MagSwitch Collector

This document provides installation instructions and configuration overview for the GRIT MagSwitch Collector.

Anatomy of the MagSwitch

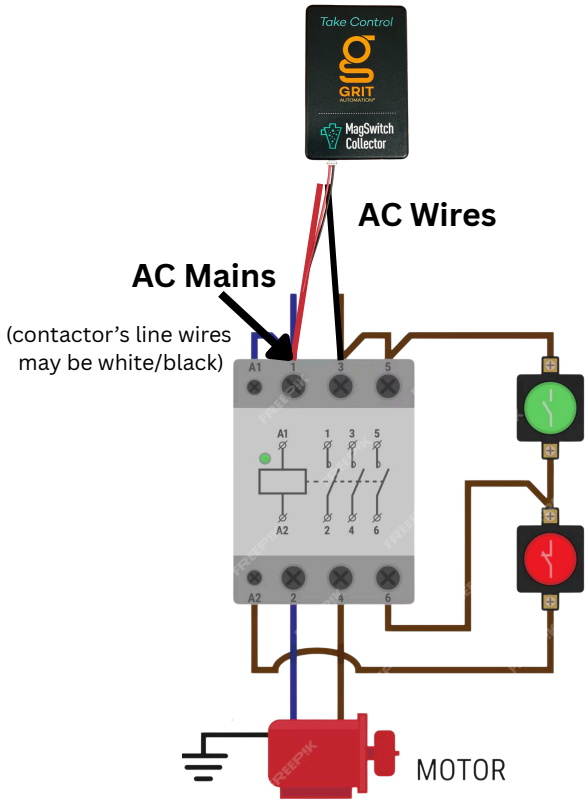
1) Red/Green LED status indicator light.

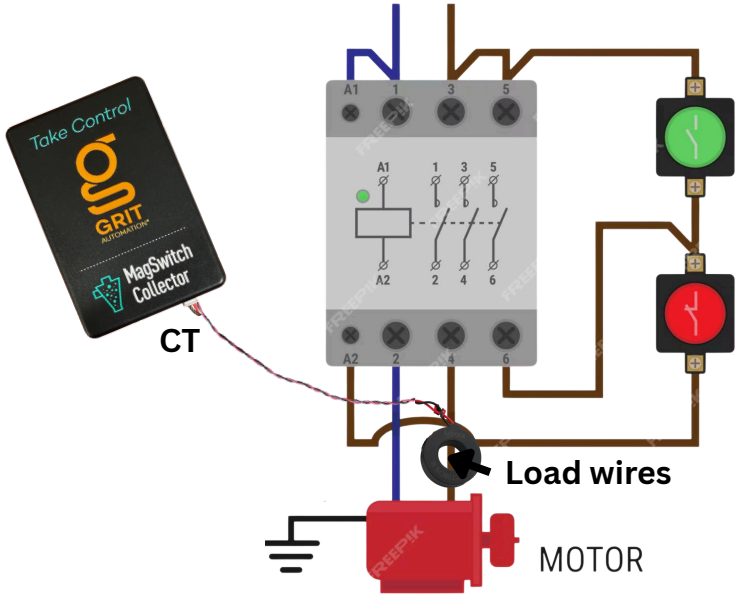
2) Current Transformer (CT)

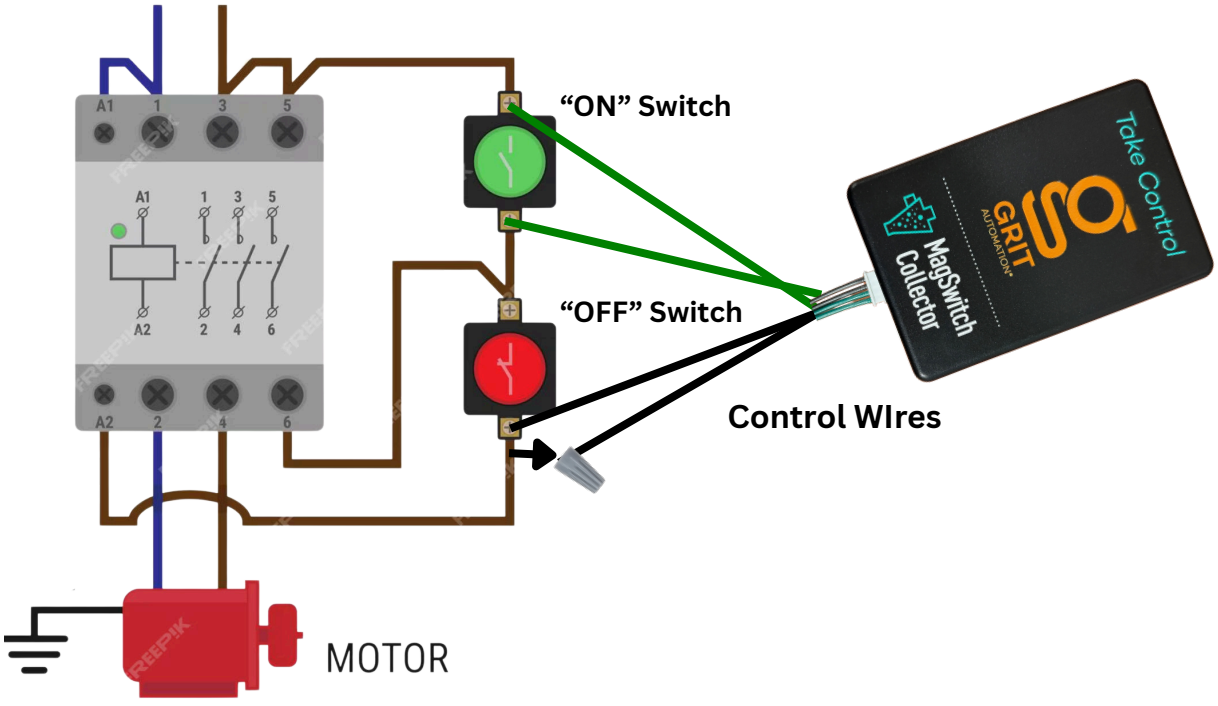
3) Control Wires (Green/ Black)

4) AC Wires (Red/Black)

Wiring Diagram







You will need the following tools to complete this installation:

- Power drill with step bit (for installations when the MagSwitch does not fit into the contactor box, the knockout must be at least 5/8''.)
- Flathead screwdriver (provided)
- Phillips screwdriver
- wire nut (provided)

Overview
The MagSwitch installation wiring process consists of three essential steps that must be completed to ensure proper operation and safety.

Installation Steps

Step 1: Power the GRIT Device: Connect the AC wires

Procedure:
1. Verify that the main power supply to the dust collector is disconnected/ breaker is turned off before beginning installation
2. Connect the GRIT device AC wire leads to the AC Mains according to the wiring diagram (please note: side does not matter when placing the **Red** and **Black** AC wires).
3. Ensure all connections are secure

Step 2: Measure Current Draw: Place the CT around a load wire to the motor

Procedure:
1. Verify that the main power supply to the dust collector is disconnected/ breaker is turned off before continuing.
2. Place the GRIT device CT over a load wire that leads to the dust collection motor.
3. Ensure the load wire is securely in place again.

Step 3: Allow GRIT to “press” the on/off buttons: Place Control Wires

Procedure for Momentary Switches:

1. Locate “On” button.
2. Connect the two **Green** GRIT Control wires on either side of the “On”/ Normally Open button.
3. Locate the “Off” button.
4. Remove one of the existing wires leading to the “Off”/ Normally Closed button.
5. Secure one **Black** GRIT Control wire in its place.
6. Twist the removed wire with the other **Black** GRIT Control wire and secure with provided wire nut.
7. Ensure wire connections match the control diagram provided.

Procedure for Latching Switches:

1. Locate “On” button
2. Connect the two **Green** GRIT Control wires on either side of the “On”/ Normally Open button.
3. Twist the **Black** GRIT Control wires together and secure with provided wire nut.

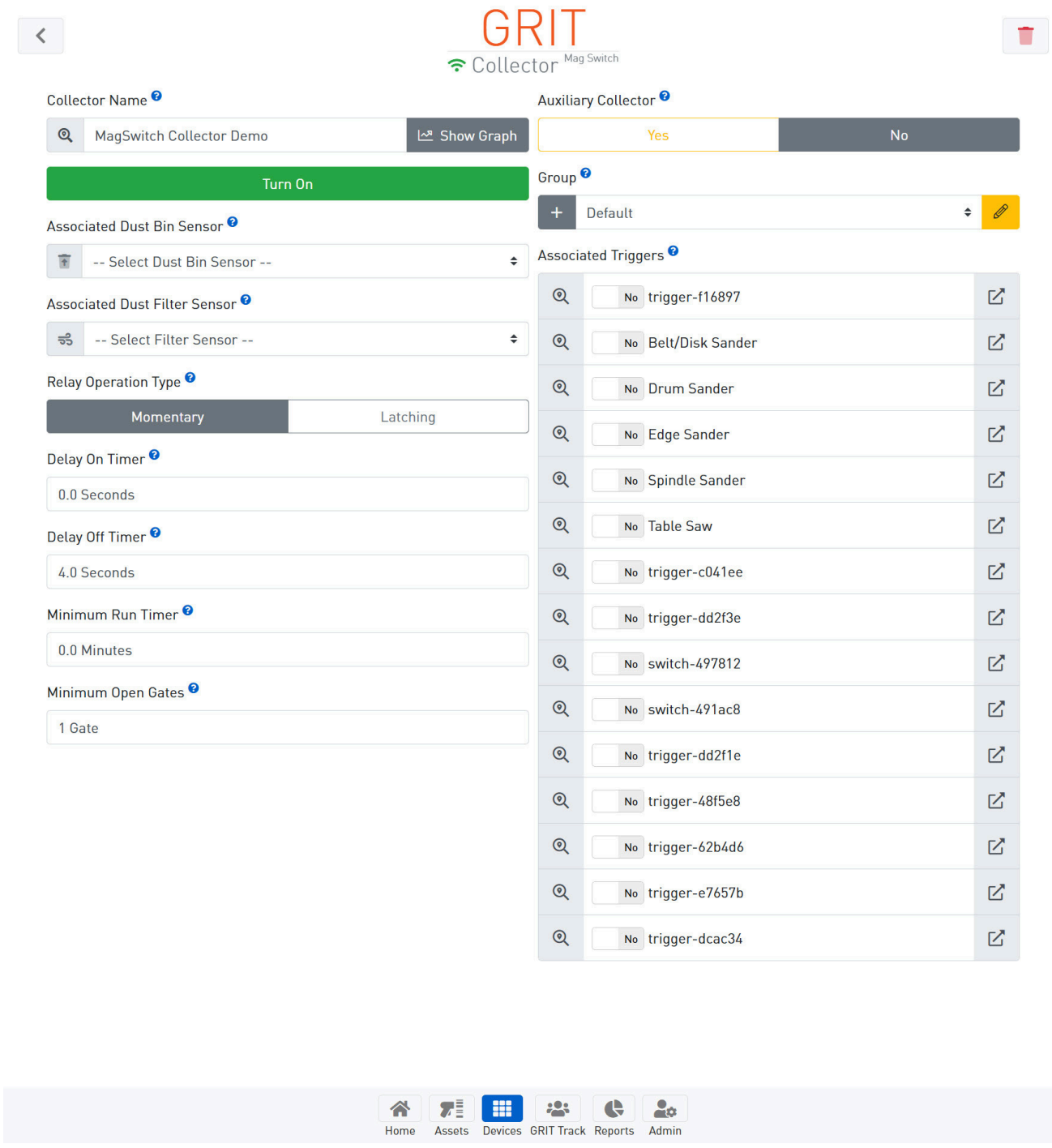
Step 4: Finish installation, Bind the new device, and Configure

Procedure:

1. If space allows, mount the MagSwitch Collector inside the tool’s cabinet or contactor. If not, drill a knockout to pass the connection wires (AC, CT, Control) through and mount the device on the outside of the contactor. The MagSwitch Collector can also be mounted inside an additional enclosure if you do not wish to mount it directly outside of the cabinet/ contactor.
2. Reconnect power/ flip breaker on.
3. Assuming wiring is correct and secure, the GRIT MagSwitch’s LED will begin to flash red/green to indicate that it is ready to Bind with the HUB.
4. Turn on Binding.
5. Find the new MagSwitch device listed in the Collector section of the Devices page in the GRIT App.
6. Complete Collector configuration and Trigger associations, being sure to select whether the dust collector is ‘Momentary’ or ‘Latching’ under ‘Relay Operation Type’.
7. Once the MagSwitch Collector is associated with at least one Trigger, test the ‘On’ and ‘Off’ commands.

MagSwitch Configuration

With the MagSwitch Collector physically installed, the next phase involves configuring the device through the GRIT App. This section provides an overview for each available configuration option.



What's on this screen?

1. **Locate Button-** Activate the device's LED indicator for easy identification.
2. **Real-time Power Graph-** Monitor real-time power data from the connected equipment.
3. **Collector Name-** Replace the default device name by clicking in the text field and entering a descriptive identifier that matches your connected equipment for easy system management.
4. **Turn On/ Turn Off Button-** Use this button to manually turn the dust collector on or off. When delay-off settings are configured, pressing this button can override the delay and immediately shut down the collector.
5. **Associated Dust Bin Sensor-** Use this dropdown to associate a Dust Bin Sensor.
6. **Associated Dust Filter Sensor-** Use this dropdown to associate a Pressure Sensor.
7. **Relay Operation Type-** Configure the relay operation mode for dust collector activation. Select 'Momentary' for most magnetic contactors (recommended default), or choose 'Latching' if required by your specific collector model.
8. **Delay On Timer-** Set the number of seconds the collector should wait to turn on after an associated Trigger has been activated. If no gates need to be changed, the collector will immediately turn on. This setting gives the system a chance to move the gates first when a collector is too powerful. The LED on the Collector device will flash green to indicate that it has received the message to turn on.
9. **Delay Off Timer-** Set the number of seconds the collector should wait to turn off after all associated Triggers have been deactivated. The LED will flash red to indicate that it has received the message to turn off.
10. **Minimum Run Timer-** Set the number of minutes that the collector must run after it has been turned on. The timer for this feature starts when the collector first turns on. If all Triggers have been deactivated and this minimum time has not elapsed, the collector will remain on until this minimum time has passed. If the value is set to 0, the feature is disabled.
11. **Minimum Gates Open-** Set the minimum number of open gates for this collector. The system finds all gates connected to this collector through the associated triggers and ensures that the number of gates that are open is at least this number even if the number of tools running should dictate they are not open. It also takes into account any branch gates that would be required to open.
12. **Auxiliary Collector-** Set whether this Collector is a primary dust collector or an auxiliary collector. Primary collectors can be associated to multiple gates and tools. Auxiliary collectors can only be associated with a single tool and will not affect the open/close
13. **Associated Triggers-** Select the Triggers that when running will cause the collector to turn on.