Ignition Pilot Modules

S87 Direct Spark Ignition Modules

Provide electronic control of direct spark ignition systems used on gas fire furnaces, boilers, and other heating appliances.

- Control ignition sequence and gas control operation.
- Generate high voltage potential for main burner ignition.
- Lockout after one trial for ignition if main burner fails to ignite.
- Reset from thermostat after lockout.
- Use modules (except S87C) with any combination gas control designed for direct spark applications and rated 2.0A or less.

Application: Provide electronic control of direct spark ignition systems used on gas fired furnaces, boilers, and other heating appliances.
Dimensions, Approximate: 5 1/4 in. high x 4 1/16 in. wide x 1 15/16 in. long (133 mm high x 103 mm wide x 49 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz
Flame Failure Response Time (sec): 0.8 sec. @ 5.0 microamp
Flame Failure Re-ignition Time (sec): 0.8 sec. maximum

Ignition Sequence: Single trial for main burner ignition (then shut down and lockout)
Ignition Source: Internal high voltage spark generator
Ignition System Type: Direct Spark Ignition
Maximum Valve Load @ 24 Vac (Amps): 2A
Typical Gas Control: VR8205, VR8305
Typical Ignition Hardware: Q347A
Maximum Ambient Temperature: -40 F to +175 F (-40 C to +79 C)

Product Number	Flame Sense	Ignition Trial Time (sec)	Ignition Trials To Lockout	PrePurge	Includes
S87B1008	Single Rod	6 sec.	1	None	Alarm terminal
S87B1016	Single Rod	11 sec.	1	None	Alarm terminal
S87B1024	Single Rod	21 sec.	1	None	Alarm terminal
S87B1065	Single Rod	4 sec.	1	None	Alarm terminal
S87C1006	Two Rod	6 sec.	1	None	—
S87C1030	Two Rod	21 sec.	1	None	—
S87D1004	Two Rod	6 sec.	1	None	Alarm terminal
S87D1012	Two Rod	11 sec.	1	None	Alarm terminal
S87D1020	Two Rod	4 sec.	1	None	Alarm terminal
S87D1038	Two Rod	21 sec.	1	None	Alarm terminal
S87J1026	Single Rod	11 sec.	1	30 sec. minimum	—
S87J1034	Single Rod	21 sec.	1	30 sec. minimum	—
S87K1008	Two Rod	4 sec.	1	30 sec. minimum	—

S89C Hot Surface Ignition Module

Provide operating control and system shutdown on loss of main burner flame in direct ignition central heat furnaces and heating appliances with hot surface igniter.

- S89C,G,J are for systems with a combination igniter- sensor.
- S89C lock out after one try for ignition. S89G,H provide three tries for ignition before lockout, with 30 sec. min. purge before second and third tries.
- Compatible with Norton 201 and 271 or equivalent hot surface igniters.
- Available with leadwires for line voltage connections.
- Modules can be used on either natural or LP gas; they provide 100 percent shutoff of gas on lockout.
- Modules have relay contacts for use with any direct ignition gas control with max. 2.0 A, 24 Vat rating.
- Modules use rectification principle for flame sensing. -40 F to +175 F (-40 C to +79 C) temperature rating.

Application: Provide electronic control of direct hot surface ignition systems used on gas fired furnaces, boilers, and other heating appliances.
Dimensions, Approximate: 5 1/4 in. high x 4 1/16 in. wide x 1 15/16 in. long (133 mm high x 103 mm wide x 49 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz
Flame Failure Response Time (sec): 2.0 sec. @ 2.5 microamp
Ignition Sequence: Single trial for main burner ignition (then shut down and lockout)

Ignition Source: Line Voltage (120 VAC) Hot Surface Element (Norton Model 201)
Ignition System Type: Direct Hot Surface Ignition
Maximum Valve Load @ 24 Vac (Amps): 2A
Typical Gas Control: VR8205, VR8305
Typical Ignition Hardware: Norton 201
Maximum Ambient Temperature: -40 F to +175 F (-40 C to +79 C)

Approvals:
Canadian Standards Association: Design Certified

Product Number	Flame Sense	Ignition Trial Time (sec)	Ignition Trials To Lockout	PrePurge
S89C1087	Single Rod	6 sec.	1	None
S89C1095	Single Rod	15 sec.	1	None

S89E,F Direct Spark Ignition Modules

Provide electronic control of direct spark ignition systems, with external spark transformers, used on gas-fired furnaces, boilers, conversion burners and other heating appliances.

- Controls ignition sequence and gas control operation in direct spark ignition systems.
- Control separate 120 Vac spark generator that provides high voltage potential for main burner ignition.
- Lockout after one trial for ignition if main burner fails to ignite.
- Reset from thermostat after lockout. Use separate electrodes for spark ignition and flame sensing.
- Use any 24 Vac combination gas control designed for direct spark applications and rated at 2.0A or less.

Application: Provide electronic control of direct spark ignition systems used on gas fired furnaces, boilers, and other heating appliances.
Dimensions, Approximate: 5 1/4 in. high x 4 1/16 in. wide x 1 15/16 in. long (133 mm high x 103 mm wide x 49 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz
Flame Failure Response Time (sec): 2.0 sec. @ 2.5 microamp
Flame Failure Re-ignition Time (sec): 0.8 sec. maximum
Ignition Sequence: Single trial for main burner ignition (then shut down and lockout)

Ignition Source: External (120 VAC powered) High Voltage Spark Generator
Ignition System Type: Direct Spark Ignition
Maximum Valve Load @ 24 Vac (Amps): 2A
Typical Gas Control: VR8205, VR8305
Typical Ignition Hardware: Q652, Q345
Maximum Ambient Temperature: -40 F to +175 F (-40 C to +79 C)

Approvals:
Canadian Standards Association: Design Certified

Product Number	Flame Sense	Ignition Trial Time (sec)	Ignition Trials To Lockout	PrePurge
S89E1058	Two Rod	4 sec.	1	—
S89F1098	Two Rod	4 sec.	1	30 sec. minimum
S89F1106	Two Rod	4 sec.	1	30 sec. minimum

Ignition Pilot Modules

S8610U Universal Intermittent Pilot Module

Field service replacement for most Honeywell, Robertshaw, Johnson, and UTEC (HSC) Intermittent Pilot Ignition Modules. Provides electronic control of most intermittent pilot ignition systems used on gas-fired furnaces, boilers, and other heating appliances.

- Provides ignition sequence, flame monitoring and safety shutoff for intermittent pilot central furnaces and heating appliances.
- Provides 100 percent pilot gas shutoff if pilot fails to light; after 6-minute delay, trial for ignition is repeated. Ignition trial/delay sequence is repeated until the appliance lights or call for heat is removed.
- For use with Natural or LP gas.
- For use in single rod or dual rod/remote sense applications. Includes relay contacts for use with any intermittent pilot gas control string with maximum 1.0A pilot or 2.0A main valve rating; Honeywell VR8204, VR8304 or VR8345M combination gas control recommended.
- Functional equivalent of S86, S8600, S8610 and S90 modules.
- Includes spark cable adapters to allow field replacement of both Honeywell and competitive controls without replacing existing spark cable.

Application: One or Two Rod Intermittent Pilot Control with continuous retry trial time with configurable lockout timing of 15 or 90 seconds and configurable prepurge of 30 seconds or no prepurge
Dimensions, Approximate: 3 15/16 in. high x 5 7/16 in. wide x 2 5/8 in. deep (100 mm high x 138 mm wide x 67 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz; 50 Hz
Flame Failure Response Time (sec): 2 seconds maximum
Ignition Sequence: Continuous retry, after trial for ignition, pilot gas shuts off for 5 minutes, then another trial for pilot ignition takes place
Ignition Source: Internal high voltage spark generator
Ignition System Type: Intermittent Pilot

Maximum Valve Load @ 24 Vac (Amps): 1A Pilot, 2A Main @ 165 F; 1A Pilot, 1A Main @ 175 F
Typical Gas Control: VR8204, VR8304
Typical Ignition Hardware: Q345, Q3451, Q3452
Maximum Ambient Temperature: -40 F to +165 F (-40 C to +74 C)

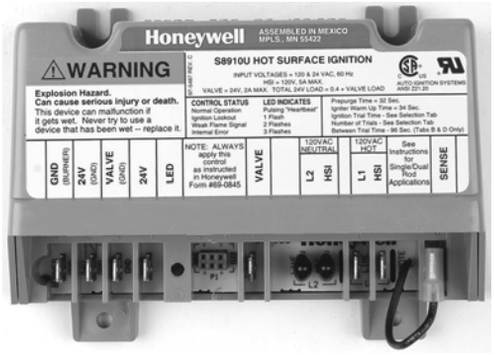
Approvals:
Canadian Standards Association: Design Certified

Accessories:
394800-30 30 in. Ignition Cable with Right Angle Boot for use with S8600 family
394801-30 30 in. Ignition Cable Assembly with straight boot for use with S8600 family

	Product Number	Flame Sense	Ignition Trial Time (sec)	Between Trial Time (sec)	Ignition Trials To Lockout	PrePurge	Includes
•	**S8610U3009**	Single Rod or Two Rods	continuous retry	5 minute delay after failed trial for ignition.	continuous retry	Configurable to 30 seconds or no prepurge	Damper connection with automatic vent damper plug

** TRADELINE models • SUPER TRADELINE models*

S8910 Universal Hot Surface Ignition Module



Universal Hot Surface Ignition Module is designed to provide easy field replacement of a wide range of hot surface ignition modules manufactured by Honeywell, Robertshaw and White-Rodgers. The S8910U Module provides operating control of a direct ignition system using a 120 Vac hot surface igniter.

- Replaces many White-Rodgers, Robertshaw and Honeywell hot surface ignition models.
- For 120 Vac (up to 5.0A) surface igniter (Norton 201/271 or equivalent).
- For local (single rod) or remote (dual rod) rectification type flame sensing.
- Contains easy-to-use instructions plus the accessories required to adapt the existing hot surface ignition module.
- Provides one or three ignition trials (four-second or seven-second trials) per call for heat; prepurge of 32 seconds or less; up to 96 seconds between purge trial times.
- Temperature range is -40 to +175 F (-40 to +79 C).

Application: Provide electronic control of direct hot surface ignition systems used on gas fired furnaces, boilers, and other heating appliances.
Dimensions, Approximate: 5 1/4 in. high x 4 1/16 in. wide x 1 15/16 in. long (133 mm high x 103 mm wide x 49 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz
Flame Failure Response Time (sec): 1.5 sec.
Ignition Sequence: The number of trials for ignition and trial time is determined by the selection tab. If a selection tab is not installed, the module will operate at four seconds trial time and one ignition trial.

Ignition Source: Line Voltage (120 VAC) Hot Surface Element (Norton Model 201 or 270)
Ignition System Type: Direct Hot Surface Ignition
Maximum Valve Load @ 24 Vac (Amps): 2A
Typical Gas Control: VR8205, VR8305
Typical Ignition Hardware: Norton 201, Norton 271, Q354
Maximum Ambient Temperature: -40 F to +175 F (-40 C to +79 C)

Approvals:
Canadian Standards Association: Design Certified

	Product Number	Flame Sense	Ignition Trial Time (sec)	Between Trial Time (sec)	Ignition Trials To Lockout	PrePurge
•	**S8910U1000**	Single Rod or Two Rods	4 sec. or 7 sec.	(2) 96 sec.- 3 trial mode only	1 or 3	32 seconds

* *TRADELINE models • SUPER TRADELINE models*

Y8610U Universal Retrofit Intermittent Pilot Gas Burner Ignition Systems

Complete kits converting conventional standing pilot system to intermittent pilot system. For use with 24 Vac gas-fired atmospheric furnaces, boiler and heating appliances.

- Y8610U kits are for use with natural or LP gas: provides 100 percent pilot gas shutoff if pilot fails to light; after 6-minute delay, trial for ignition is repeated.
- Ignition trail/delay sequence is repeated until the appliance lights or call for heat is removed.

Application: Provide electronic control of intermittent pilot ignition systems used on gas fired furnaces, boilers, and other heating appliances.
Dimensions, Approximate: 3 15/16 in. high x 5 7/16 in. wide x 2 5/8 in. deep (100 mm high x 138 mm wide x 67 mm deep)
Type of Gas: Natural or LP
Electrical Ratings: 24 Vac
Frequency: 60 Hz
Flame Failure Response Time (sec): 2.0 sec

Ignition Sequence: Continuous retry, after trial for ignition, pilot gas shuts off for 5 minutes, then another trial for pilot ignition takes place
Ignition Source: Internal high voltage spark generator
Ignition System Type: Intermittent Pilot
Maximum Valve Load @ 24 Vac (Amps): 1A Pilot, 2A Main @ 24Vac
Typical Gas Control: VR8204, VR8304
Typical Ignition Hardware: Q345, Q3451
Maximum Ambient Temperature: -40 F to +165 F (-40 C to +74 C)

Product Number	Flame Sense	Ignition Trial Time (sec)	Ignition Trials To Lockout	PrePurge	Includes
Y8610U4001	Single Rod or Two Rods	15 or 90 seconds	continuous retry	0 or 30 seconds	VR8204A2142 valve (1/2 x 1/2; 3.5 in. WC setting; 150 kBtu/hr at 1 in. p.d.)
Y8610U6006	Single Rod or Two Rods	15 or 90 seconds	continuous retry	0 or 30 seconds	VR8304M3558 (1/2 x 3/4; 3.5 in. setting; 270kBtu/hr at 1 in. p.d.)