XV-IGN-ADPT-RS

Robertshaw Ignition Adapter
for the Robertshaw 780-715 U (24 VAC) ignition control
Installation, Operation and Maintenance



XV-IGN-ADPT-RS connects an X-VENTISO gas controller to an appliance with a **Robertshaw 780-715 U** ignition control. It is the standard X-VENTISO ignition cable with factory terminals for the Robertshaw module: **no splicing at the module.** The appliance can light only after the controller proves.

Controller	Adapter plugs into
XV-GBC, XV-GBC-DUO	Black 4-pin on the back of the wall control (MUC)
XV-MERD-CTRL, XV-MERD-DUO	The controller's black 4-pin ignition connection
XV-GFDC	The controller's black 4-pin ignition connection
XV-INTG systems	IGNITION on the first XV-INTG

Sold separately. Used in place of the standard ignition cable. Gas appliances only.

1 Read First

Read this insert and the controller's installation manual (XV-IM-CP, XV-IM-CP-DUO, XV-IM-MERD or XV-IM-DMP-CTRL) before installing, and leave them with the homeowner or building owner. Installation and service are for qualified personnel familiar with the codes that apply to the job.

DANGER: Turn off and unplug the appliance and the X-VENTISO controller, and lock out power, before working at the ignition control. Shut off the gas supply per the appliance manual.

WARNING: The appliance must never light without proven draft. The grey wire comes off TH and goes only to the adapter's Red spade. Never leave it on TH, never jumper Black to Red, and never wire a switch or remote to the module around the controller.

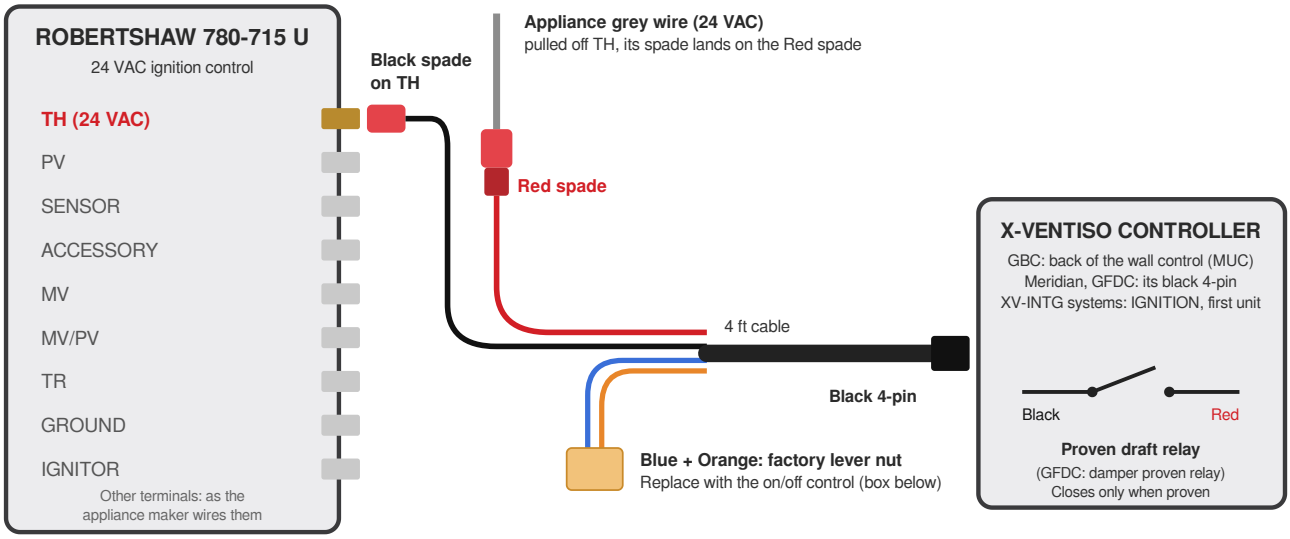
NEVER PUT VOLTAGE ON BLUE + ORANGE.

Blue + Orange carry low voltage from the X-VENTISO controller. Close them with a dry contact only: a switch, a remote receiver contact or an automation relay. Never connect 120 V, 24 VAC or a remote's battery power to them.

CAUTION: For the Robertshaw 780-715 U only. Any other ignition control: see the controller manual, Appendix A, or call 800.642.2920. Always check against the appliance maker's wiring diagram; the appliance instructions govern.

2 How It Works

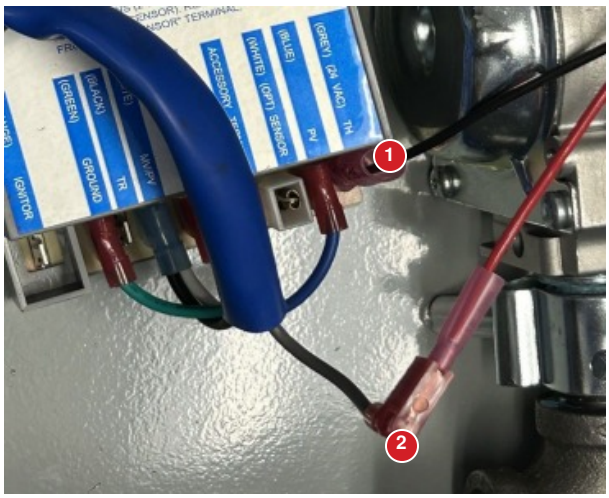
The appliance's grey wire carries the 24 VAC call to the module's TH terminal. The adapter puts the controller's proven draft relay in series in that wire: grey wire to Red, through the relay, and back on Black to TH. TH sees 24 VAC only when the controller has proven draft (on the GFDC, the damper proven open). Blue + Orange are the ignition demand, the call that starts the X-VENTISO system.



XV-IGN-ADPT-RS wiring. Schematic: terminal order and spacing on the module are illustrative.

3 Install

1. With power and gas off, find the grey wire on the module's **TH (24 VAC)** terminal. Pull its spade straight off.
2. Push the adapter's **Black** spade onto TH.
3. Connect the grey wire's spade to the adapter's **Red** spade. The factory terminals are insulated; no tape needed.
4. Plug the adapter's black 4-pin into the controller (cover table). Beyond 4 ft: XV-IGNEXT-20 or -50 extension.
5. **Blue + Orange:** remove the factory lever nut and connect the on/off control (box below: automation recommended; on a GBC the lever nut may stay).
6. Support the cable so no weight hangs on a terminal. Leave every other module terminal as the appliance maker wired it.



At the module, finished. 1 Adapter Black spade on TH. 2 Grey wire spade joined to the adapter Red spade.

BLUE + ORANGE: PUT THE FIREPLACE ON AUTOMATION.

Recommended: a home automation relay. Blue + Orange take any dry contact, so the fireplace can run from Lutron, Crestron, Control4, Savant or any platform that can close a contact, as well as from a hearth remote receiver or a wall switch. Automation turns the system on and off; it never fires the appliance. Draft proving and the interlock stay with the X-VENTISO controller.

The cable ships with a lever nut on Blue + Orange, which keeps the system called. **Meridian, Meridian DUO, GFDC and XV-INTG systems:** always remove it and connect the on/off control; with no wall control, the lever nut leaves the system called all the time. **GBC and GBC-DUO:** the lever nut may stay, with the wall control slider as the on/off, but automation or a switch is recommended. Wiring: the controller manual, Appendix B.

4 Start-Up Check

Start up and commission the controller per its manual first. Then prove that the adapter holds the appliance off:

1. **Controller unplugged:** make the appliance's call for heat. The appliance must **not** light: TH has no 24 VAC. If it lights, stop: the grey wire is still reaching TH. Shut off the gas and recheck steps 1 to 3.
2. **Controller on:** turn the on/off control on. The draft inducer (or damper) starts first; the appliance lights only after the controller proves.
3. **Interlock:** with the appliance running, unplug the draft inducer at its disconnect (GFDC: the damper). The controller alarms and the appliance shuts down. Restore it.
4. Record the check in the controller manual's commissioning record.

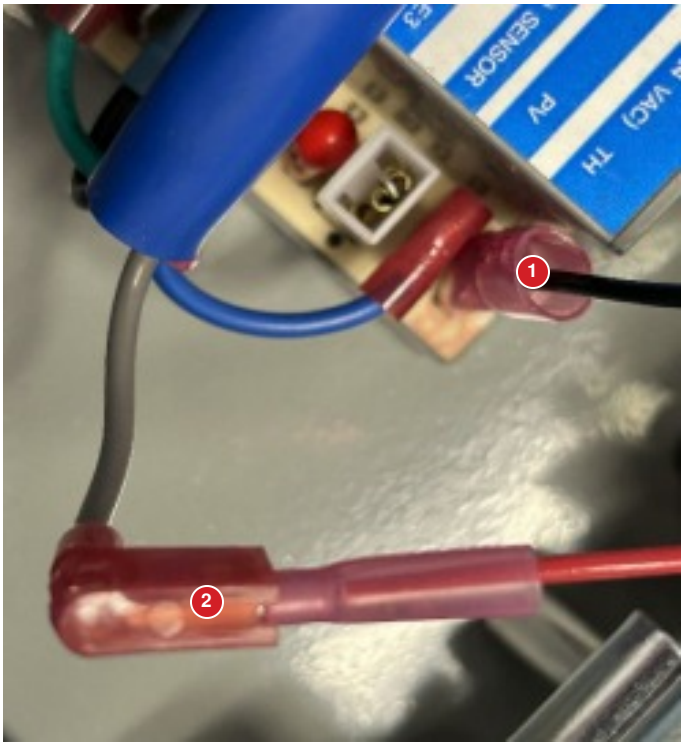
5 Troubleshooting

Symptom	Check
Appliance lights with the controller unplugged	• **Shut off the gas and call 800.642.2920.** The grey wire is still on TH, or Black and Red are joined
Appliance never lights; draft inducer runs and the controller shows proven	• Black spade fully on TH; grey spade fully on the Red spade • Adapter's black 4-pin latched at the controller • Then see the appliance manual for the module
X-VENTISO system never starts on a call	• Blue + Orange connected to the on/off control, and the control is on (GBC with the lever nut: wall control slider above OFF) • Adapter's black 4-pin latched
Meridian or GFDC: draft inducer runs (or damper stays open) all the time	• The factory lever nut is still on Blue + Orange: remove it and connect the on/off control

At the Module



Before. The TH (24 VAC) terminal is marked "(GREY) (24 VAC) TH" on the module label. The appliance's grey wire comes off here (step 1).



After. 1 Adapter Black spade on TH. 2 Grey wire spade pushed fully onto the adapter Red spade, insulation over the joint.

6 Annual Inspection

Inspect at the controller's annual inspection, with power and gas off. Spades tight on TH and on the grey wire; insulation not cracked, melted or pulled back; cable not pinched or resting on hot surfaces; black 4-pin latched. Repeat the start-up check (Section 4, step 1). A damaged adapter is replaced, not repaired: call 800.642.2920.

7 Specifications

Item	Specification
Part number	XV-IGN-ADPT-RS
Ignition control	Robertshaw 780-715 U, 24 VAC
Use with	XV-GBC, XV-GBC-DUO, XV-MERD-CTRL, XV-MERD-DUO, XV-GFDC; XV-INTG systems at the first unit's IGNITION. Gas appliances only.
Cable	Standard X-VENTISO 4-wire ignition cable, 4 ft, black 4-pin Molex at the controller end
Module end (factory)	Black: spade onto TH. Red: spade to the appliance's grey wire. Blue + Orange: lever nut (see Install, step 5).
Circuit	Proven draft relay (GFDC: damper proven relay) in series in the module's 24 VAC TH lead
Longer runs	Black 4-pin ignition extensions, XV-IGNEXT-20 (20 ft) or XV-IGNEXT-50 (50 ft)
Warranty	2 years, valid with proper installation and a documented annual inspection of the system. Skipping the inspection voids the warranty.

Installation record

Installed by		**Date**	
Controller (model, serial)		**Appliance (make, model)**	
Blue + Orange: lever nut or on/off control (type)		**Start-up check passed**	YES / NO

X-VENTISO by earthcore

Leave this insert with the homeowner or building owner, with the controller manual.

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