

RA890F Protectorelay™ Primary Control



Primary control provides solid state, electronic flame safeguard protection for industrial and commercial single or dual fuel burners for rectification type flame detection.

- Uses rectification principle of electronic flame detection.
- Replaces RA890E in most applications and mounts on same Q270A1024 Subbase.
- Recycles if flame signal lost while in Run. Failure to establish pilot results in a lockout.
- Safe-start check prevents start-up if flame-simulating failure occurs in flame detector circuit.

- Includes built-in protection against ignition crossover in flame rod systems.
- Includes SPDT alarm contacts.
- Solid state circuitry.
- Mounts and removes easily through use of captive mounting screws.
- Mounting base is made of strong thermoplastic.

Application: Primary control for rectification application (Flame Rod for example)

Frequency: 50 Hz; 60 Hz

Temperature Range: 60 Hz models -20°F to +115°F, 50 Hz models -20°F to +105°F (50 Hz Models -29°C to +41°C, 60 Hz Models -29°C to +46°C)

Approximate, Dimensions: 5 in. high x 5 in. wide x 4 3/4 in. deep (including subbase) (127 mm high x 127 mm wide x 121 mm deep (including subbase))

Approvals, Underwriters Laboratories Inc.: UL Listed: 120V models only; File No. MP268, Guide No. MCCZ

Approvals, CSA: CSA Certified: 120V models only; File No. LR1620

Approvals, Factory Mutual: Approved: Report No. 17678, 19417, 19784

| Material Number | Voltage | Flame Failure Response Time (sec) | Alarm Relay Switching | Safety Switch Timing | Description |
|-----------------|---------|-----------------------------------|-----------------------|----------------------|--|
| RA890F1270/U | 120 Vac | 0.8 sec | SPDT | 15 seconds | Rectification, with alarm contacts |
| RA890F1288/U | 120 Vac | 3.0 sec | SPDT | 15 seconds | Rectification, with alarm contacts |
| RA890F1296/U | 208 Vac | 3.0 sec | SPDT | 15 seconds | Rectification, with alarm contacts |
| RA890F1304/U | 220 Vac | 0.8 sec | SPDT | 15 seconds | Rectification, with alarm contacts |
| RA890F1338/U | 120 Vac | 0.8 sec | SPDT | 30 seconds | Rectification, with alarm contacts |
| RA890F1346/U | 120 Vac | 3.0 sec | SPDT | 30 seconds | Rectification, with alarm contacts |
| RA890F1387/U | 240 Vac | 3.0 sec | SPDT | 15 seconds | Rectification, with alarm contacts |
| RA890F1478/U | 120 Vac | 0.8 sec | SPDT | 15 seconds | Rectification, with alarm contacts, fast safe start check. |

RA890G Protectorelay™ Primary Control



Primary control provides solid state, electronic flame safeguard protection for industrial and commercial single or dual fuel burners applications using Ultraviolet flame detectors.

- Design for interrupted ignition with intermittent pilot on gas burners, and interrupted or intermittent ignition on oil burners.
- Use with a C7027, C7035 or C7044 Minipeeper Ultraviolet Flame Detector for flame sensing.
- Recycles if flame signal lost while in Run. Failure to establish pilot results in a lockout.

- Safe-start check prevents start-up if flame-simulating failure occurs in flame detector circuit.
- Includes SPDT alarm contacts.
- Solid state circuitry, eliminates warm-up and increases resistance to vibration.
- Mounts and removes easily through use of captive mounting screws.
- Mounting base is made of strong thermoplastic.

Application: Either a line or low voltage controller can be used

Frequency: 50 Hz; 60 Hz

Temperature Range: 60 Hz models -20°F to +115°F, 50 Hz models -20°F to +105°F (50 Hz Models -29°C to +41°C, 60 Hz Models -29°C to +46°C)

Approximate, Dimensions: 5 in. high x 5 in. wide x 4 3/4 in. deep (including subbase) (127 mm high x 127 mm wide x 121 mm deep (including subbase))

Approvals, Underwriters Laboratories Inc.: UL Listed: 120V models only; File No. MP268, Guide No. MCCZ

Approvals, CSA: CSA Certified: 120V models only; File No. LR9S329

Approvals, Factory Mutual: Approved: Report No. 22013

| Material Number | Voltage | Flame Failure Response Time (sec) | Alarm Relay Switching | Safety Switch Timing | Description |
|-----------------|---------|-----------------------------------|-----------------------|----------------------|----------------------------------|
| RA890G1229/U | 120 Vac | 0.8 sec | SPDT | 15 seconds | Ultraviolet, with alarm contacts |
| RA890G1245/U | 220 Vac | 0.8 sec | SPDT | 15 seconds | Ultraviolet, with alarm contacts |
| RA890G1260/U | 120 Vac | 3.0 sec | SPDT | 15 seconds | Ultraviolet, with alarm contacts |
| RA890G1286/U | 240 Vac | 3.0 sec | SPDT | 15 seconds | Ultraviolet, with alarm contacts |

Q270 Wiring Mount Base

Application: Wiring Mounting Base for RA890, R4795

| Material Number | Description | Used With |
|-----------------|---------------------------------------|--------------|
| Q270A1024/U | Wiring Mounting Base for RA890, R4795 | RA890, R4795 |