

Oil Primaries

R8184M Protectorelay® Oil Burner Control



Ignition Type: Intermittent

Electrical Rating, Contacts (full load): 7.4 A @ 120 Vac; 3.7 A @ 240 Vac

Electrical Rating, Contacts (locked rotor): 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

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

- Intermittent ignition is on while the burner is on.
- 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.

Approximate, Dimensions: 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)

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

Approvals, Underwriters Laboratories Inc.: UL Component Recognized; File no. MP268, guide no. MCCZ2

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

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.

Approximate, Dimensions: 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)

Comments: Max insertion length: 5 1/2 in.

Approvals, Underwriters Laboratories Inc.: UL Listed; File no. MP268, Guide no. MCCZ

Approvals, CSA: CSA Certified; File no. LR95329-1

Material Number	Timing, Safety Switch	Mounting	Ignition Type	Description
RA116A1055/U	75 sec. Nominal	Mount with flange for mounting on curved or flat surfaces.	Intermittent	Protectorelay® Oil Burner Control with 75 seconds lock out timing
RA117A1047/U	75 sec. Nominal	Mount with flange for mounting on curved or flat surfaces.	Interrupted	Protectorelay® Oil Burner Control with 75 seconds lock out timing

Oil Primary Control Parts

Material Number	Description
120320/U	Replacement Cell Assembly (7.5 mA at 2 ft-candles)
130367/U	Replacement Cell Assembly (12 mA at 2 ft-candles)

C554 Cadmium Sulfide Flame Detector



The Cadmium Sulfide Flame Detector (cad cell) is a photoconductive flame detector used with oil primary controls such as R4166, R4184, R8182, R8184, R8185, R8404 and R8991.

- On flame failure, the light sensitive cadmium sulfide cell, in conjunction with flame sensing circuitry, causes the Protectorelay® control to shutdown the main oil burner.
- Glass-to-metal hermetic seal in plug-in cell prevents deterioration by humidity, soot or oil fumes.
- Replaceable CAD Cell

Approximate, Dimensions: 1 7/8 in. high x 1 in. long x 1/2 in. wide
(47 mm high x 25 mm long x 13 mm wide)

Ambient Temperature Range: 140°F maximum (1524 mm)

Approvals, Underwriters Laboratories Inc.: UL Listed: File no.

MP268, Vol. 39, Sec. 1, Guide MCCZ

Approvals, CSA: CSA Component Listed: File no. LR95329-1

Sensitivity: 12mA @ 2 ft-candles

Material Number	Lead Length	Electrical Connections	Mounting	Includes	Used With
C554A1463/U	60 in. (1524 mm)	lead wires: NEC Class 1; Includes 2 flag 1/4 in. quick connects.	Type R bracket	A, B, E, J and P mounting brackets and fuel line adaptor	R4166, R4184, R8182, R8184, R8185, R8404, R8991, R7997, R7184, R7284
C554A1794/U	60 in. (152.4 cm)	lead wires: NEC Class 1	Type R bracket	Type "E" mounting bracket and fuel line adaptor	R4166, R4184, R8182, R8184, R8185, R8404, R8991, R7997, R7184, R7284

C554A Accessories and Replacement Parts

Material Number	Description
120320/U	Replacement Cell Assembly (7.5 mA at 2 ft-candles)
130367/U	Replacement Cell Assembly (12 mA at 2 ft-candles)
4074BJS/U	Oil line mounting bracket assembly, including nut and screw