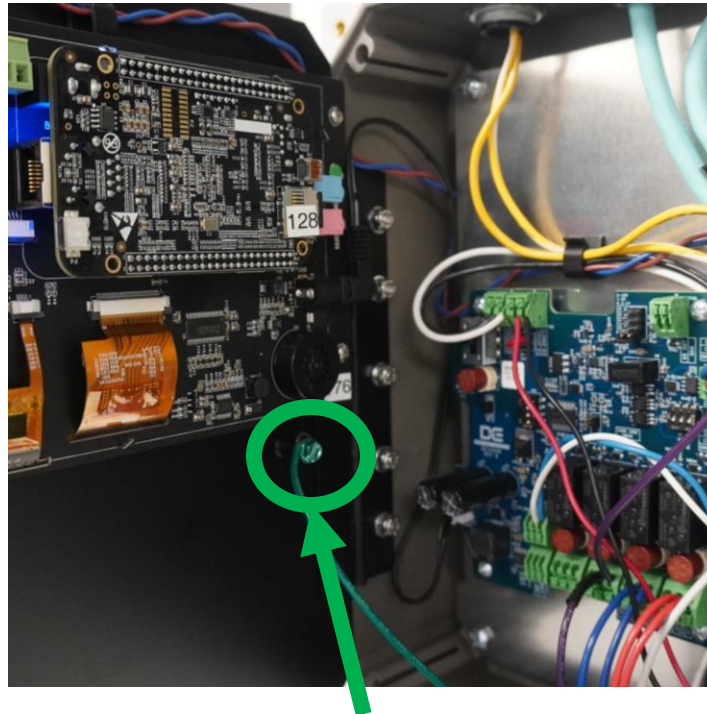


Power to Control Panel



Power to Expansion Packs

Step 2 – Input Wiring



Ground to Control Panel

Step 3 – Remote Transmitter Wiring

- This panel does not provide any power to the remote transmitters
 - Power may be daisy chained through the system
- Using a cable with color-coded conductors is highly recommended
 - Brasch Color Code:
 - Black = +24 VAC
 - White = -24 VAC
 - Brown = +COMM
 - Blue = -COMM
- Connect each conductor from your cable to the corresponding wire
- Remote transmitters are not to be used as junction boxes



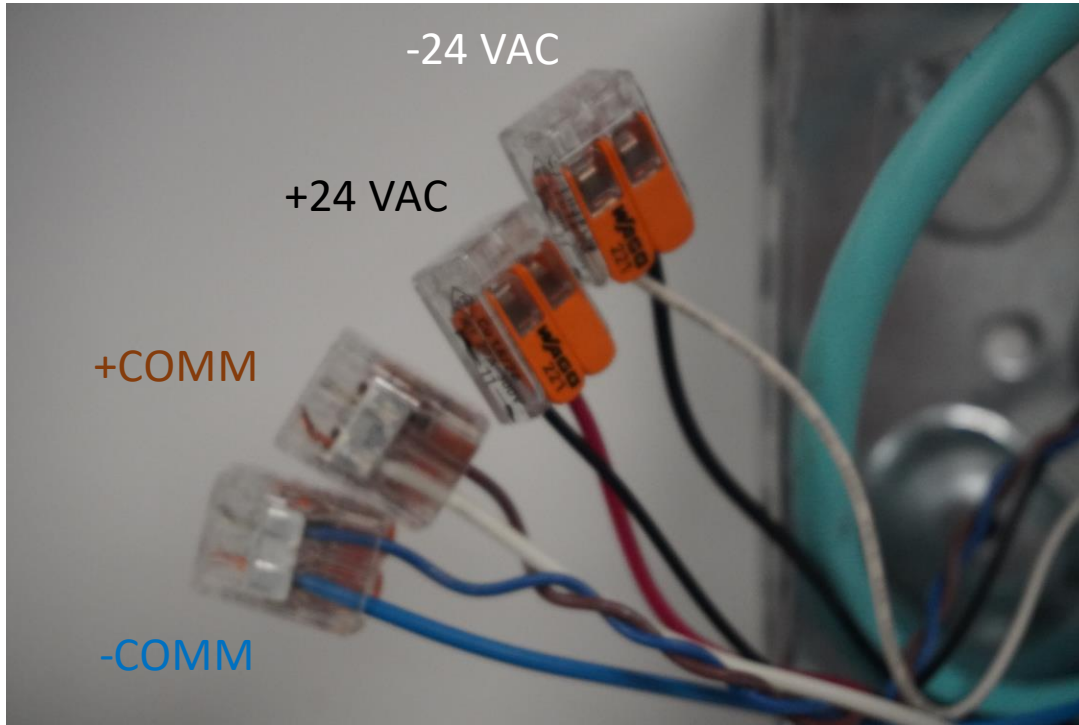
Step 3 – Remote Transmitter Wiring

- Power Wiring
 - See Power Table
- Communication Wiring
 - See Communication Table
 - Use shielded twisted-pair cable of at least 24 AWG
 - Preferably include an overall foil and braid shield
 - Connect components only in a straight daisy chain pattern
 - Use a 120 Ω termination resistor at the end of the line

| Power | | |
|-------|------|--------|
| AWG | Feet | Meters |
| 18 | 250 | 80 |
| 16 | 400 | 125 |
| 14 | 650 | 200 |
| 12 | 1000 | 320 |

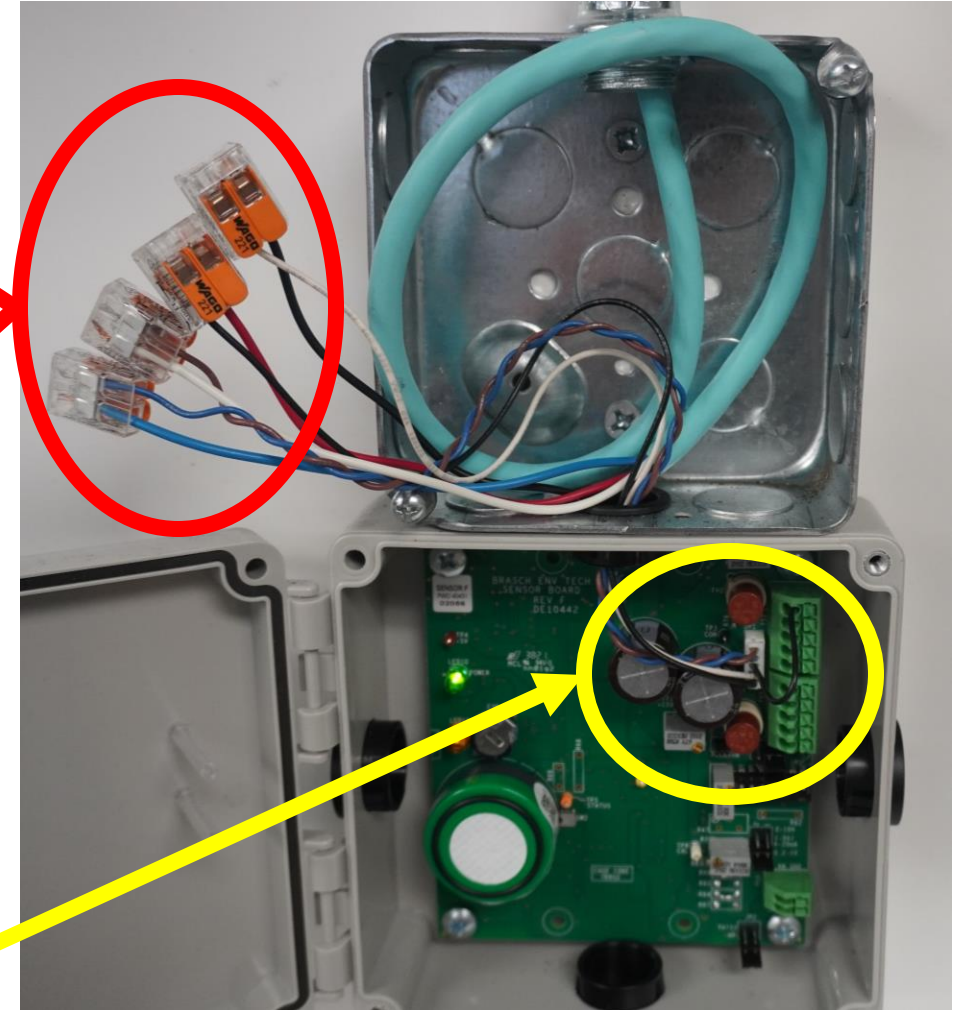
| Communication | | |
|---------------|------|--------|
| AWG | Feet | Meters |
| 24 | 200 | 60 |
| 22 | 350 | 100 |
| 20 | 500 | 150 |
| 18 | 850 | 215 |

Step 3 – Remote Transmitter Wiring

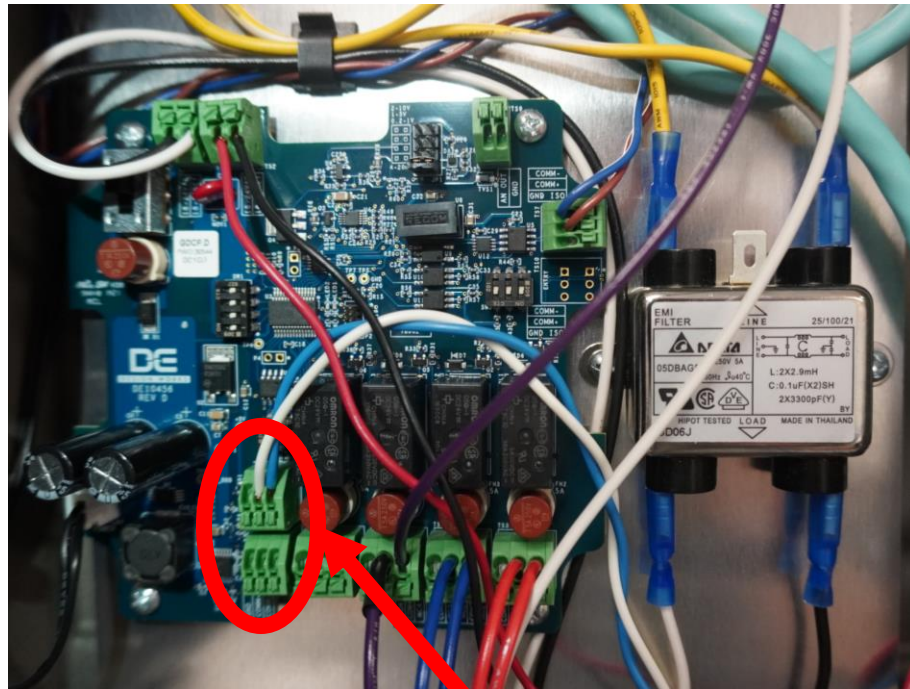


Use lever nuts or wire nuts to connect wires inside junction box

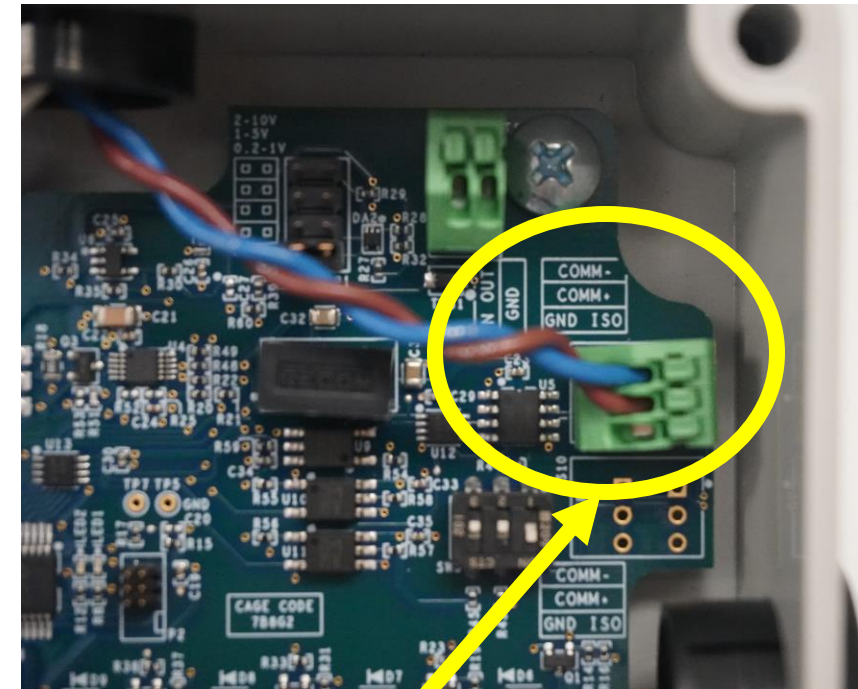
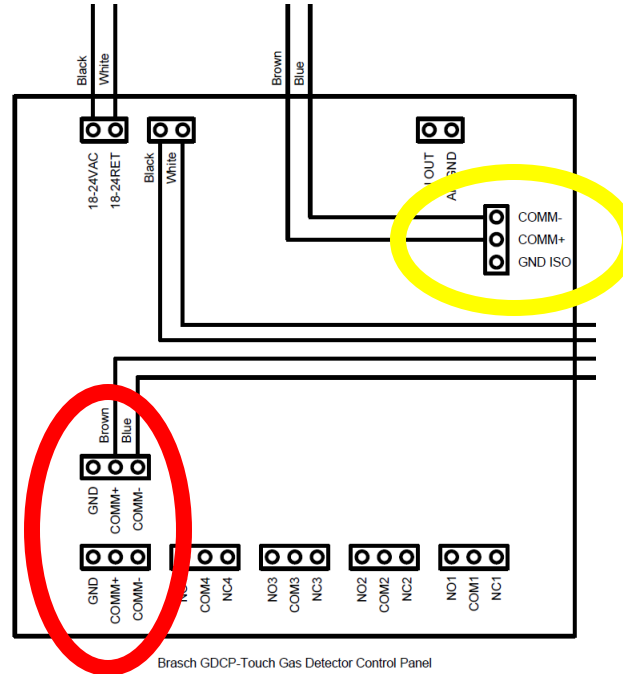
Wires are pre-configured and routed out the top of the enclosure so you don't need to open the lid



Step 3 – Remote Transmitter Wiring

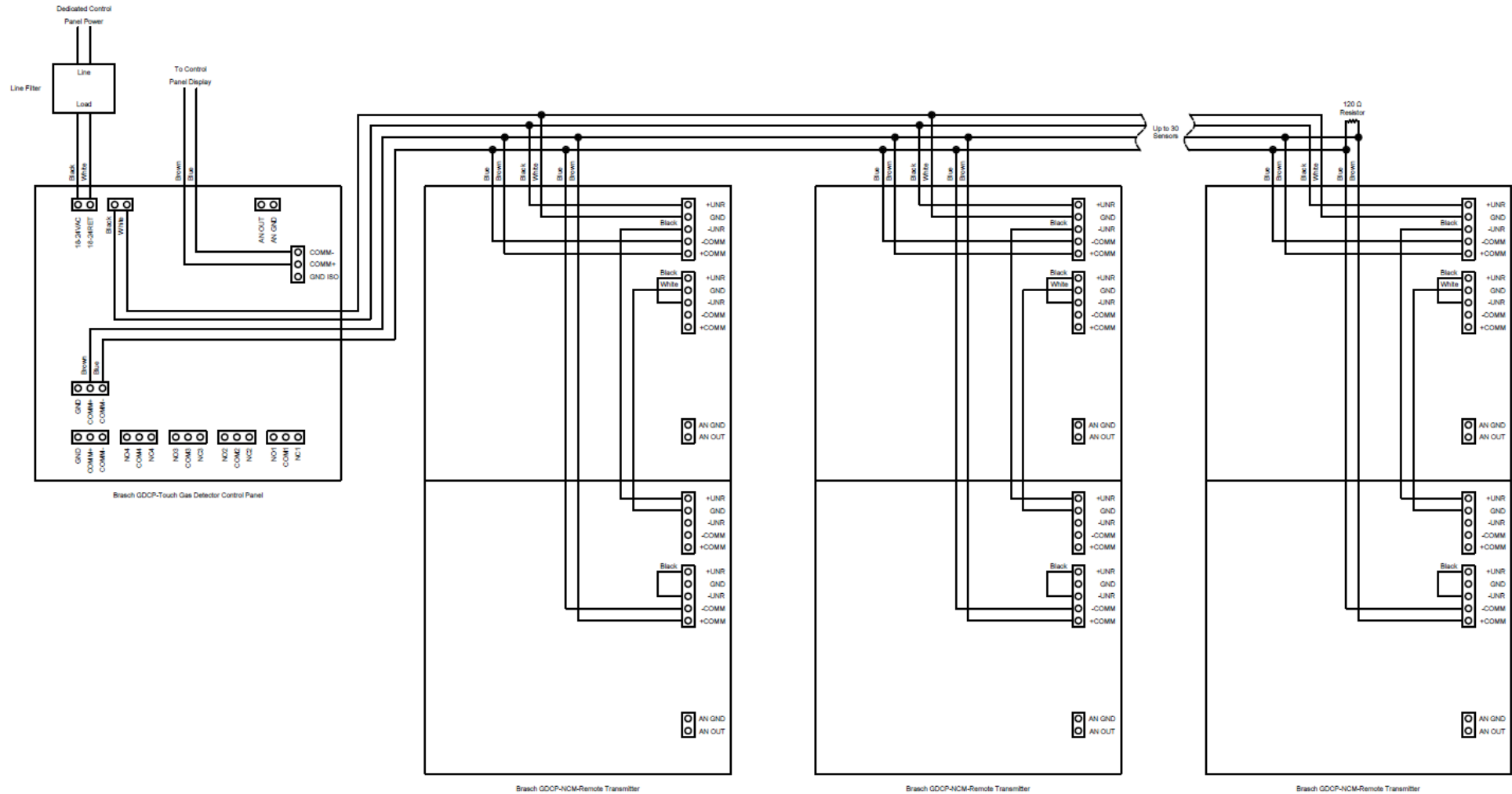


COMM Output at Control Panel



COMM Input at Expansion Pack

Step 3 – Remote Transmitter Wiring



Step 4 – Relay Wiring

- The panel (and expansion packs) have four relays with connections for both NO and NC operation
 - These connections are labeled on the silkscreen
 - Relay 1 is on the far right of the board, Relay 4 is on the left
- The panel is set for fail-safe relay operation by default (Level 1)
 - Level 1 Relays should be wired to NC under most circumstances
 - Relays will close during power loss, error states, or high gas conditions, but open during normal operation
- Level 2-4 relays may be used for multiple speed fan configurations or situations where fail-safe is not desired.
 - Level 2-4 Relays should be wired to NO under most circumstances
 - Relays will close during high gas conditions, but open during power loss, error states, or normal operation

Step 4 – Relay Wiring

RELAY CONNECTIONS

LEVEL 1: (Default)

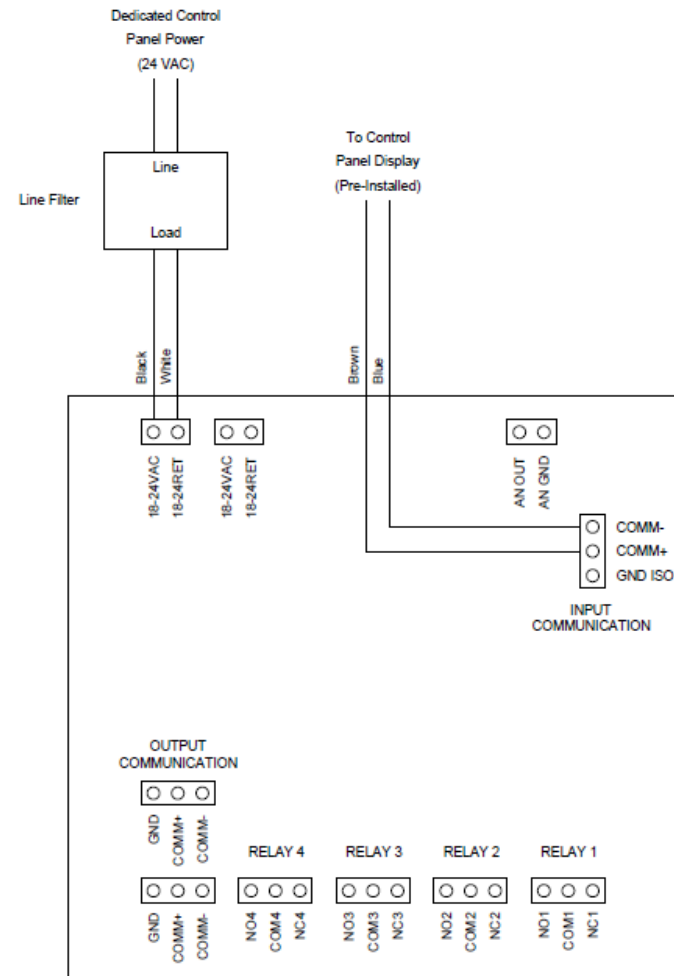
NC = Closes when gas exceeds setpoint (or fail-safe condition)

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

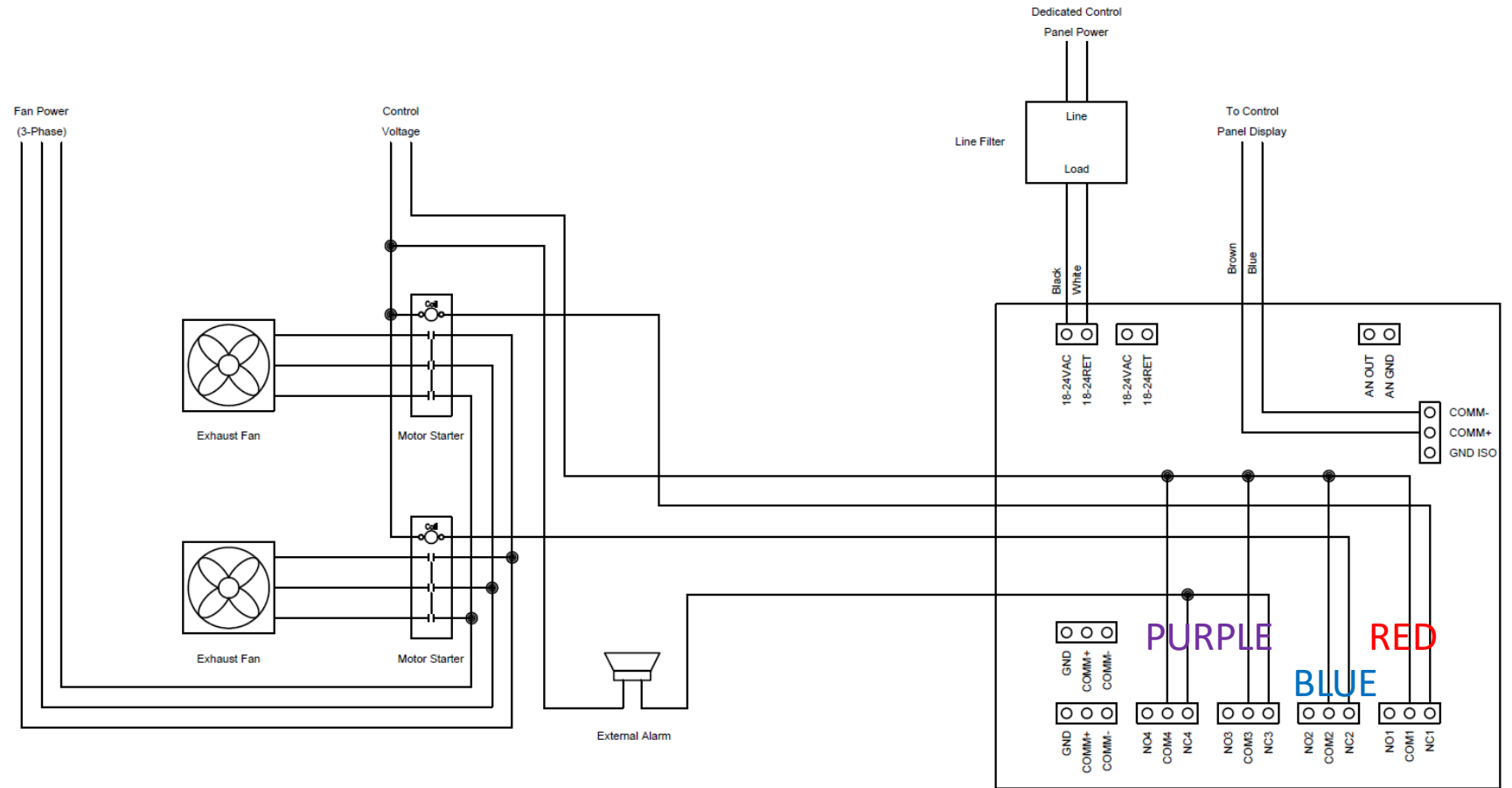
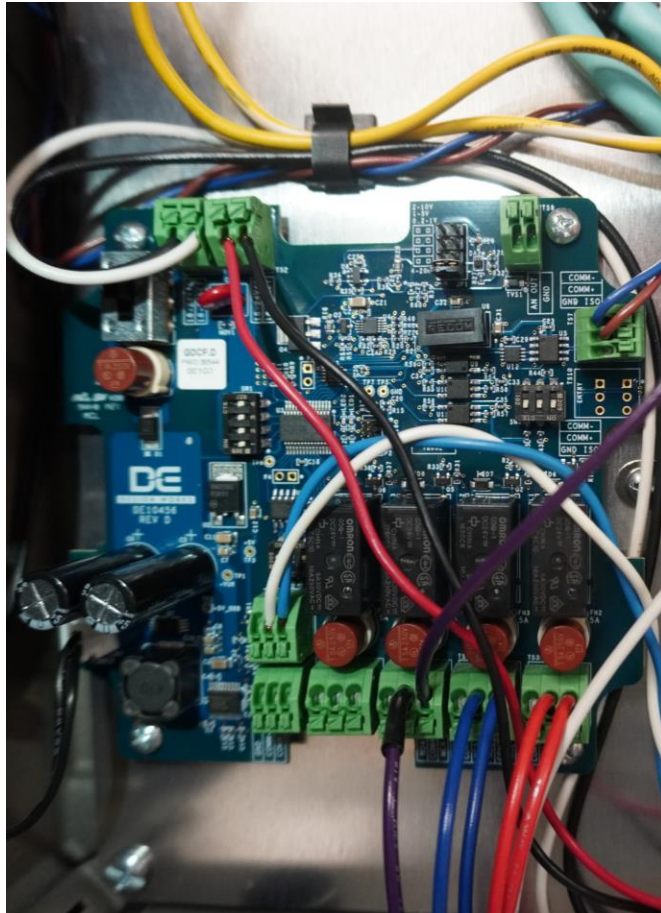
LEVEL 2-4:

NC = Opens when gas exceeds setpoint

NO = Closes when gas exceeds setpoint



Step 4 – Relay Wiring



Step 5 – External Alarms

- If this system includes an external alarm, provide the proper wires and voltage source
- Any relay may be used to trigger the alarm
- Brasch horns and strobes are powered by 115 VAC
 - See manual for additional wiring information

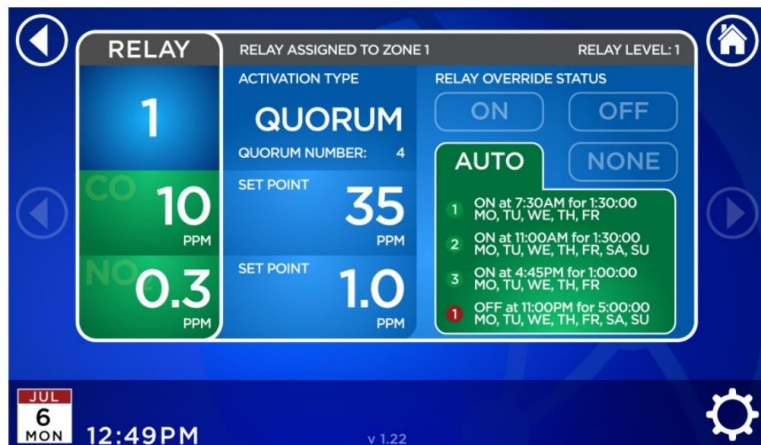


Step 6 – Applying Power

- Verify all wiring connections prior to applying power
- Misconnected or disconnected power wires can cause damage
 - Brasch recommends disconnecting the communication wires at the control panel and each expansion pack to isolate the communication from power
 - If power is properly connected, the panel and all transmitters should illuminate their power LEDs
 - Once power is verified, remove power and connect communication wires
- Do not attempt to service the panel with power applied
- After power is applied, the transmitters will wait 150 seconds prior to sending any gas concentration values to the panel

Step 7 – Testing the System

- Brasch programs, configures, addresses, and wires the system at the factory
 - Changes can always be made in the field if desired
- To check that ventilation/warning equipment is properly connected, use the manual override function of each relay
 - Once proper function is verified, be sure to set the override to either AUTO or NONE



Troubleshooting

- Ventilation Equipment does not activate at the desired time
 - Check that the relays are wired correctly to either NO or NC, depending on intended function and Relay Level
 - Check that the Relay Level is set appropriately
- Transmitter(s) have lost communication
 - Check all the wiring connections
 - Verify that a straight daisy chain configuration was used for wiring
 - Check that no more than 30 nodes (transmitters or expansion packs) are connected to a single bus line
 - Ensure that a 120 Ω termination resistor is present at the ends of each bus line

Resources

- Brasch

- [Website](#)

- [GDCP-Touch Products](#)

- [Downloads](#)

- Customer Service

- customerservice@braschenvttech.com

- 314-291-0440

- ARCAT

- [CSI Specification](#)

- [Drawings and Diagrams](#)