X-VENTISO by earthcore®

Controlled Power Series GBC and WBC Draft Controllers

Installation, Operation and Maintenance

XV-GBC Gas applications
XV-WBC Solid fuel applications

For use with one XV Series draft inducer. Two flues: see the GBC-DUO / WBC-DUO manual. Three or four flues (XV-MULTICTRL): call before you install.

1 Read First

Read this manual fully before installing, and leave it with the homeowner. Installation and service are for qualified personnel familiar with the codes that apply to the job.

DANGER: Disconnect, lock out and tag all power before installing or servicing. Failure to do so can cause fire, shock or serious injury.

WARNING: Do not install, use or service in an explosive or hazardous environment.

CAUTION: Follow all national, state and local codes. Where they differ from this manual, the code governs.

THE TWO MOST COMMON INSTALL CALLS. CHECK THESE BEFORE YOU CALL.

1. **The system will not turn on.** The system only runs when **both** of these are true: **(1)** the 4 ft ignition connector cable is plugged into the back of the wall control (MUC), and **(2)** its blue and orange wires are closed. WBC: through a switch (turned on), remote or automation contact, or joined with the factory-installed lever nut. GBC: the appliance's ignition control closes them when it calls. Miss either one and the controller never gets a call to run.

2. **The fan disconnect shorted out.** The disconnect box at the fan is NEMA 3: rain-resistant, **not waterproof**. Mount it **vertical only, with the fan cable entering at the top** and the controller cable leaving at the bottom. Any other position lets water in and shorts the switch.



The controller is sealed at the factory. There is nothing inside to adjust. Opening the controller voids the warranty. The only setting you make is fan speed, using the slider on the wall control (see Section 6). If an alarm will not clear, call 800.642.2920.

What this manual covers

1. Read First
2. Which Controller, What You Need
3. Install the GBC (Gas)
4. Install the WBC (Solid Fuel)
5. Mount the Wall Control

A. Ignition Module Connections

6. Start Up and Set Fan Speed
7. How It Works
8. Troubleshooting
9. Specifications
10. Startup Checklist and Commissioning Record

B. On/Off Control Options
C. More Than One Flue (XV-MULTICTRL)

The system in one paragraph

The controller runs the XV Series draft inducer at a fixed speed you set once at startup, proves draft every time the system runs, and sounds an alarm if draft is lost. On gas (GBC), it also proves the damper open and holds the gas appliance off until draft is proven. On solid fuel (WBC), it proves draft by the draft inducer's motor current and alarms per NFPA 211. All connections are factory-wired Molex plugs. Only the controller plugs into a 120 V receptacle. The draft inducer plugs into the controller (3-pin Molex) and is powered by the controller.

2 Which Controller, What You Need

	XV-GBC (Gas)	XV-WBC (Solid Fuel)
Use on	Gas applications	Solid fuel applications
How draft is proven	Stack pressure probe in the flue	Draft inducer motor current (no probe)
Damper	Top mount or inline gas flue damper, proven open before the appliance lights	Top mount solid fuel damper (SFD), or no damper with the XV-DMPJUMP jumper
Appliance connection	4 ft ignition connector cable from the wall control to the appliance ignition control (gas interlock)	4 ft ignition connector cable from the wall control to a switch, remote receiver or automation contact, or a lever nut jumper
Alarm	Audible and visual, at the wall control	
Horizontal (sidewall) termination	Permitted, with the sidewall adapter	**Not permitted**
Draft inducer	XV Series draft inducer, sized to the appliance (call for sizing help)	
Designed for	NFPA 54 installations	NFPA 211 installations
More than one flue	Two flues: use the GBC-DUO or WBC-DUO (separate manual). Three or four flues: XV-MULTICTRL runs two controllers from one wall control (a DUO plus a single, or two DUOs). Same fuel type only. See Appendix C, and call before you install.	

In the box

- Controller (sealed), 6 ft power cord
- Wall control (MUC) with 6-pin extension cable
- Two CR2032 back-up batteries in tray
- **4 ft ignition connector cable**: black 4-pin Molex to the back of the wall control
- **GBC:** stack pressure probe and tubing; two SIT Proflame 2 terminal blocks, factory-connected to the ignition connector cable
- **WBC:** lever nut, installed on blue and orange of the ignition connector cable, and XV-DMPJUMP damper jumper (lets the WBC run with or without a damper)

Sold separately

- XV Series draft inducer and XV Series fan adapter sized to the flue
- Vibration dampener (accessory)
- Damper: top mount or inline gas flue damper (GBC); top mount solid fuel damper (WBC)
- Test port flue length and test port plug adapter (GBC)
- GBC ignition adapters: XV-IGN-ADPT-RS (Robertshaw 780-715 U); XV-IGN-PFAK (switch or automation on Proflame 2)
- Fan extension cables: 20, 50 or 100 ft (custom lengths by request)
- 4-pin extension cable, only if the switch is beyond reach of the 4 ft ignition connector cable

Before you start, confirm the site

- **Power:** a 120 V, 15 A grounded duplex receptacle within 6 ft of the controller. On gas jobs the same duplex also feeds the appliance's gas valve control box.
- **Controller location:** indoors, dry, accessible after the finish is complete. Between 5 and 104°F, no condensing humidity. Away from heat, heavy vibration, and high-power wiring or equipment. Gas: near the gas valve control box, within the distance the appliance manufacturer allows.
- **Conduit:** we recommend conduit from the roof to the chase as a pull path for install and future replacement: one 3/4 in. conduit carries the fan cable and the damper cable together. Outside, run it downward from the disconnect box so water drains away.
- **Cable length:** one continuous cable is best (call for custom lengths). Any extension connection must stay accessible, never inside conduit or a closed wall.
- **Solid fuel:** vent pipe must be UL 103 or UL 103HT rated, at the clearances the appliance manufacturer specifies. Confirm a working smoke alarm is present in the home (supplied by the building, not this kit), especially on retrofits.

3 Install the GBC (Gas)

Pick your damper configuration first. The two configuration pages (6 and 7) show every part and every connection; the steps below follow them.

Configuration	Damper	Page
GBC with top mount damper	Top mount gas flue damper at the termination, under the draft inducer	Page 6
GBC with inline damper	Inline gas flue damper in the flue run, below the roof line	Page 7

At the appliance

1. Install the fireplace and its ignition control per the appliance manufacturer's instructions.
2. Install the X-VENTISO test port flue length as the first section above the appliance flue adapter. It carries the factory-built port for the stack probe.
3. Mount the GBC controller near the gas valve control box, in a spot that stays accessible after installation. Fasten it to a wall or framing through the mounting fins at each end, with fasteners suited to the surface.

In the flue

4. Install the damper for your configuration. **Top mount:** at the termination, seated flush on the last flue section. **Inline:** between two standard flue sections. Either way, keep it accessible for service.
5. Insert the stack probe into the test port plug adapter on the test port flue length. Connect the probe tubing to the **lower** pressure port on the side of the controller. Keep tubing free of kinks.

> **Do not drill the vent.** Drilling or otherwise modifying factory-built vent pipe can void the vent manufacturer's listing. The test port flue length provides a factory-built probe port so you never have to. On a retrofit where a test port flue length cannot be installed, call 800.642.2920 before going further.

At the termination

6. Install the XV Series fan adapter sized to the flue (inline configuration), or use the top mount damper as the mounting base (top mount configuration).

> **Sidewall (horizontal) termination, gas only:** anchor the adapter to wall framing at four points, able to support at least 150 lb. Flash every wall penetration and seal the adapter to the structure with non-hardening waterproof sealant. See the drawing at the end of this section.

7. If the job includes the vibration dampener accessory, install it first. Mount the draft inducer with the supplied hardware.
8. Mount the fan disconnect box **vertically**. Run the fan cable and the damper cable to the controller, with exterior conduit running downward.

> **MOUNT THE DISCONNECT VERTICAL. NO EXCEPTIONS.**
> The fan disconnect box is NEMA 3: rain-resistant, not waterproof. Mount it vertical with the **cable from the fan entering at the top** and the cable to the controller leaving at the bottom. Flat, sideways or upside down, water gets in and shorts it out.

Make the connections

Molex	From	To
White 3-pin	Controller	Draft inducer
White 4-pin	Controller	Damper
Black 6-pin	Controller	Wall control (MUC), through the 6-pin extension
Black 4-pin	Back of the wall control (MUC), on the 4 ft ignition connector cable	Appliance ignition control. SIT Proflame 2: plug the factory-connected terminal blocks into X4 and X13. Robertshaw 780-715 U: use adapter XV-IGN-ADPT-RS. **Required: without it the system never gets a call to run.**

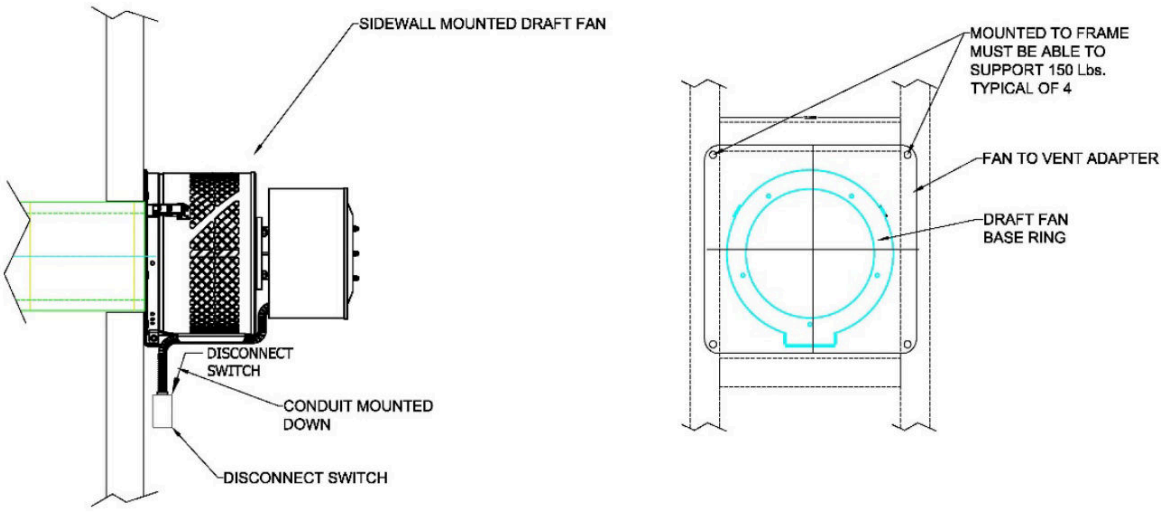
Ignition wire	Function	SIT Proflame 2
Black and Red	Proven draft relay (releases the appliance once draft is proven)	X4
Blue and Orange	Ignition demand (the appliance's call for the system to run)	X13

Ignition module wiring: see Appendix A for Proflame 2, Dexen, Robertshaw 780-715 U and Resideo / Honeywell S8610U connections.
SIT Proflame 2 modules: the ignition connector cable comes with its two terminal blocks factory-connected. Plug them into the module's native terminals: **Black and Red to X4** (proven draft relay), **Blue and Orange to X13** (ignition demand). Leave the module's own connections as the fireplace manual specifies (power on X1; pilot assembly and gas valve on X2, X3, X5 and X6).

Finish

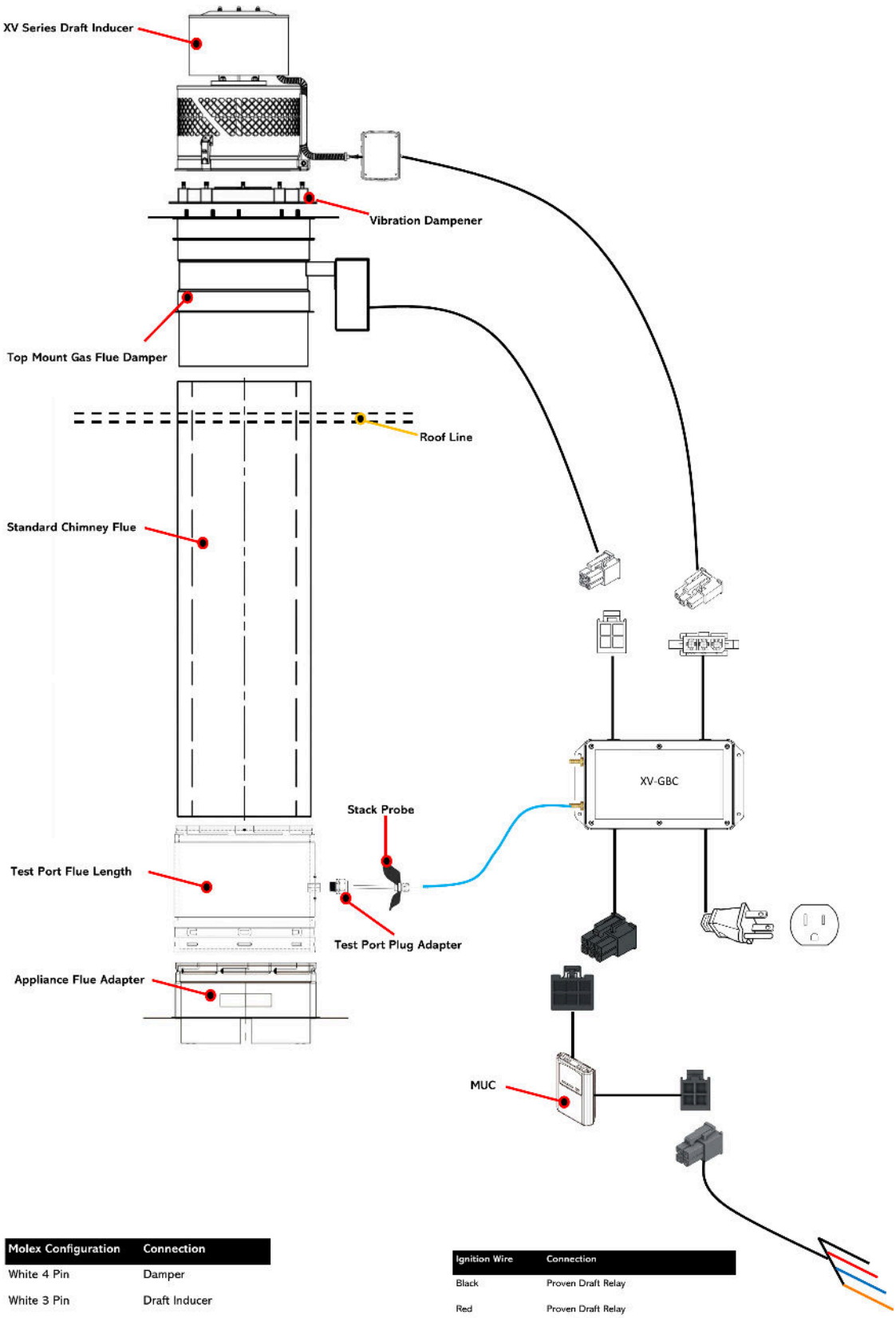
9. Confirm all gas connections are complete between service, gas valve control box and burner (main and pilot), per the appliance manual.
10. Plug the gas valve control box and the GBC controller into the duplex receptacle. Do not start the system until you complete the Startup Checklist (Section 10).

Sidewall (horizontal) termination, gas only



Adapter anchored to framing at four points, 150 lb minimum. Disconnect below the fan, conduit run downward.

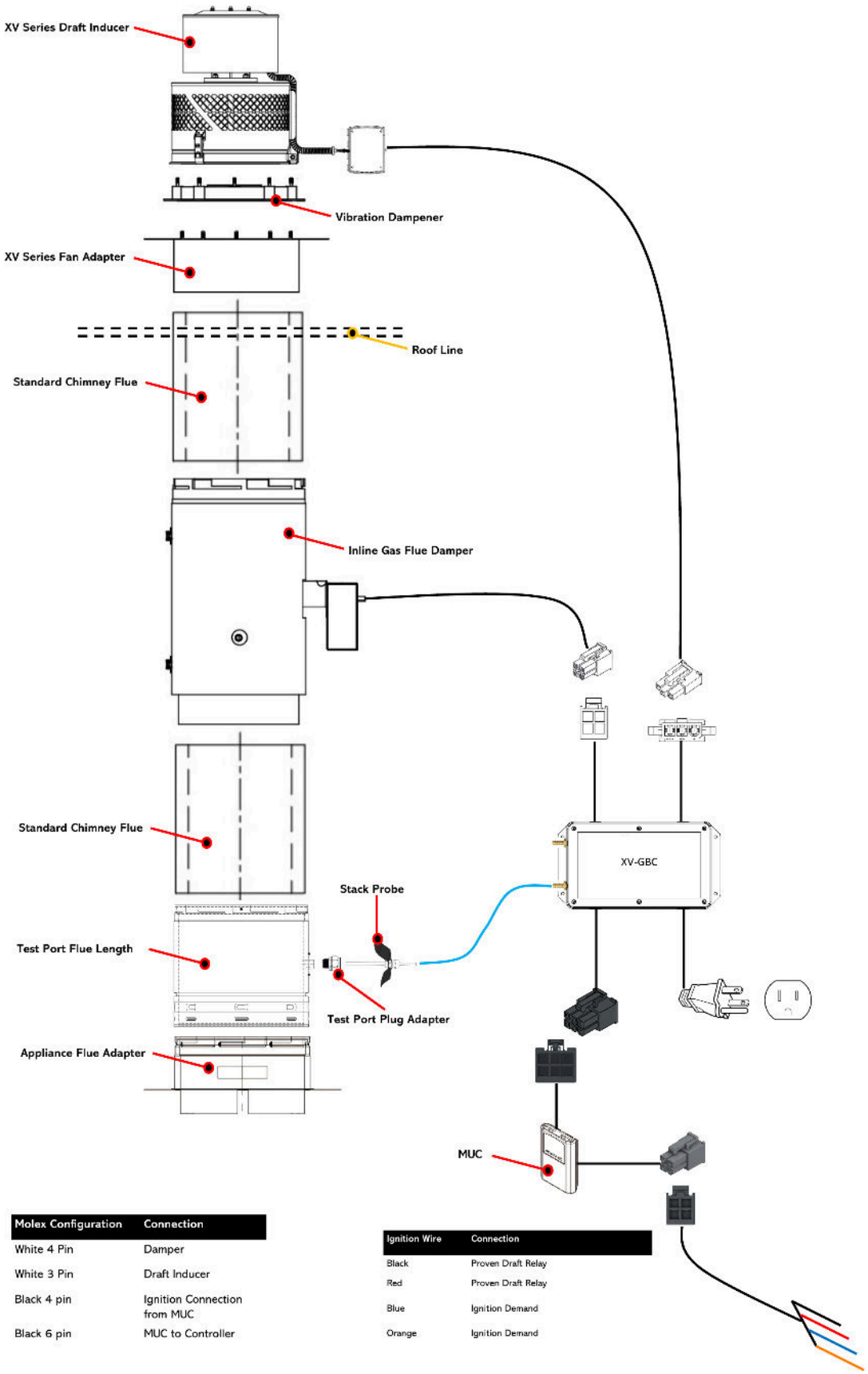
XV-GBC with Top Mount Damper



Molex Configuration	Connection
White 4 Pin	Damper
White 3 Pin	Draft Inducer
Black 4 pin	Ignition Connection from MUC
Black 6 pin	MUC to Controller

Ignition Wire	Connection
Black	Proven Draft Relay
Red	Proven Draft Relay
Blue	Ignition Demand
Orange	Ignition Demand

XV-GBC with Inline Damper



Molex Configuration	Connection
White 4 Pin	Damper
White 3 Pin	Draft Inducer
Black 4 pin	Ignition Connection from MUC
Black 6 pin	MUC to Controller

Ignition Wire	Connection
Black	Proven Draft Relay
Red	Proven Draft Relay
Blue	Ignition Demand
Orange	Ignition Demand

4 Install the WBC (Solid Fuel)

Solid fuel: vertical termination only, never horizontal. Use only the solid fuel damper (SFD); gas dampers are not heat-rated for solid fuel, even though the plug fits.

Configuration	Damper port on the controller	Page
WBC with no damper	XV-DMPJUMP damper jumper (included with the WBC) plugged into the white 4-pin. **Required:** do not leave the port open.	Page 9
WBC with solid fuel damper	Top mount solid fuel damper on the white 4-pin	Page 10

1. Install the appliance per its instructions. Mount the WBC controller near it, accessible, within 6 ft of the receptacle, fastened through the mounting fins at each end.
2. **No damper:** install the XV Series fan adapter sized to the flue at the termination. **Solid fuel damper:** install the top mount solid fuel damper at the termination, seated flush on the last flue section, and keep it accessible.
3. Install the vibration dampener, if used, then mount the draft inducer with the supplied hardware.
4. Mount the fan disconnect box **vertically**. Run the fan cable (and damper cable, if used) to the controller, with exterior conduit running downward.

MOUNT THE DISCONNECT VERTICAL. NO EXCEPTIONS.

The fan disconnect box is NEMA 3: rain-resistant, not waterproof. Mount it vertical with the **cable from the fan entering at the top** and the cable to the controller leaving at the bottom. Flat, sideways or upside down, water gets in and shorts it out.

5. Make the connections:

Molex	From	To
White 3-pin	Controller	Draft inducer
White 4-pin	Controller	Solid fuel damper, or XV-DMPJUMP if no damper
Black 6-pin	Controller	Wall control (MUC), through the 6-pin extension
Black 4-pin	Back of MUC (ignition connector cable)	On/off contact (see below). **Required for the system to run.**

6. Plug the WBC controller into the receptacle. Do not start the system until you complete the Startup Checklist (Section 10).

THE BLACK 4-PIN ON THE BACK OF THE MUC IS NOT OPTIONAL.

Every job: **(1)** plug the 4 ft ignition connector cable into the back of the MUC; **(2)** close blue and orange (switch, remote, automation contact or the factory lever nut). Miss either one and the WBC never turns on.

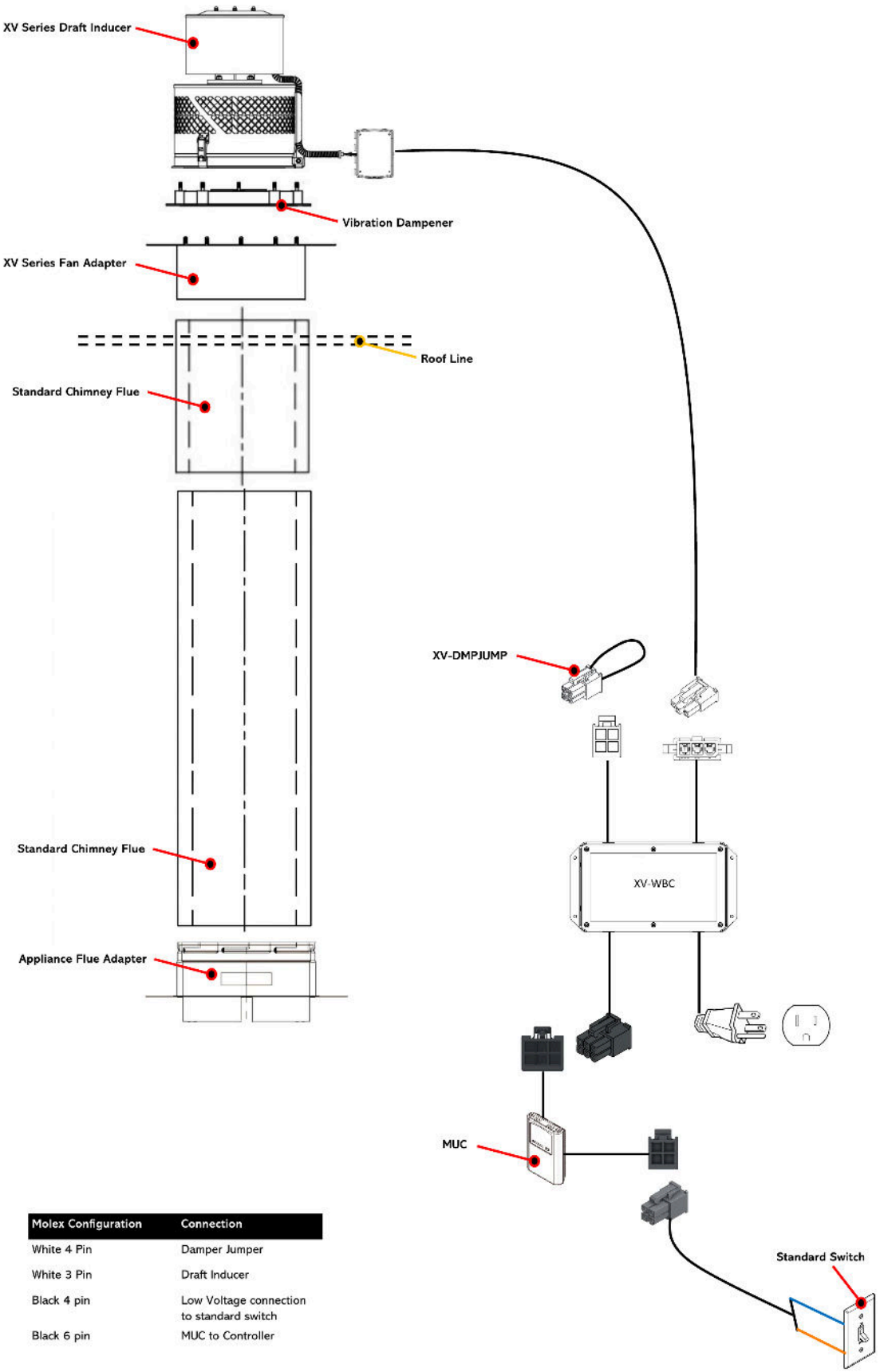
The on/off contact (choose one; diagrams in Appendix B)

NEVER PUT VOLTAGE ON BLUE + ORANGE.

Blue + Orange already carry 24 VDC from the controller. Close them with a dry contact only: a switch, lever nut, remote receiver contact or automation relay. **Never connect line voltage (120 V), 24 VAC or a remote's battery power to them.**

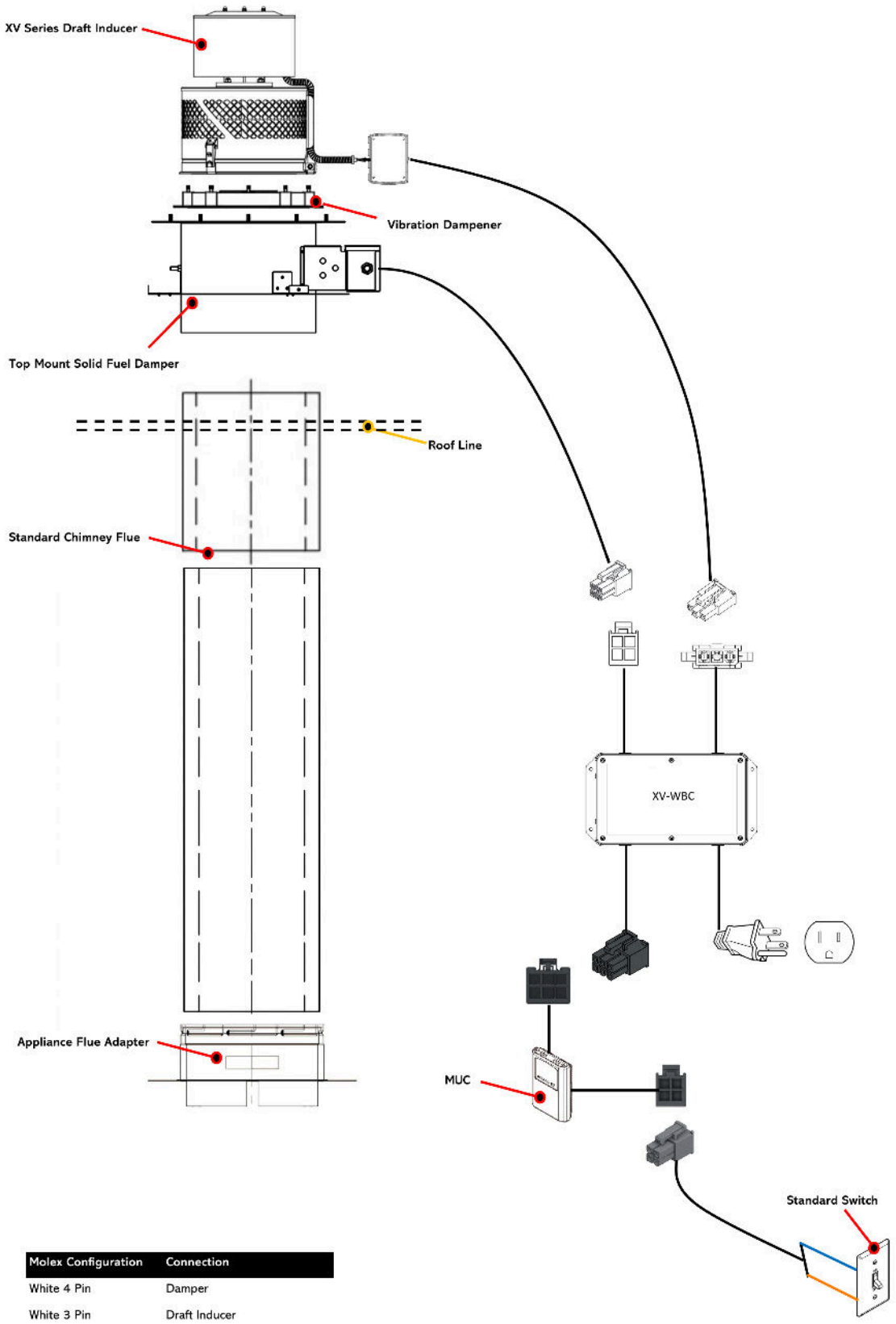
Option	How
Standard switch	Any standard wall switch (4-pin extension if needed). Remove the lever nut.
Remote or home automation	Any dry contact: a hearth remote receiver or automation relay (field installs include Lutron and Crestron). Remove the lever nut.
No switch	Leave the factory lever nut on **blue and orange**; runs whenever the slider is above OFF.

XV-WBC with No Damper



Molex Configuration	Connection
White 4 Pin	Damper Jumper
White 3 Pin	Draft Inducer
Black 4 pin	Low Voltage connection to standard switch
Black 6 pin	MUC to Controller

XV-WBC with Solid Fuel Damper (SFD)



Molex Configuration	Connection
White 4 Pin	Damper
White 3 Pin	Draft Inducer
Black 4 pin	Low Voltage connection to standard switch
Black 6 pin	MUC to Controller

5 Mount the Wall Control

The wall control (MUC) mounts on a standard single-gang electrical box or directly to the wall. **Low voltage only:** no 120 V reaches the wall control or any of its cables. Line voltage exists only inside the controller.

1. Remove the cover: it hooks on at the top, so release the bottom edge first (pry each bottom corner gently with a small screwdriver; loosen the security screw if one is installed).
2. Press the base near the bottom latch and lift the control out. Handle it by the edges and use normal anti-static care.
3. Screw the base to the box or wall using the holes in Figure 1.
4. Pull the cables through the center opening, snap the control back into the base securely, and replace the cover.

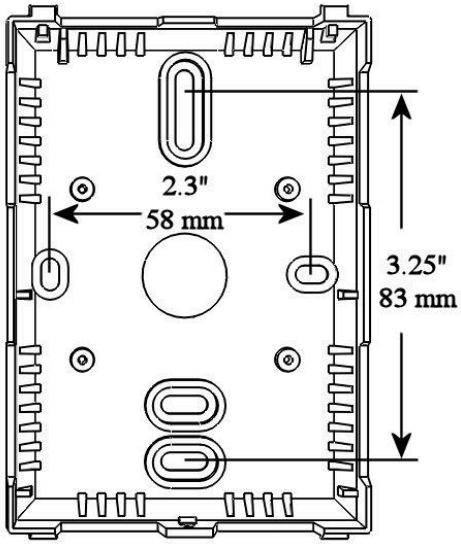
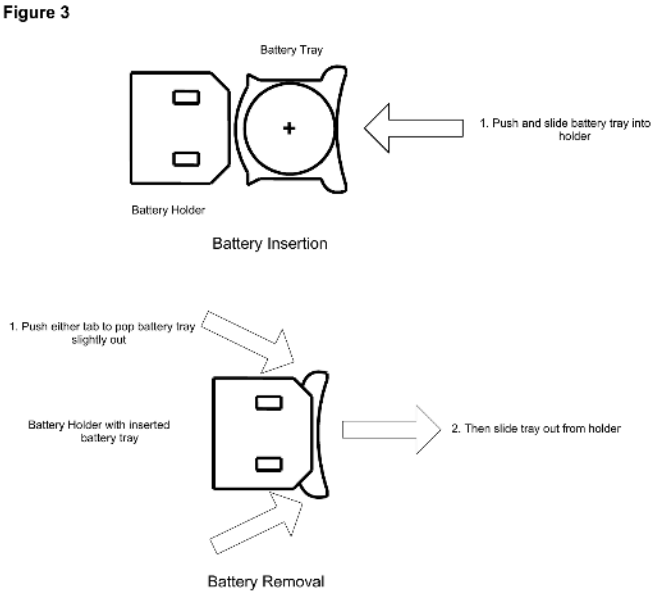


Figure 1. Mounting holes

Install the back-up batteries

After all wiring is connected, slide the battery tray into its holder with the positive (+) side facing up. To remove, push either tab to pop the tray out, then slide it free.

The batteries keep the alarm working if power is lost. Replace both when the green light flashes.



Battery tray insertion and removal

6 Start Up and Set Fan Speed

Fan speed is the one setting on this system, and it is what makes the install quiet. Set it once, at the lowest speed that holds steady draft. The homeowner only turns the system on and off.

Wall control front panel

RUN (green)	System running, draft proven
ALARM (red)	Draft or damper not proven
OFF to MAX slider	Fan speed. The system will not start below about 20% of travel.
MUTE	Silences the buzzer for 5 minutes; it sounds again until the fault clears. The red light stays on until the fault clears.

Set the speed

Always start at full speed and work down. Setting draft is the technician's call: on solid fuel the smoke shows you; on gas, work the system until it draws cleanly. For fully automatic draft control with no speed to set, use the Meridian controller (gas).

1. Complete Startup Checklist parts A and B (Section 10).
2. Slide the wall control to **full (MAX)** and start the appliance (gas: by the remote or appliance control; solid fuel: switch on and light the fire). The green RUN light should come on within 15 seconds.
3. Let the appliance reach **normal operating temperature** before you set the speed. Commission with the system hot, not at cold start.
4. Lower the slider slowly. Stop at the lowest setting that holds steady draft with no spillage and no alarm. Solid fuel: smoke should draw cleanly into the firebox. Gas: watch the flame and check the opening for spillage.
5. The system will not run below its minimum setting, so you cannot set it too low. If it stops or alarms, raise the slider until it holds.
6. Worst-case check: with the appliance running, turn on the range hood, dryer and bath fans and close interior doors. If smoke or flue gas spills, raise the slider slightly and recheck. Persistent spillage under exhaust points to a makeup air shortage, not a speed problem: call.
7. Cycle the system off and on at least three times and confirm it starts, proves and shuts down normally each time.
8. Record the final slider position on the Commissioning Record and show the homeowner how to turn the system on and off. Tell them not to move the slider.

7 How It Works

Sequence of operation

Stage	What happens
Off	Waiting for a call: the gas appliance (GBC) or the on/off contact (WBC), with the slider above about 20%.
Start	Draft inducer starts. GBC opens the damper and proves it open.
Prove	Controller confirms draft within 15 seconds (GBC by stack pressure, WBC by motor current). GBC then releases the gas interlock so the appliance can light.
Run	Draft inducer holds the speed set at startup. Draft is monitored continuously.
Call ends	GBC releases the gas interlock right away. The draft inducer runs a 60-second post-purge, then stops. Sliding the wall control to OFF stops the system.
Alarm	If draft (or the GBC damper) does not prove for 15 seconds: red light, buzzer, and GBC holds the gas appliance off. The damper stays open. When the fault clears for 2 seconds, the system returns to normal on its own.
Power loss	Wall control switches to its back-up batteries: both lights on and the buzzer sounds.

Wall control lights

Green	Red	Meaning
Off	Off	Not running
On	Off	Running normally
Flashing	Off	Running, batteries low: replace both
Off	On	Alarm
Off	Flashing	Alarm, buzzer muted
On	On	Power lost, running on batteries

Mute: press MUTE to silence the buzzer for 5 minutes. If the fault has not cleared, the buzzer sounds again; it repeats until the fault is cleared. The red light stays on the whole time.

8 Troubleshooting

Every check below can be done without opening the controller. If these do not solve it, unplug the controller for 10 seconds and plug it back in. If the alarm returns, call **800.642.2920**. Do not open the controller.

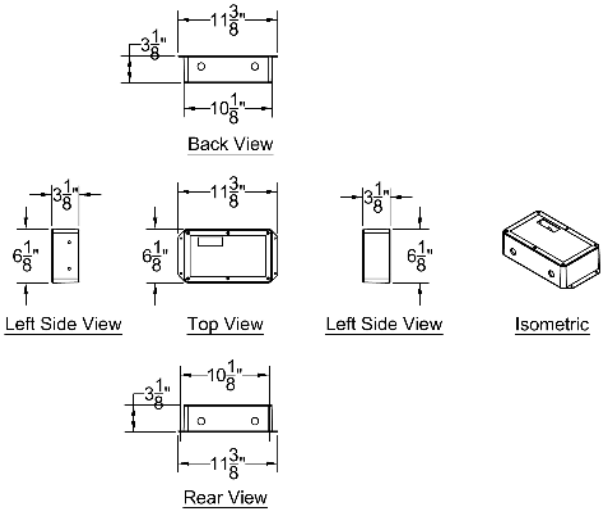
Symptom	Check
Nothing happens, no lights	• **First check:** 4 ft ignition connector cable is plugged into the back of the wall control, **and** blue and orange are closed (WBC: switch turned on, or lever nut installed; GBC: appliance is calling) • Receptacle has power; controller is plugged in • 6-pin wall control cable is fully seated at both ends • Slider is above about 20% • GBC: remote synced to the ignition module • Proflame 2 appliances: AUX is turned ON at the Proflame remote
Green light on, draft inducer not running	• Disconnect box mounted vertical, fan cable at the top, no water inside (a flat or sideways box takes on water and shorts out) • Disconnect switch at the fan is on (open the front cover of the disconnect box; do not open the sealed back compartment) • 3-pin connection and any extension connections are seated • Fan cable is undamaged; impeller turns freely
Red ALARM GAS	• **Damper:** white 4-pin damper cable seated; damper seated and free of obstruction • **Draft:** tubing on the **lower** port; tubing not kinked, pinched or blocked; probe seated in the test port plug adapter and clear • Flue blockage; fan disconnect off • Speed set too low for conditions: raise the slider slightly
Red ALARM SOLID FUEL	• Fan disconnect wet or shorted: confirm it is mounted vertical • Fan disconnect off; 3-pin or extension connection loose • White 4-pin damper port: solid fuel damper connected and free to open, or XV-DMPJUMP in place if there is no damper • Fan cable damage; draft inducer not turning
Green light flashing	Replace both CR2032 batteries.
Smoke or odor at the opening, no alarm	• Raise the slider slightly and recheck • Check for house depressurization: range hood, dryer, bath fans, closed doors. If spillage tracks with exhaust, the home needs makeup air: call.

Conditions outside the controller that can cause an alarm

Room depressurization from exhaust equipment, wind and weather, low supply voltage, natural draft at cold start, and a fire larger than the flue was sized for. An occasional alarm under these conditions is the system doing its job. Repeated alarms mean the speed setting, the flue or the home's makeup air needs a look.

9 Specifications

Models	XV-GBC (gas), XV-WBC (solid fuel)
Electrical rating	120 VAC, 50/60 Hz, 6.0 A
Power connection	6 ft cord, 3-prong grounded plug, to a standard 120 V, 15 A receptacle
Control power	24 VDC, 30 W, Class 2 (limited power source). The wall control and its 6-pin and 4-pin cables are on this circuit.
On/off input (blue/orange)	24 VDC from the controller (sinking input). Close with a dry contact only; never apply outside voltage.
Proven draft relay (black/red)	Dry relay contact, rated 5 A at 250 VAC and 5 A at 30 VDC
Connections	Factory-wired, plug-in Molex: white 3-pin draft inducer, white 4-pin damper, black 6-pin wall control, black 4-pin call/interlock
Draft proving	GBC: stack pressure probe. WBC: draft inducer motor current.
Alarm	Audible and visual, at the wall control; mute silences the buzzer for 5 minutes
Post-purge	60 seconds
Enclosure	NEMA 1 (indoor). Impact-resistant, UV-stabilized polycarbonate, UL94 V-0. Sealed at the factory.
Conduit (suggested)	3/4 in., carrying the fan and damper cables together
Dimensions	11-3/8 x 6-1/8 x 3-1/8 in. (289 x 156 x 79 mm), W x H x D, overall
Operating environment	5 to 104°F (-15 to 40°C), 5 to 90% RH non-condensing
Listings	ETL Listed, Intertek 4007025. Conforms to UL 508 (Industrial Control) and UL/ULC 378 (Draft Equipment).
Wall control back-up	2 x CR2032 3 V lithium coin cells
Designed for	GBC: NFPA 54 installations. WBC: NFPA 211 installations.



Controller enclosure: overall dimensions

10 Startup Checklist and Commissioning Record

Do not skip steps. Skipping steps can create a hazardous condition or damage equipment.

A. Before power

1	Power is off at the receptacle and the fan disconnect.	YES / NO
2	All components installed and secure.	YES / NO
3	All Molex connections fully seated; any extension connections accessible, not in conduit or a closed wall.	YES / NO
4	**Fan disconnect box mounted vertical**, fan cable entering at the top.	YES / NO
5	**4 ft ignition connector cable plugged into the back of the wall control, and blue and orange closed** (GBC: to the ignition control; WBC: switch, contact or lever nut).	YES / NO
6	Draft inducer and termination clear of debris, tools and people.	YES / NO
7	Receptacle voltage verified (120 V).	YES / NO
8	GAS Stack probe in the test port plug adapter; tubing on the lower port.	YES / NO
9	GAS Damper installed and accessible, white 4-pin connected; all gas connections complete and leak-checked per appliance manual.	YES / NO
10	SOLID FUEL Vertical termination; UL 103 / 103HT vent; working smoke alarm present in the home.	YES / NO
11	SOLID FUEL On/off contact connected, or lever nut on blue and orange. Solid fuel damper or XV-DMPJUMP on the white 4-pin.	YES / NO

WARNING: Go on only when the system is complete. The next steps energize the controller and moving equipment.

B. Power up

1	Turn on the fan disconnect and plug in the controller (and gas valve control box).	YES / NO
2	Batteries installed in the wall control.	YES / NO
3	GAS Remote synced to the ignition module per the appliance manual.	YES / NO
4	GAS Proflame 2 only: AUX turned ON at the remote.	YES / NO
5	System starts and green RUN light comes on within 15 seconds.	YES / NO

C. Commissioning

1	Speed set hot, working down from full, to the lowest setting that holds steady draft (Section 6).	YES / NO
2	No spillage with exhaust equipment running.	YES / NO
3	Cycled on and off three times with normal start, prove and shutdown.	YES / NO
4	Homeowner shown on/off operation and told not to move the slider.	YES / NO

Controller model / serial		**Draft inducer model**	
Final slider position		**Installer / date**	

A Appendix A: Ignition Module Connections (GBC)

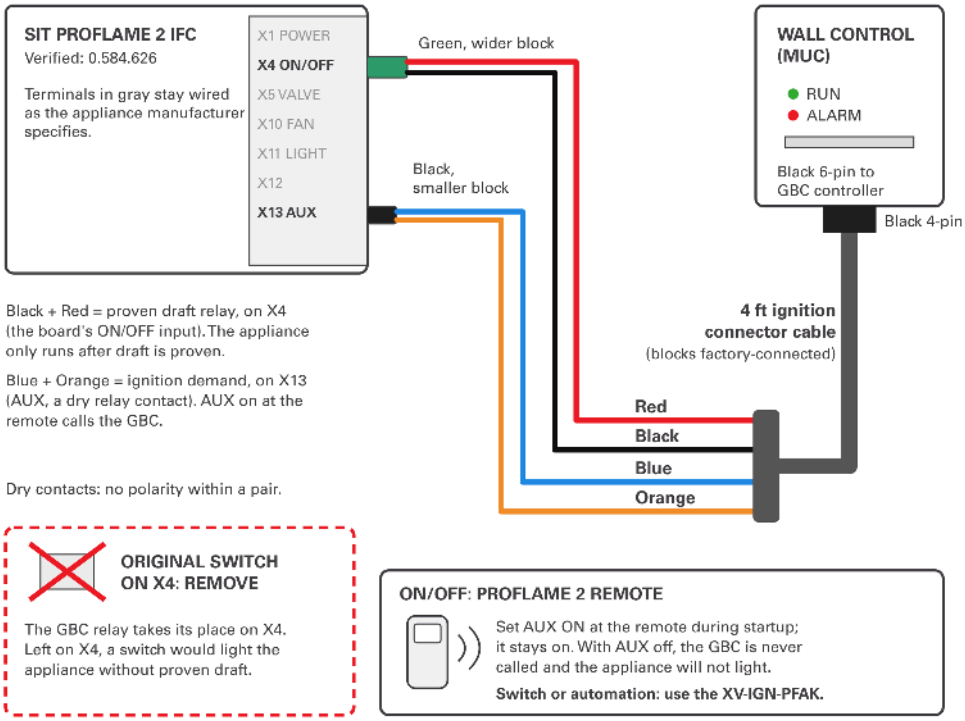
The GBC connects to the appliance's ignition control through the 4 ft ignition connector cable. **Black + Red** are the proven draft relay: the appliance can only light after the GBC proves draft. **Blue + Orange** are the ignition demand: the call that starts the system. **Black + Red** is a dry relay contact, rated 5 A at 250 VAC or 30 VDC. **Blue + Orange** carries 24 VDC from the controller: close it with a dry contact only. Neither pair has polarity. On Dexen, Robertshaw and Resideo / Honeywell modules, Blue + Orange take any of the four on/off options in Appendix B: lever nut, wall switch, remote receiver or home automation. Each module diagram shows them.

Always: verify against the appliance manufacturer's wiring diagram; the appliance's instructions govern. Never leave a switch or remote wired directly to the module: it bypasses draft proving. Module not shown here? Call 800.642.2920 before wiring.

SIT Proflame 2

On Proflame 2, Blue + Orange land on the module at X13. X13 is a dry relay contact (rated to switch up to 120 VAC, 5 A): it closes when AUX is on and puts no voltage on Blue + Orange. X4 is the board's low-voltage (3.3 V) ON/OFF input. Verified on SIT Proflame 2 IFC 0.584.626. The Proflame 2 remote is the on/off control. **Turn AUX ON at the remote during startup.** It stays on once set. The remote's AUX output is what calls the GBC; with AUX off, the GBC never starts and the appliance will not light. To add a wall switch, remote switch or home automation on a Proflame 2 appliance, use the XV-IGN-PFAK kit (next page).

Ignition wire	Function	Proflame 2 terminal
Black and Red	Proven draft relay	X4: green, wider terminal block
Blue and Orange	Ignition demand	X13: black, smaller terminal block

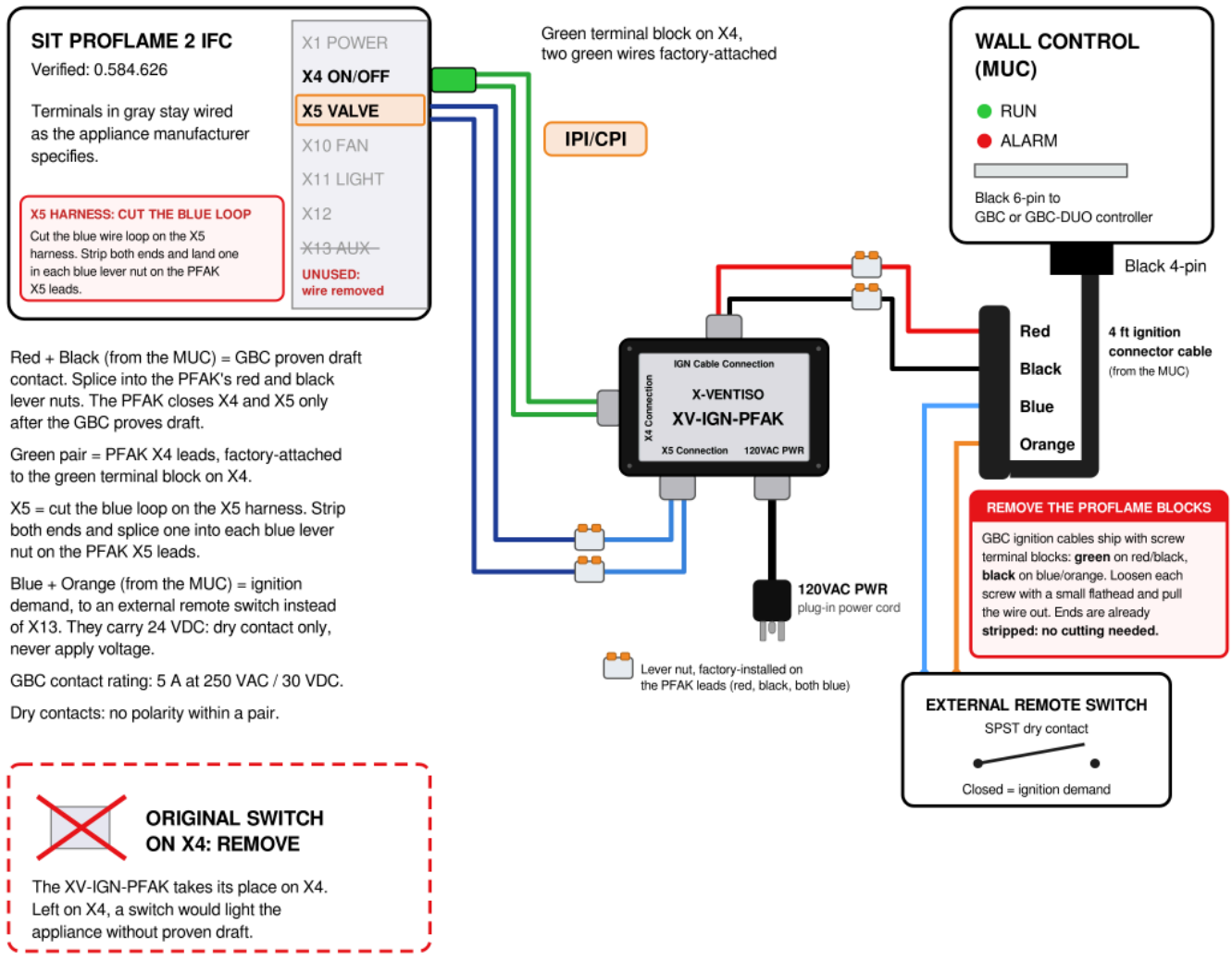


The GBC relay replaces the original ON/OFF switch on X4. AUX on X13 calls the GBC.

SIT Proflame 2 with a switch, remote or automation: XV-IGN-PFAK

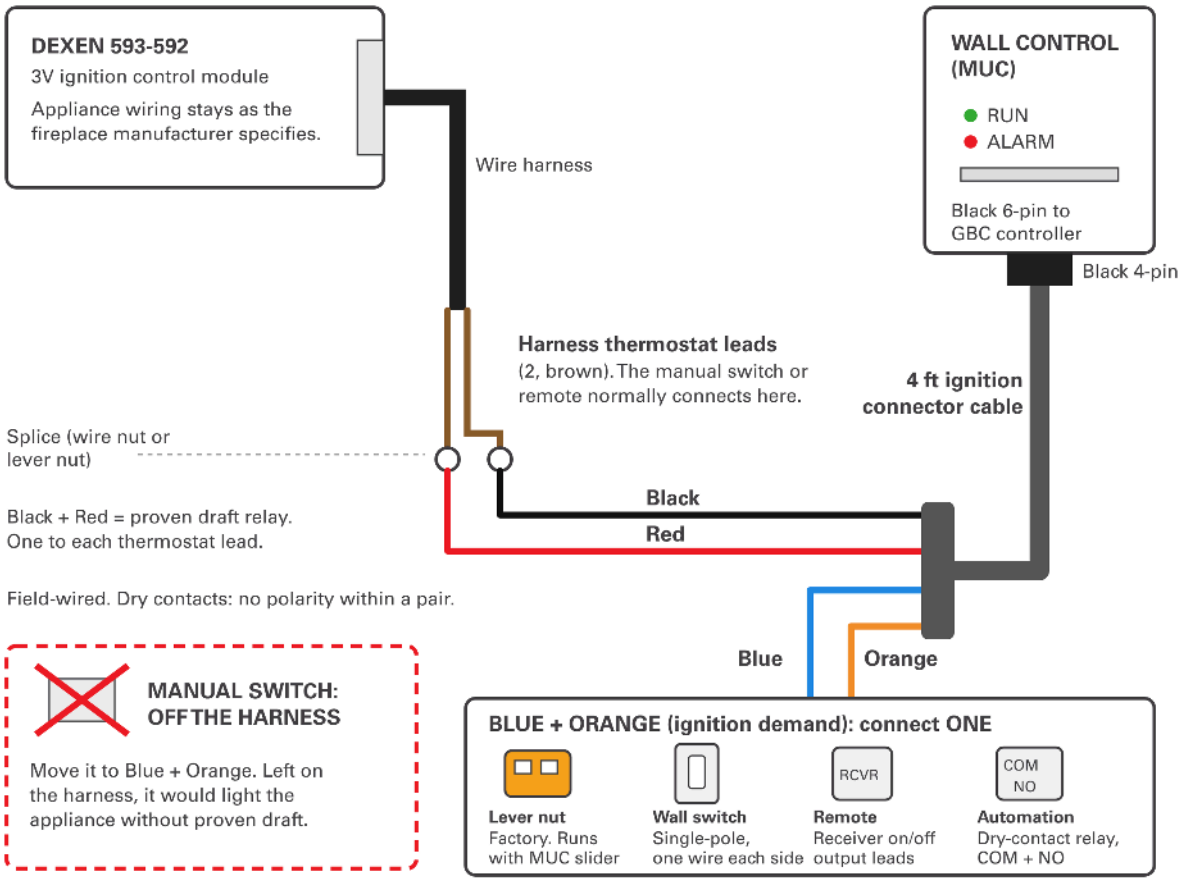
On its own, a Proflame 2 appliance runs only from its Proflame remote. To run it from a wall switch, remote receiver or automation contact instead, add the **XV-IGN-PFAK** kit. The PFAK takes over X4 and X5 and closes them only after the GBC proves draft. That frees Blue + Orange for any on/off option in Appendix B. X13 is not used.

1. **Remove the Proflame blocks** from the ignition connector cable: green on red/black, black on blue/orange. Loosen each screw with a small flathead and pull the wire out. The ends are already stripped.
2. Remove the original ON/OFF switch from X4. Plug the PFAK's green X4 block onto X4.
3. **X5:** cut the blue wire loop on the X5 harness. Strip both ends and land one in each blue lever nut on the PFAK's X5 leads.
4. Land the ignition connector cable's **red** and **black** in the PFAK's red and black lever nuts.
5. Connect **Blue + Orange** to the switch, remote receiver or automation contact (Appendix B). Dry contact only.
6. Plug the PFAK's power cord into a 120 V receptacle.



XV-IGN-PFAK with the GBC: the PFAK closes X4 and X5 only after draft is proven.

Dexen 593-592

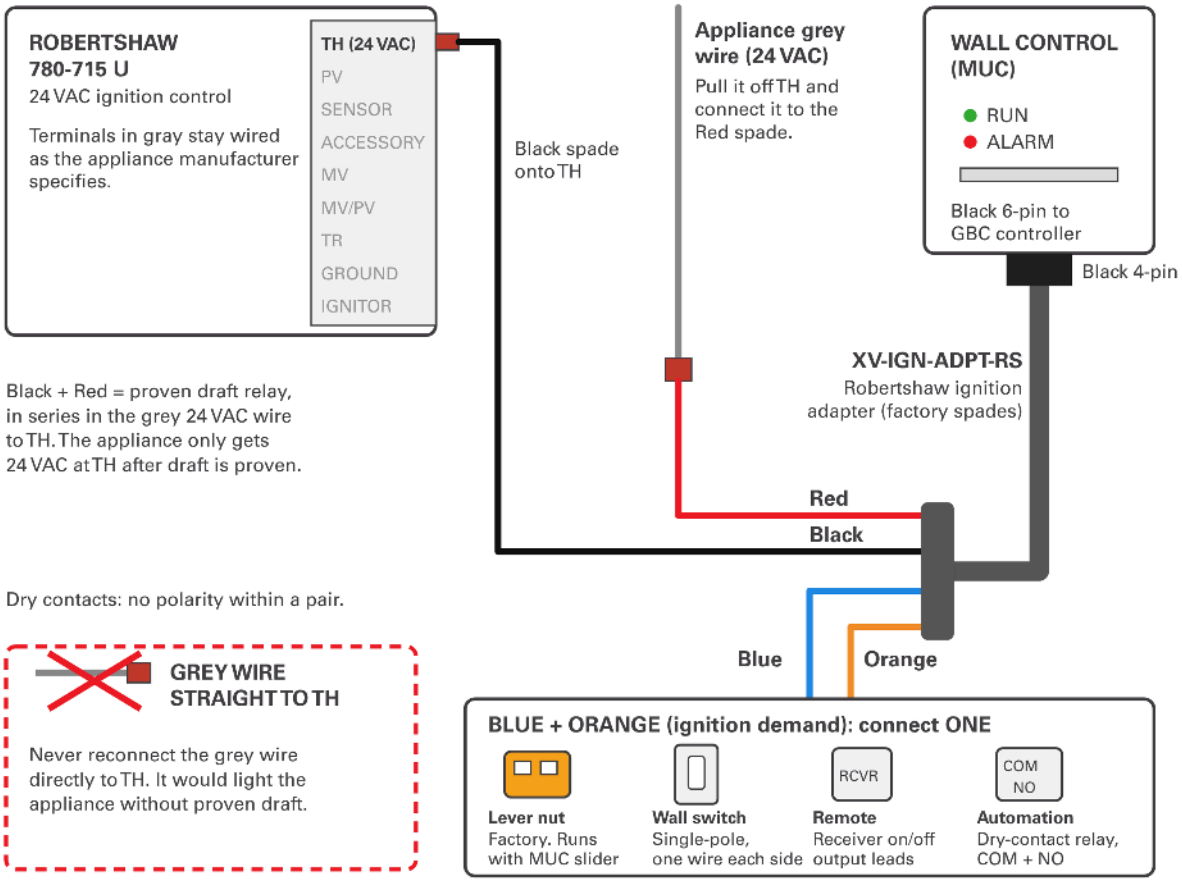


The GBC sits between the call source and the module. Remove the manual switch from the harness.

Robertshaw 780-715 U (24 VAC): use adapter XV-IGN-ADPT-RS

Order **XV-IGN-ADPT-RS**, the Robertshaw ignition adapter. It plugs into the black 4-pin on the back of the MUC in place of the standard ignition connector cable, and comes with factory spade terminals on Black and Red and a lever nut on Blue and Orange. No splicing at the module.

1. Pull the appliance's grey wire spade off the module's **TH (24 VAC)** terminal.
2. Push the adapter's **Black** spade onto TH.
3. Connect the grey wire's spade to the adapter's **Red** spade.
4. Plug the adapter's black 4-pin into the back of the MUC.
5. Leave the lever nut on **Blue and Orange**, unless you are adding an on/off remote, wall switch or automation contact. Then remove it and connect those wires to the remote or switch.

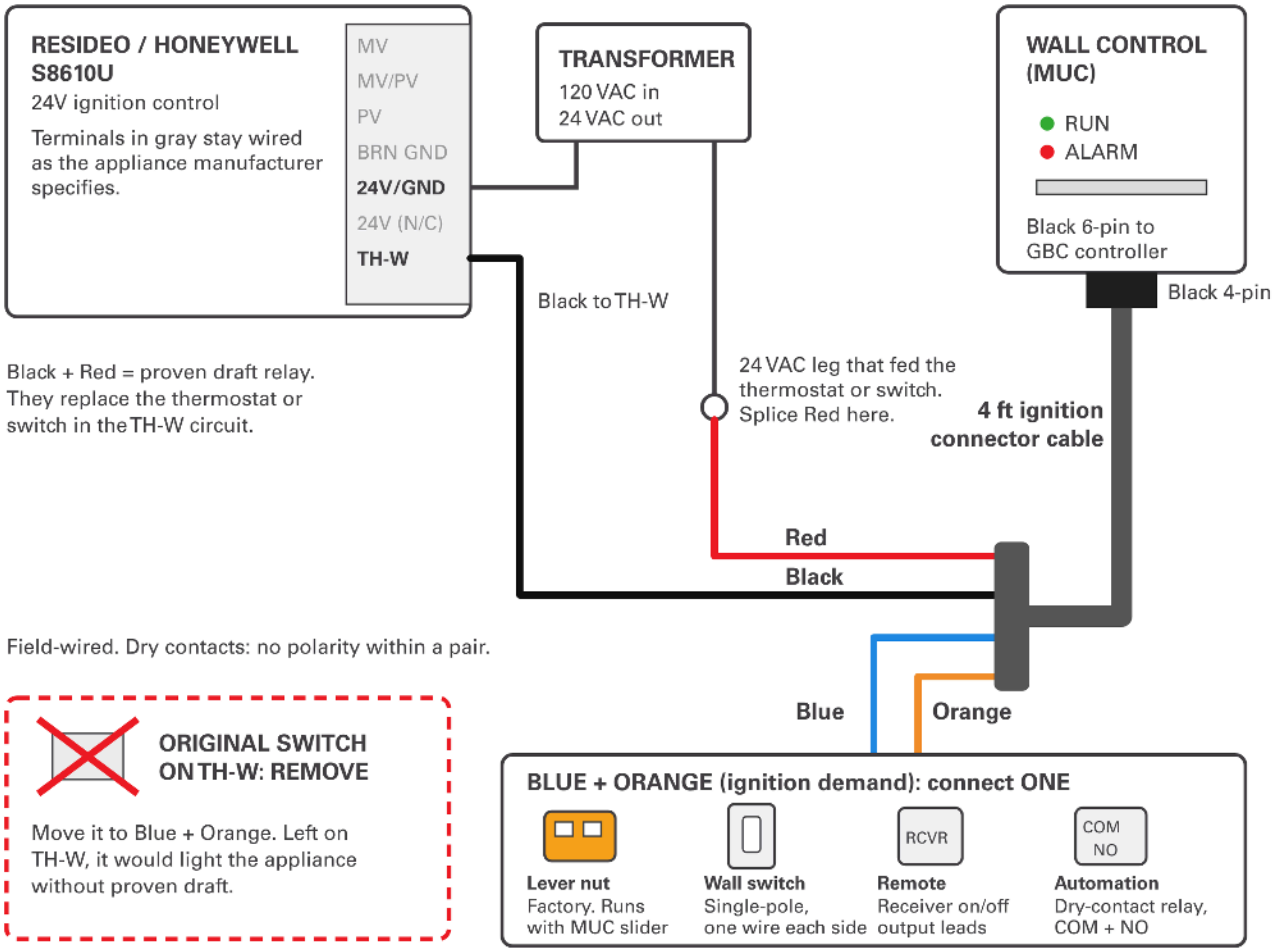


The proven draft relay sits in series in the grey 24 VAC wire to TH.

Resideo / Honeywell S8610U (24V)

The same control is sold under both the Resideo and Honeywell names; the wiring is identical. On 24V modules, the call for heat is the thermostat circuit: the transformer's 24 VAC leg runs through the thermostat or switch to TH-W. The GBC's proven draft relay takes the thermostat's place in that circuit, and the original switch moves to Blue + Orange.

Ignition wire	Function	S8610U connection
Black	Proven draft relay	TH-W
Red	Proven draft relay	Transformer 24 VAC leg that fed the thermostat (other leg stays on 24V/GND)
Blue and Orange	Ignition demand	Switch, remote or automation dry contact



The original switch or thermostat comes off TH-W and moves to Blue + Orange.

B Appendix B: On/Off Control Options (GBC and WBC)

These four options apply to every WBC, and to the GBC on Dexen, Robertshaw and Resideo / Honeywell modules (Proflame 2: with the XV-IGN-PFAK kit, see Appendix A). Blue + Orange on the ignition connector cable (or XV-IGN-ADPT-RS) is the call that starts the system. Close the contact and the system runs; open it and the system shuts down with a post-purge. Pick **one** of the four options below. The MUC slider still has to be above OFF.

A NO SWITCH: LEVER NUT

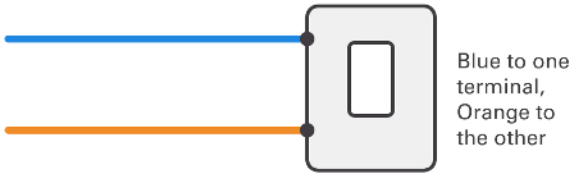
From the ignition cable



The system runs whenever the MUC slider is above OFF. Ships this way from the factory. Remove the lever nut only to use B, C or D.

B WALL SWITCH

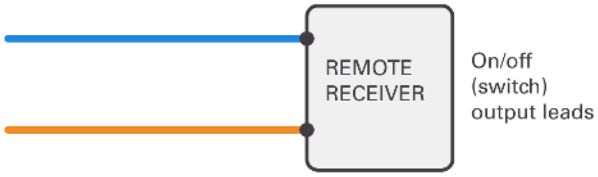
From the ignition cable



Any single-pole switch. It only switches the low-voltage dry contact: no line voltage on these wires. ON = system runs.

C HEARTH REMOTE RECEIVER

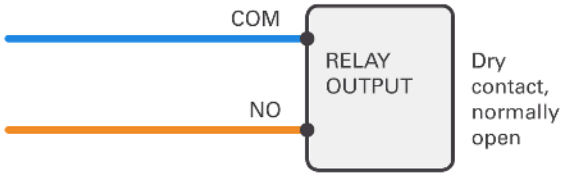
From the ignition cable



Use the receiver's on/off switch output, the leads that would otherwise go to the appliance. Never connect them to the ignition module too.

D HOME AUTOMATION

From the ignition cable



Use a dry-contact relay output, COM and NO (field installs include Lutron and Crestron). Program it to stay closed while on.

NEVER PUT VOLTAGE ON BLUE + ORANGE.

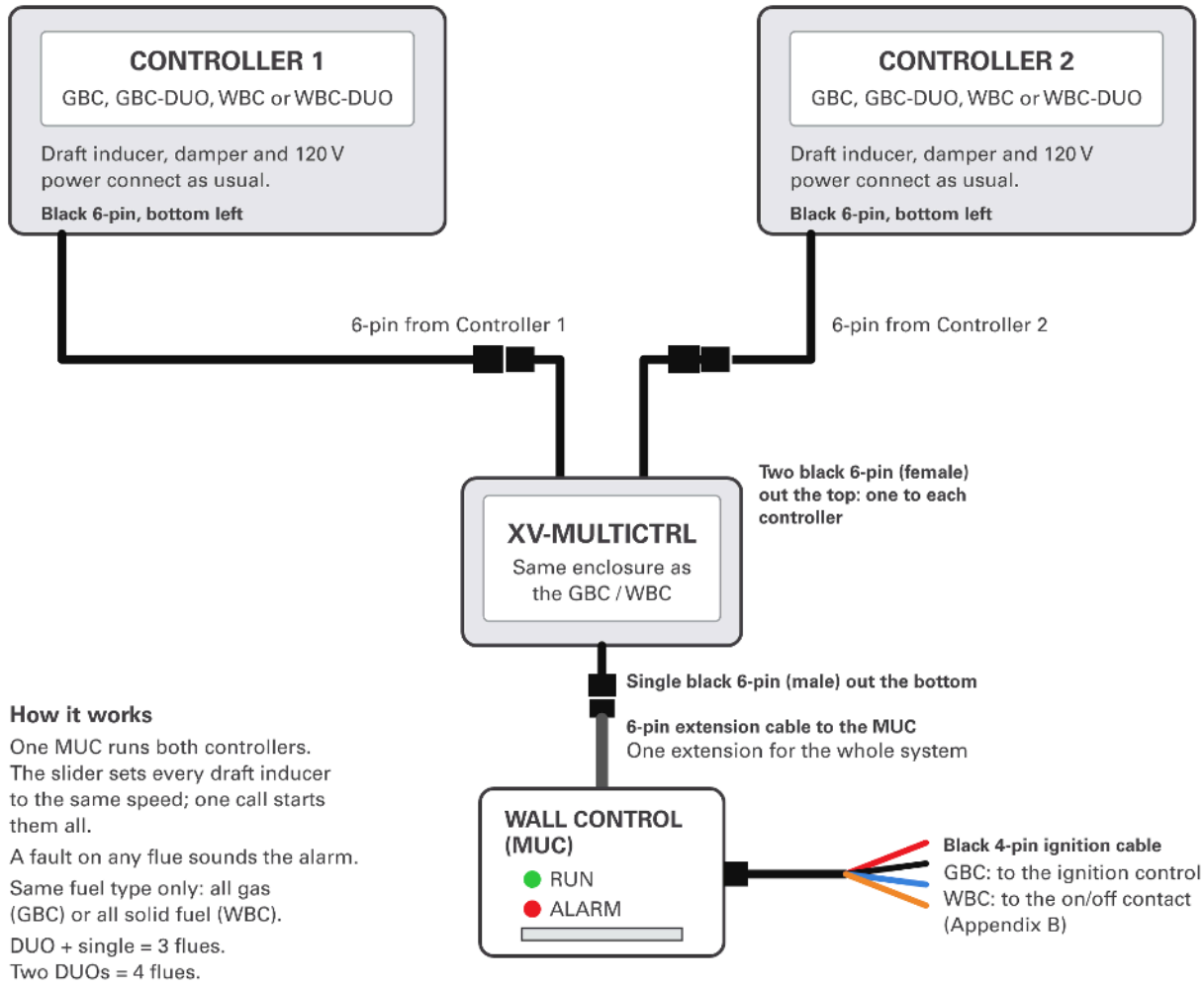
Blue + Orange already carry 24 VDC from the controller. Close them with a dry contact only: a switch, lever nut, remote receiver contact or automation relay. **Never connect line voltage (120 V), 24 VAC or a remote's battery power to them.**

One control at a time. Only one control on Blue + Orange at a time. Never wire the same switch, remote or relay to the ignition module as well: that bypasses draft proving.

C Appendix C: More Than One Flue (XV-MULTICTRL)

XV-MULTICTRL runs two controllers from one wall control (MUC), for one appliance with three or four flues: a DUO plus a single for three flues, or two DUOs for four. Two flues: use a GBC-DUO or WBC-DUO instead (separate manual). It uses the same enclosure as the GBC and WBC. Same fuel type only: all gas or all solid fuel.

1. Install each controller with its draft inducers and dampers as usual. Each keeps its own draft inducer, damper and 120 V power connections.
2. Plug each controller's black 6-pin (bottom left of the controller) into one of the two black 6-pin leads on top of the MULTICTRL.
3. Run **one** 6-pin extension cable from the MULTICTRL's bottom 6-pin to the MUC. One MUC and one extension serve the whole system.
4. Connect the MUC's black 4-pin ignition cable as usual: to the appliance ignition control (gas), or to the on/off contact (solid fuel, Appendix B).



How it runs: one slider sets every draft inducer to the same speed, and one call starts them all. A fault on any flue sounds the alarm; on gas, the appliance stays off. Works best on flues of similar size and height; if they differ, call first. Follow the instructions that ship with the XV-MULTICTRL, and call 800.642.2920 before you install.

X-VENTISO by earthcore®

Leave this manual with the homeowner.

Keep it with the appliance's own instructions. It has the commissioning record, the speed setting and everything a service technician needs.

TECHNICAL SUPPORT **800.642.2920** x-ventiso.com