

## Product Sheet - Model 7590

### Product Description

The Beckett GeniSys® Gas Power Burner Control is a 24 Vac primary safety control designed for use on gas power burners in residential and light commercial gas heating applications. Applications may include boilers, furnaces, water heaters, space heating and commercial cooking equipment. The GeniSys® Gas Power Burner Control provides supervision of a 120 volt burner motor and a separate 120 Vac igniter as well as a 24 Vac gas valve. The 7590C and D models provide connections for a combustion air proving switch and monitor the switch position to check for sticking or welded switch contacts.

### Features & Benefits

- 3 LEDs provide basic diagnostic information
- Single or multiple trials for ignition before lockout
- Designed for easy mounting on a 4 x 4 junction
- Selectable ignition timing 4-15 seconds
- Selectable pre-purge timing 1-240 seconds
- Selectable relight or recycle operation on loss of flame
- The microprocessor is checked for proper operation before each cycle
- Checks combustion air proving switch contacts on 7590C and D models
- Gas valve relay check on each cycle
- Available model (7590C) with manual reset button and non-volatile lockout
- Communication Port links new alarm module and future products



**3 LEDs Provide Easy Diagnostics**  
 For faster troubleshooting and service calls  
 Service personnel can quickly determine control status

**Status LEDs**

### Quick Status Check

FLAME <input type="checkbox"/> <input type="checkbox"/> MV <input type="checkbox"/> STATUS	No call for heat or no power to control	FLAME <input checked="" type="checkbox"/> <input type="checkbox"/> MV <input checked="" type="checkbox"/> STATUS	Run Mode, Flame LED flashing, low flame signal
FLAME <input type="checkbox"/> <input checked="" type="checkbox"/> MV <input type="checkbox"/> STATUS	Slow flash, Pre-purge or Interpurge period	FLAME <input type="checkbox"/> <input checked="" type="checkbox"/> MV <input type="checkbox"/> STATUS	Fast Flash, lockout
FLAME <input type="checkbox"/> <input type="checkbox"/> MV <input checked="" type="checkbox"/> STATUS	Trial for Ignition	FLAME <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> MV <input type="checkbox"/> STATUS	Flashing Flame and Status LEDs, Flame out of sequence
FLAME <input checked="" type="checkbox"/> <input type="checkbox"/> MV <input checked="" type="checkbox"/> STATUS	Run Mode, strong flame signal	FLAME <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> MV <input checked="" type="checkbox"/> STATUS	Control error, replace control

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## Available Models

Beckett GeniSys Control Part No.	Lockout Time	120 Volt Igniter and Blower Motor Output	24 Volt Gas Valve Output	2 Pin Connector for Pressure Switch	Non-volatile Lockout
7590D0001	4 sec	Yes	Yes	Yes	No
7590T0001	4-15 sec	Yes	Yes	No	No
7590C0001	4 sec max	Yes	Yes	Yes	Yes

## Electrical Ratings

### Inputs

Voltage: 120 Vac (igniter, motor)  
 24 Vac (control, gas valve, air proving switch)  
 24 Volt Current Draw: 0.2 Amps plus gas valve  
 Frequency: 50/60 Hz

### Outputs

Main Valve Rating: 2.0 Amps (24 V) (resistive)  
 Motor Relay Rating: 7.4 Amps (120V)  
 Igniter Relay Rating: 1.0 Amp (120V)

### Approvals

UL listing per ANSI Z21.20, UL372 and CSA C22.2 No. 199

### Timings

Ignition Timing: 4-15 seconds  
 Pre-purge Timing: 1-240 seconds  
 Inter-purge Timing: 90-300 seconds

### Additional Ratings

Minimum Flame Current: 1  $\mu$ A  
 Flame Failure Response Time: 0.8 seconds  
 Thermostat Voltage: 24 Vac (if used)

### Environmental Ratings

Storage & Operating Ambient Temp.: -40°F to +175°F (-40°C to +79.4°C)  
 Moisture: 5 to 95% RH, non-condensing

## Available Lockout Sequences

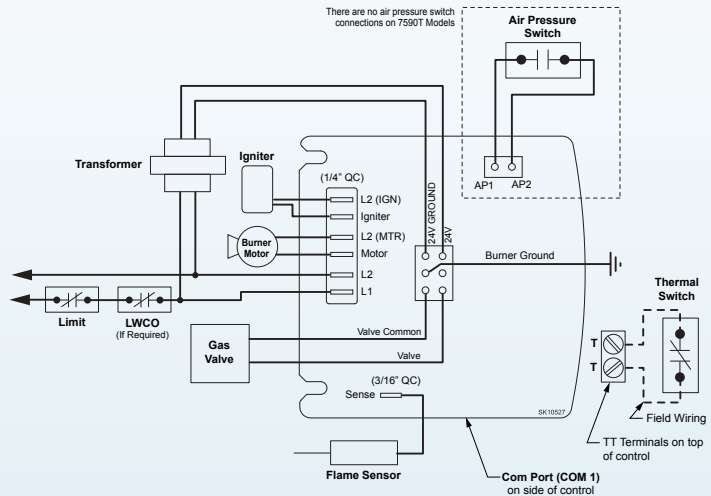
### D and T Models - Lockout Sequences

- Lockout after single trial for ignition (volatile lockout)
- Lockout with retrial every 1 hour (volatile lockout)
- Lockout after 3 trials for ignition (volatile lockout)

### C Models - Lockout Sequence

- Shutdown after flame failure or failure to light (no relight attempt)
- 5 minute minimum waiting time
- 1 retry attempt allowed, then non-volatile lockout
- Lockout must be manually reset using reset button

The standard 7590 is designed for use on applications below 400,000 BTUs. For applications above 400,000 BTUs, contact Beckett's Engineering Group.



7590 Top View



7590 Bottom View