2017 OUTDOOR CONTROL SYSTEM

WEATHER BEATER ELECTRONIC CONTROL SYSTEM

GRAND CANYON 3515 East Atlanta Ave. Phoenix, AZ 85040 1-602-344-4217

Weather Beater Electronic Control System

The Weather Beater Electronic Control System is the ultimate control for outdoor fire features. Neither snow nor rain nor gloom of night...may be the motto for the post office, but it applies to the Weather Beater equally well. This ignition and control module will perform through wind, rain, freezing temperatures, salt air and more.

Powered by a state of the art microprocessor, the Weather Beater provides safe and sure control by sensing if the flame goes out, then relighting automatically. If for some reason the fire does not relight the module will safely stop the flow of gas.

Weather Beater meets and exceeds all the latest standards for installation near water while operating fire features up to 290,000 BTU's. Simple on off operation can be controlled by your choice of switch, pool controller or optional remote control. GRAND CANYON also offers Bluetooth and wifi controllers so you can use a smart phone, tablet or smart watch to effortlessly set the mood with just a touch or voice command.

Whatever fire pit or fire feature you choose, make sure the Weather Beater Electronic Control is at the heart of the system. Its small footprint fits in most any application, while its abundant features insure maximum enjoyment and years of dependable service.

Available for use with natural or propane gas.

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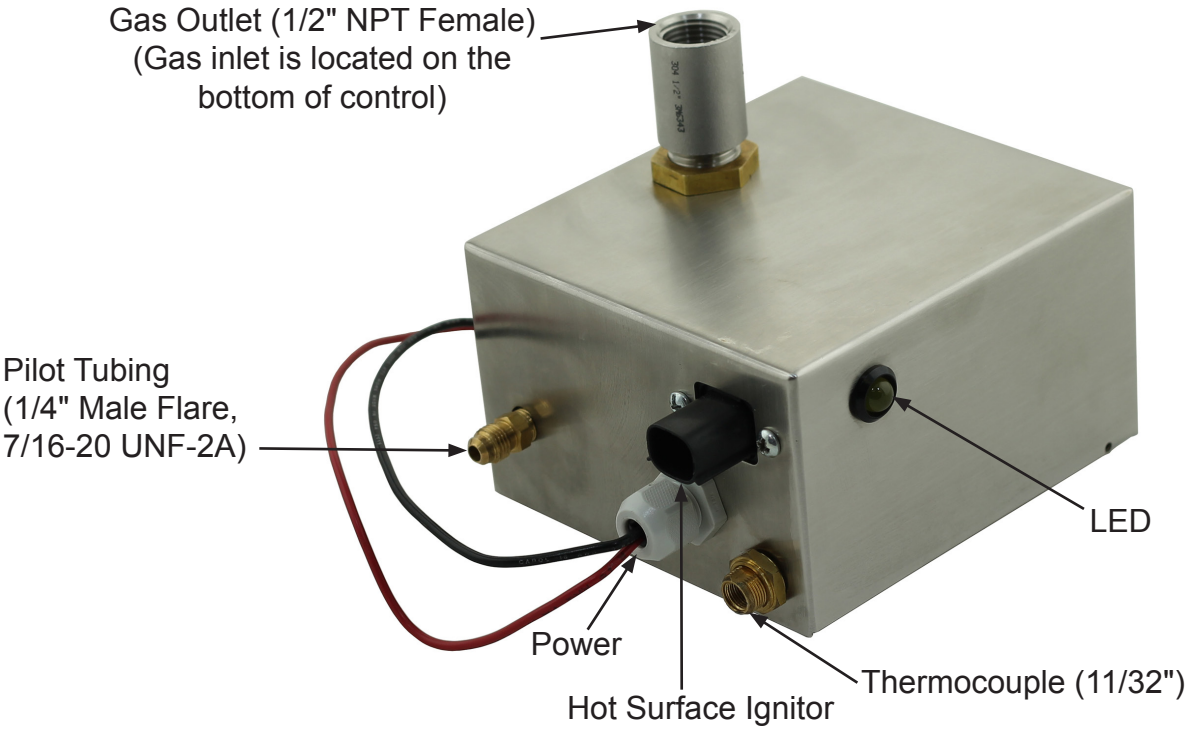
GRAND CANYON Outdoor Control System Electronic Flame Control

Module Model: WBECS-01



FOR OUTDOOR USE ONLY!
⚠ **WARNING: If the information in these instructions in conjunction with the appliance manufacturers instructions are not followed exactly, a fire may result causing property damage, personal injury or death.**
— Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. **— WHAT TO DO IF YOU SMELL GAS** **• Do not try to light any appliance.** **• Do not touch any electrical switch; do not use any phone in your building.** **• Immediately call your gas supplier. Follow the gas supplier's instructions.** **• If you cannot reach your gas supplier, call the fire department.** **— Installation and service must be performed by a qualified installer, service agency or the gas supplier.**
⚠ **WARNING: For use with Natural or Propane gas only. NO SOLID FUELS TO BE USED WITH THIS SYSTEM.**

The ROCS Automatic Outdoor Control System is NOT an approved appliance. It is intended to be applied to appliances and burner systems supplied by various manufacturers. The ROCS instructions are supplemental to the appliance manufacturers installation instructions. Installation of the ROCS system must be applied to an appliance approved by the appliance manufacturer and installed by a qualified professional. Failure to follow the manufacturers instructions, in addition to the ROCS installation instructions could result in property damage, injury or death.

It is the responsibility of the installation professional and end user to confirm that the ROCS Control System is approved and safe to be used on the applied appliance or burner system. All BTU ratings and clearances to combustibles are solely defined by the appliance manufacturer.

- **Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1.**
- **The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electric Code, ANSI/NFPA 70 (if applicable).**

SYSTEM OVERVIEW

- Safety or Active components are CSA Certified.
- 12 vac system to comply to NEC 2014 Article 680 requirements.
- -20° to 175° temperature range.
- Durable connections designed to resist outdoor conditions.
- 290,000 BTU's at 1" pressure drop.
- TC Flame-sense system.
- Hot Surface Ignitor (HSI).
- LED diagnostics.
- Electronics are ANSI Z21.20-2014 certified.
- iFlame app is available as an option.

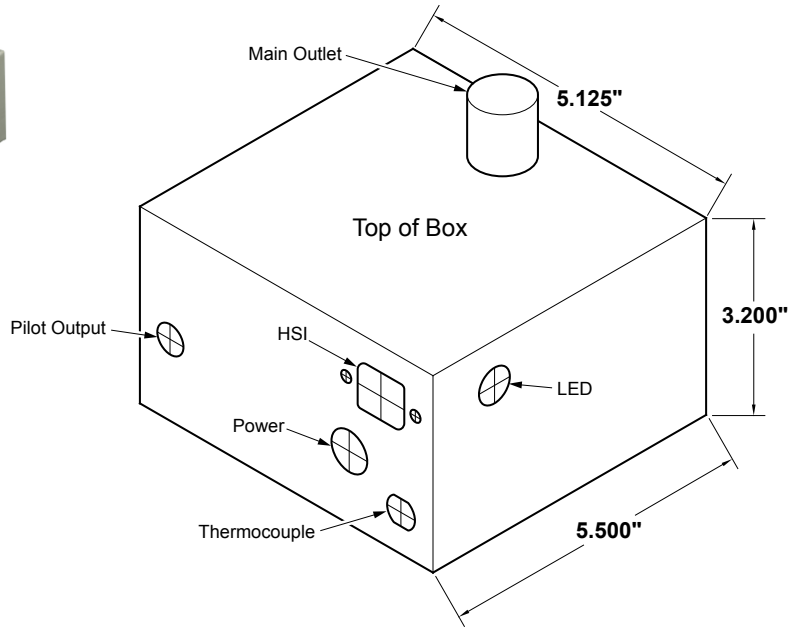
ELECTRONICS

- Certified ANSI Z21.20-2014
- 12 VAC for installation within 5 feet of water.
- Potted control module to protect against moisture and damage.
- Hot Surface Ignition (HSI), provides stable burner ignition in harsh conditions.
- Thermocouple Flame Sense, fast responding and resistant to wind, moisture and corrosion.
- LED diagnostics for field service and troubleshooting.

GAS VALVE AND PILOT COMPONENTS

- All connectors are water resilient.
- BASO BGA-171 series valve and pilot valve.
- Certified CSA 229521-1656058.
- Coils are encapsulated to protect against moisture.
- Pilot has robust flame pattern, wind resistant.
- Pilot injectors are stainless steel.
- Thermocouple is nickel plated for durability.
- CoorsTek HSI with protective cage.
- HSI connection is waterproof.
- The Power Wire connector is waterproof.
- Transformers are available.

PRODUCT DIMENSIONS



INSTALLATION

⚠ WARNING: Inspect all components before installation. If any parts are damaged, contact your supplier. Do not install damaged parts.

⚠ WARNING: RISK OF FIRE! Provide adequate clearances. Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

Only a qualified installer, service agent, or local gas supplier may install and service this product.

Gas Type

Before making gas connections ensure appliance being installed is compatible with the available gas type.

Gas Pressure

Proper input pressures are required for optimum appliance performance. Gas line sizing requirements need to be made following NFPA51.

Pressure Requirements for Appliance

(Natural Gas or Propane)

Maximum Inlet Pressure: $^{1}/_{2}$ psi

Consult the appliance manufacturers instructions for all gas installation requirements.

Typical Pressure Requirements for Appliance:

Minimum Inlet Pressure: 0.25 psi

Nominal Operating Inlet Pressure: 7" WC (NG) / 11" WC (LP)

Gas Connection

Have the gas supply line installed in accordance with local building codes, if any. If not, follow ANSI 223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality.

Note: A listed manual gas shutoff device must be installed prior to the location of the appliance.

Startup

A small amount of air will be in the gas supply lines. When first lighting appliance it will take a short time for air to purge from lines. Subsequent lighting of the appliance will not require such purging.

Pilot must be clear of all media.

⚠ WARNING: Check for gas leaks after installation is complete.

- Check all fittings and connections.
- Do not use open flame to check for leaks.
- Check for leaks with a commercially available, non-corrosive leak check solution.

⚠ WARNING: Placement of media (glass, lava, stone, etc.) MUST NOT cover the pilot assembly.

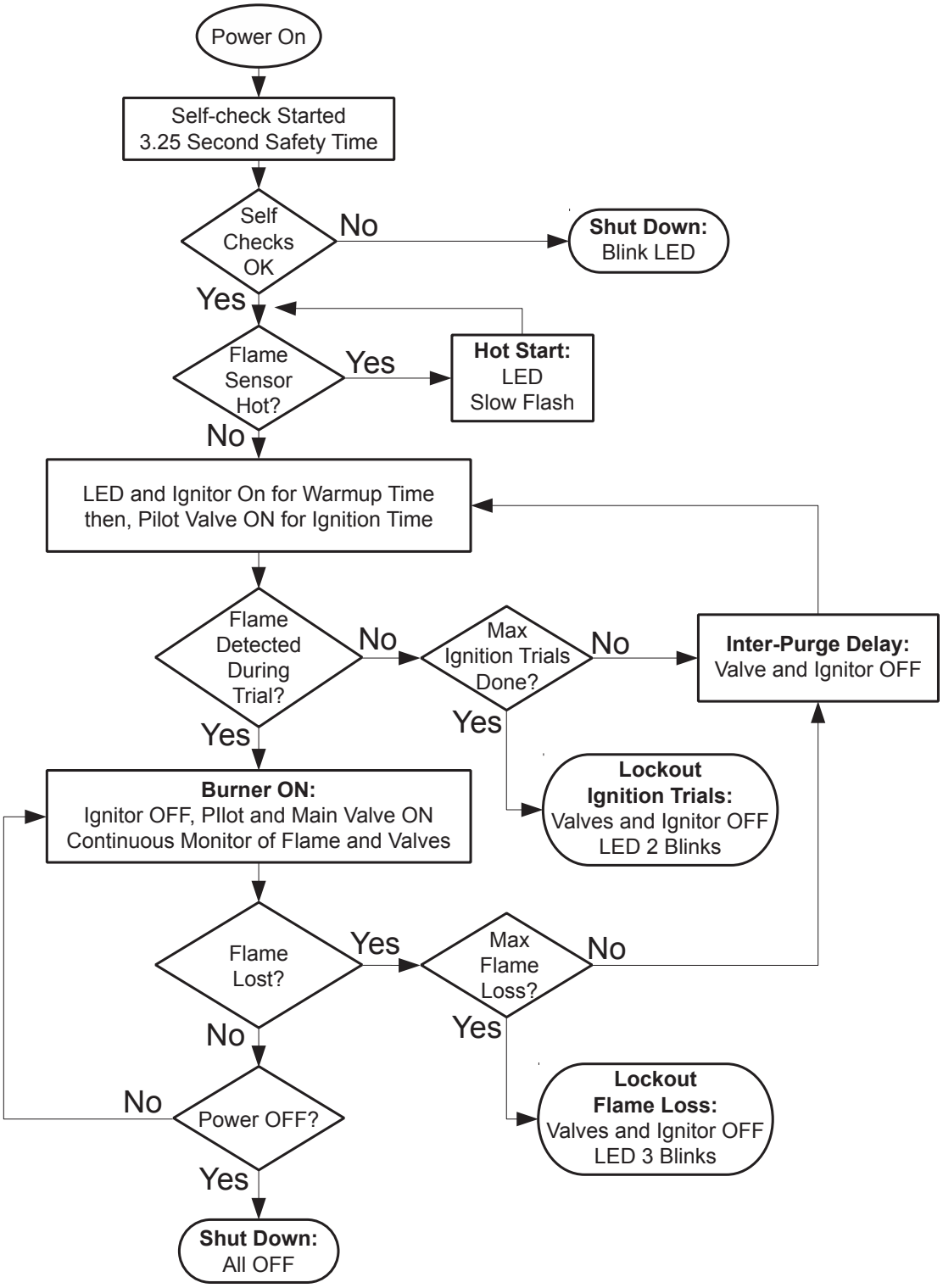
Pilot - Correct Installation

Pilot - Incorrect Installation

OPERATION

Sequence of Operation

When powered, indicating a call for heat, the unit will wait for Pre-Purge time. The HSI will be energized for warm up time, then the pilot gas valve will energize for Trial-for-Ignition time. The HSI will turn off after Ignition Time. If the flame is detected on the thermocouple before the end of the trial for ignition time, the HSI will turn off. The main valve will turn on and the pilot valve will remain on until power is removed or flame signal is lost. If flame is lost, the control will turn off the gas valve, and after the flame loss recycle delay, restart the ignition sequence. If a flame is not detected during the Trial-for-Ignition time and Trials-for-Ignition remain, the pilot and HSI will turn off and wait for Inter-Purge time before starting the next ignition attempt. If a flame is detected prior to turning on the gas valve, the control will stop sequence and remain in safety shutdown until the flame signal is below minimum threshold, or drops continuously by minimum threshold value before continuing.



LED DIAGNOSTIC CODES

OFF	No Power / Internal fault
ON	Normal Operation
1 Flash	Hot Start, thermocouple hot at power up.
2 Flash	Trial Lockout, maximum Ignition trials exceeded without flame detection.
3 Flash	Flame Loss Lockout, exceeded maximum losses of flame after proving burner on.
4 Flash	Flame Sense Fault
5 Flash	Valve Fault
Fast Flash	Safety Shutdown

WIRING DIAGRAM

Electrical Information

Note: The 12 volt transformer supplied is to be located in a remote location away from the fire feature in an approved weatherproof electrical junction box and installed in accordance with local codes.

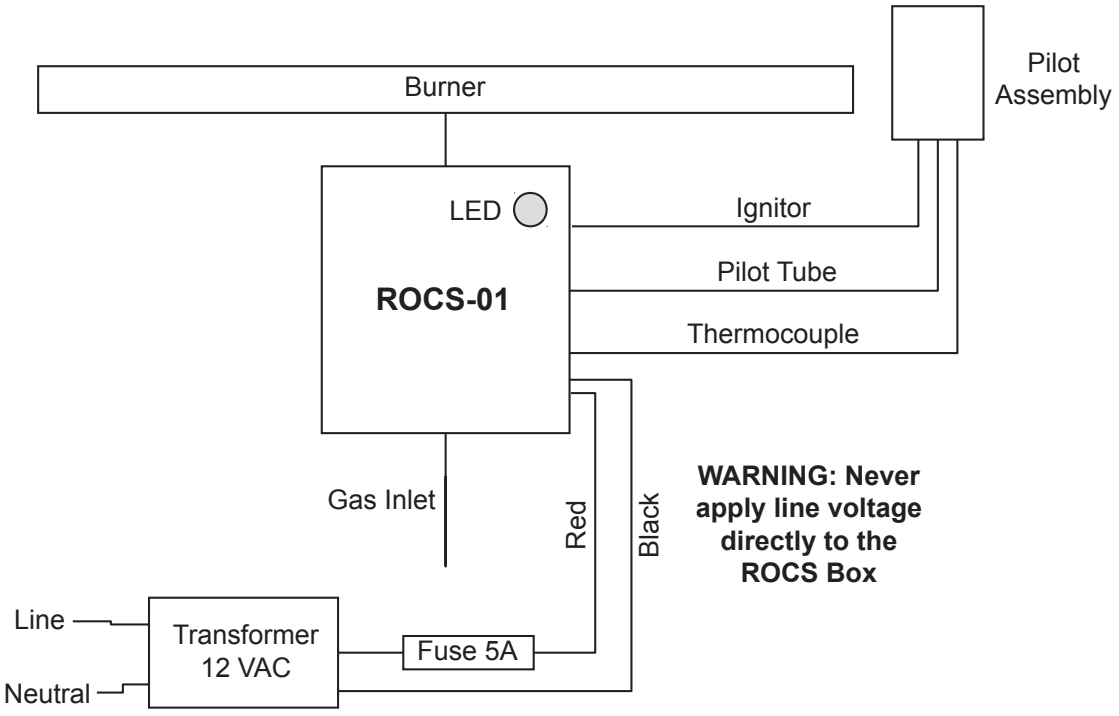
Recommended Wire Size

No less than 12 gauge wire for all installations

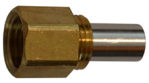
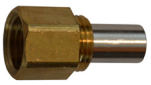
Note: There are numerous electrical devices that can be used to turn the fire feature on and off. Devices such as wall switches and remote control devices that are used should be UL listed and approved devices for turning high voltage (110 v electrical power) on and off. This high voltage electrical power shall be connected to the supplied 12 volt AC transformer by a qualified electrical installer.

HTC01-001-001 Control Timing (control used in ROCS01):

Pre-Purge	3.25 seconds
HSI Warm Up	5 seconds
Trial for Ignition	10 seconds
Flame Failure Response	10 seconds Max
Inter-Purge	5 seconds
Flame Loss Recycles	15 seconds
Flame Loss Recycles Delay	None



PARTS LIST

	Part #	Description	
1	HTC01-001-001	Ignition Control	
2	BDA109FNA-2DAAD	Pilot Valve	
3	BGA171EDA-2CBAD	Main Valve	
4	J998MDA-1	Pilot Burner	
5	Y90AA-3239D	Pilot Injector (Nat)	
6	Y90AA-3223D	Pilot Injector (LP)	
7	301XBM	Hot Surface Ignitor	
8	K16RA-24H	Thermocouple	
9	T-90-9898-24	Pilot Tubing	
10	TR-120-12	Transformer 12V	
11	PS-ROCS	Pilot Shield	

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GRAND CANYON GAS LOGS

Weather Beater ™ versus competition. Check the features to see how the Weather Beater is best

Feature/Benefit	Weather Beater	Competitor
CSA Certified as a stand alone control unit. **ANSI Z21.20-4014**	✓	✗
LED Diagnostic readout onboard. Makes troubleshooting simple	✓	✗
Pilot fittings are flared instead of compression to eliminate leaks	✓	✗
All connections are waterproof	✓	✓
Ignitor is separately protected with stainless steel cage for longevity	✓	✗
Thermocouple flame sense for fast response and reliability	✓	✗
Thermocouple is nickle plated for longevity and resists corrosion	✓	✗
Cover is removable for service if needed	✓	✗
Encapsulated gas valves to protect against water intrusion	✓	✓
Fully potted electronics to protect against water intrusion	✓	✓
Small overall size for use in almost all fire features	✓	✓
Lower cost than most units. Even those with fewer features	✓	✗
12 V transformer included. Meets latest National Electical Codes for use near water or pools.	✓	✗

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