http://waterheatertimer.org/How-to-troubleshoot-gas-water-heater.html

Example Honeywell Gas Valve Error Codes

Gas Valve LED Codes

LCD CODE For Optional Display	GAS VALVE LED	STATUS/PROBLEM	PROBABLE CAUSE	SOLUTION
None	Short flash once every four seconds	IDLE (no call for heat, no fault conditions)	Temperature setpoint achieved and burner is off	No solution required
None	"Heartbeat", alternates bright/dim	Call For Heat (no fault conditions)	Water temperature is below setpoint and burner is on	No solution required
12	One Flash, three second pause	Low flame signal (control continues to operate)	Pilot tube restriction, carbon buildup on electrode, pilot wire damage or gas supply	1. Gas supply pressure is low 2. Low voltage supply 3. Pilot replacement
44	Two Flash, three second pause.	Pressure switch failed closed	Pressure switch tube blockage or faulty pressure switch.	1. Pressure switch wiring incorrect 2. Replace pressure switch
46	Three Flash, three second pause	Pressure switch failed open.	Vent blockage or improper insallation, switch tube blockage, faulty switch, blower improper operation or temperature switch open	1. Pressure switch wiring incorrect 2. Replace pressure switch 3. Air intake or exhaust obstructed 4. Replace blower temperature switch 5. Replace blower
31	Four Flash, three second pause_	TCO limit lockout	Thermal well fault, gas control fault or tank is not filled with water	1. Reset valve and check for proper valve cycling 2. Make sure tank is full of water
14	Five Flash, three second pause	Flame out of sequence	Pilot or burner valve has failed open	1. Replace gas valve control
11	Six-One Flash, three second pause	Failed trial for ignition	Insufficient gas supply, unstable pilot, carbon buildup on electrode or wire/pilot tube damage	1. Check gas supply 2. Replace pilot
45	Six-Two Flash, three second pause	Recycle limit - PS/limit opened	Vent blockage or improper installation, switch tube blockage, faulty switch, blower improper operation, blower temperature switch open or excessive wind at vent termination	1. Pressure switch wiring incorrect 2. Replace pressure switch 3. Air intake or exhaust obstructed 4. Replace blower temperature switch 5. Replace blower 6. Check for vent termination compliance as stated in this manual
13	Six-Three Flash, three second pause	Recycle limit - flame lost	Pilot tube restriction, low gas supply pressure, carbon buildup on electrode, wire/pilot tube damage or combustion air port blockage	1. Gas supply pressure is low 2. Jacket air holes obstructed 3. Pilot replacement
14	Six-Four Flash, three second pause	Soft Lockout - flame out of sequence sensed	Valve stuck in open position	1. Replace gas valve control
47	Seven Flash, three second pause	Flammable vapor sensor lockout	Gasoline or other flammable gas was detected near the appliance or the sensor has failed	1. Verify no gasoline or flammable vapors are present 2. Reset control using ON/OFF switch on the gas control valve 3. Replace the flammable vapor sensor
49	Eight-One Flash, three second pause	FVS fault detected	Flammable vapor sensor resistance is out of range, wiring to FV sensor is faulty or control is faulty	1. Replace FV sensor 2. Replace FV sensor wiring 3. Replace gas control valve
89	Eight-Two Flash, three second pause	Temperature sensor fault detected	Thermal well fault	1. Check thermal well wiring connection 2. Replace thermal well
15	Eight-Three Flash, three second pause	Electronics fault detected	Thermal well fault or gas control fault	1. Replace gas control valve 2. Replace thermal well
93	Eight-Four Flash, three second pause	Valve fault detected	Gas control valve needs to be reset or has been damaged	1. Cycle power to gas control valve 2. Replace gas control valve

⚠CAUTION: Make certain power to water heater is "OFF" before removing protective cover FOR ANY REASON.

⚠CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. VERIFY PROPER OPERATION AFTER SERVICING.

⚠CAUTION: For your safety DO NOT attempt repair of gas piping, remote control, burners, vent connectors or other safety devices. Refer repairs to qualified service personnel.

http://waterheatertimer.org/BW.html#Temp