

Oil Primaries

R7284B,U Interrupted Electronic Oil Primary



The R7284B,P,U,G Electronic Oil Primary is a line voltage, safety rated, interrupted and intermittent ignition oil primary control for residential oil fired burners used in boilers, forced air furnaces and water heaters. The R7284B,P,U,G used with a cad cell flame sensor operates an oil burner, spark igniter, and optional oil valve. The control works with a low voltage and optional high voltage thermostat. The primary controls fuel oil, senses flame, controls ignition spark (either interrupted or intermittent) and notifies through the EnviraCOM™ bus a remote alarm circuit when in lockout.

The R7284 Series of Oil Primary Controls can be used with both hydronic and forced air systems. When used with hydronic systems, line voltage switching Aquastat® Controllers normally provide for the starting and stopping of the combustion sequences. With forced air systems, both mechanical and electronic low voltage thermostats control the starting and stopping of the combustion process.

Dimensions, Approximate: 4 5/32 in. long x 4 11/32 in. wide x 2 1/2 in. high (105.4 mm long x 110.5 mm wide x 63.5 mm high)

Ignition Type: Interrupted and Intermittent

Temperature Range: -40 F to +147 F (-40 C to +64 C)

Mounting Bracket: Junction box on main burner

Electrical Rating, Contacts

Full Load: 7.4 A @ 120 Vac; 3.7 a @ 240 Vac

Locked Rotor: 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

Approvals:

Underwriters Laboratories, Inc. UL and cUL Component Recognized

Product Number	Electrical Connections	Timing, Safety Switch	Description
R7284B1024	Burner motor, oil valve, ignition, cad cell, limit, thermostat, alarm	15 sec.	Electronic Oil Primary with 15 seconds lock out timing
R7284U1004	Burner motor, oil valve, ignition, cad cell, limit, thermostat, alarm	Settable 15, 30 or 45 sec.	Electronic Oil Primary with selectable 15, 30 or 45 second lock out timing, selectable valve and blower delays, and two line LCD display

R7184A,B,U Interrupted Electronic Oil Primary



Line voltage, safety rated, control for residential oil fired burners used in boilers, forced air furnaces and water heaters. When used with a cad cell flame sensor, operates an oil burner and optional oil valve. Can be used with both hydronic and forced air systems.

- Compatible with hydronic and forced air applications.
- Patented cad cell resistance readout.
- Available in 15-, 30-, and 45-second lockout times.
- Safe start check.
- Indicator light monitors burner flame status and system lockout.
- Uses proven flame detection and monitoring systems.
- Optional valve-on delay, blower-off delay models: 15 second, or selectable 0 or 15 second valve-on delay.
- Zero time or selectable 0-, 2-, 4-, 6-minute blower-off delay.
- Oil valve control.
- Compatible with power venters without integral timers.
- Oil-resistant plastic cover for electronics.

Dimensions, Approximate: 4 5/32 in. long x 4 11/32 in. wide x 2 1/2 in. high (105.4 mm long x 110.5 mm wide x 63.5 mm high)

Ignition Type: Interrupted

Temperature Range: -40 F to +147 F (-40 C to +64 C)

Electrical Connections: Burner motor, oil valve, ignition, cad cell, limit, thermostat, alarm

Electrical Rating, Contacts

Full Load: 7.4 A @ 120 Vac; 3.7 a @ 240 Vac

Locked Rotor: 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

Approvals:

Underwriters Laboratories, Inc. UL and cUL Component Recognized

Product Number	Lead Length		Alarm Load Ratings		Timing, Safety Switch	Mounting Bracket
	(inch)	(mm)	(Pilot Duty)	(Resistive)		
R7184A1026	10 in.	254 mm	—	—	15 sec.	Junction box on main burner
R7184A1034	10 in.	254 mm	—	—	30 sec.	Mounts on standard 4 x 4 in. junction box
R7184A1042	10 in.	254 mm	—	—	45 sec.	Mounts on standard 4 x 4 in. junction box
R7184B1024	10 in.	152 mm	—	—	15 sec.	Junction box on main burner
R7184U1004	10 in.	254 mm	2 A @ 30 Vac	2A @ 30 Vac	15 sec.	Junction box on main burner
R7184U1012	10 in.	254 mm	2 A @ 30 Vac	2A @ 30 Vac	30 sec.	Junction box on main burner
R7184U1020	10 in.	254 mm	2 A @ 30 Vac	2A @ 30 Vac	45 sec.	Mounts on standard 4 x 4 in. junction box

R8184G Protectorelay® Oil Burner Control



Dimensions, Approximate: 4 3/8 in. high x 4 1/8 in. wide x 2 1/2 in. deep (111 mm high x 104 mm wide x 64 mm deep)

Ignition Type: Intermittent

Temperature Range: -40 F to +130 F (-40 C to +54 C)

Mounting Bracket: For mounting on a standard 4 in. X 4 in. junction box or direct mounting on burner housing.

Electrical Rating, Contacts

Full Load: 7.4 A @ 120 Vac; 3.7 a @ 240 Vac

Locked Rotor: 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

Provides automatic, nonrecycling control of an intermittent ignition oil burner system.

- Controls oil burner, oil valve (if desired) and the ignition transformer in response to a call for heat.
- Solid state flame sensing circuit.
- LED on terminal strip indicates system lockout.
- Remote lockout indication available on some models.
- Enclosed safety switch with external reset button.
- Manual trip lever opens safety switch for system maintenance.
- Mounts on standard 4 x 4 in. junction box; select models may be mounted directly on burner housing.
- C554A Cadmium Sulfide Flame Detector and 24 Vac thermostat required.

Alarm Load Ratings:

Pilot Duty: 75 VA @ 120/240 Vac, 50-60 Hz; 25 VA @ 24V, 50-60 Hz

Resistive: 1.5 A @ 120/240V, 50-60Hz; 3 A @ 24 V, 50-60 Hz

Approvals:

Canadian Standards Association: CSA Certified; File no. LR95329-1

Underwriters Laboratories, Inc. UL Component Recognized; File no. MP268, Vol. 35 Sec. 1,3

Residential
Combustion Controls

Product Number	Timing, Safety Switch	Comments	Includes
* R8184G4009	45 sec.	With LED for lockout indication, and manual trip lever on safety switch to assure burner shutdown during servicing.	—
* R8184G4025	45 sec.	With LED for lockout indication, and manual trip lever on safety switch to assure burner shutdown during servicing.	Remote Alarm Power
* R8184G4066	15 sec.	With LED for lockout indication, and manual trip lever on safety switch to assure burner shutdown during servicing.	—
* R8184G4074	30 sec.	With LED for lockout indication, and manual trip lever on safety switch to assure burner shutdown during servicing.	—
* R8184G4082	45 sec.	With LED for lockout indication, and manual trip lever on safety switch to assure burner shutdown during servicing. Includes remote alarm dry contacts.	Alarm

* TRADELINE models • SUPER TRADELINE models

R8184M Protectorelay® Oil Burner Control



Dimensions, Approximate: 4 3/8 in. high x 4 1/8 in. wide x 2 1/2 in. deep (111 mm high x 104 mm wide x 64 mm deep)

Ignition Type: Intermittent

Temperature Range: -40 F to +130 F (-40 C to +54 C)

Operates the oil burner and oil valve (if desired) in response to a call for heat from a low voltage control circuit.

- Ignition is on whenever the burner is on (intermittent ignition-also called constant ignition).
- Solid state flame sensing circuit.
- External button to manually reset safety switch after lockout.
- Enclosed safety switch must be manually reset after safety shutdown.
- R8184M includes 40 VA transformer and Y and G terminals for connection of cooling equipment.
- Mounts on standard 4 x 4 in. junction box.
- C554A Cadmium Sulfide Flame Detector and a 24 Vac thermostat required.

Electrical Rating, Contacts:

Full Load: 7.4 A @ 120 Vac; 3.7 a @ 240 Vac;

Locked Rotor: 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

Approvals:

Underwriters Laboratories, Inc. UL Component Recognized; File no.

MP268, guide no. MCC22

Product Number	Timing, Safety Switch	Mounting Bracket	Description
* R8184M1051	45 sec.	Mounts on standard 4 x 4 in. junction box	Protectorelay® Oil Burner Control with 45 seconds lock out timing

* TRADELINE models • SUPER TRADELINE models

Oil Primaries

RA116; RA117 Protectorelay® Controls



One-piece, stack-mounted oil burner primary controls that cycle the burner on and shut down the burner on flame loss or system malfunction.

- Combine a Protectorelay® unit for cycling the burner and a Pyrostat® flame detector for sensing temperature changes of flue gases up to 1000 F (556 C).
- Manual reset of safety switch required after ignition failure completely shuts off main burner.
- Include manual trip safety switch to assure burner shutdown during servicing.
- Mount with flange for mounting on curved or flat surfaces.
- Use with line voltage or 24 Vac Control Circuit.

Dimensions, Approximate: 6 in. high x 5 3/16 in. wide x 3 3/16 in. deep (152 mm high x 132 mm wide x 81 mm deep)

Ignition Type: Intermittent

Approvals:

Canadian Standards Association: CSA Certified; File no. LR95329-1
Underwriters Laboratories, Inc. UL Listed; File no. MP268, Guide no. MCCZ

	Product Number	Timing, Safety Switch	Mounting Bracket
*	RA116A1055	75 sec. Nominal	Mount with flange for mounting on curved or flat surfaces.
*	RA117A1047	75 sec. Nominal	Mount with flange for mounting on curved or flat surfaces.

* TRADELINE models • SUPER TRADELINE models

Oil Primary Control Parts

Product Number	Description
120320	Replacement Cell Assembly, 400-1600 Ohm Sensitivity
130367	Replacement Cell Assembly, 400-1000 Ohm Sensitivity
32611	Grommet (Bulk Mdse)
4074BJS	Oil line mounting bracket assembly, including nut and screw