

# Thermocouples and Thermopiles

## Q313 Thermopile Generators



The Q313 Thermopile generates 750 mV, which is sufficient to operate an automatic millivolt gas control system, independent of any outside power source.

- Push-in clip, split nut, and adapter assembly for easy pilot burner installation.
- Spade or quick-connect terminals available for millivolt gas control connections.

**Application:** Thermopile

**Voltage:** 750 mV; Open circuit output – 600 mV to 750 mV

**Temperature Ratings:** Hot Junction – 1400°F; Cold Junction – 780°F  
(Hot Junction – 760°C; Cold Junction – 416°C)

**Used With:** Q314, Q324, Q327, Q377, Q379, Q382 Pilot Burners

**Approvals:** CSA International: 112395

|   | Material Number | Length           | Connection Type | Resistance | Includes  |
|---|-----------------|------------------|-----------------|------------|---|
|   | Q313B1005/U     | 35 in. (889 mm)  | Spade Terminals | 2.89 ohms  | Terminal Block  |
| U | Q313U3000/U     | 35 in. (889 mm)  | Spade Terminals | 2.89 ohms  | 1/2 in. attaching nut, split nut, spade to quick connect adapter, push-in clip, PG9 adapter |
|   | Q313A1055/U     | 47 in. (1194 mm) | Spade Terminals | 2.90 ohms  | 1/2 in. attaching nut   |

U Universal Service Parts

## Q340 Universal 30 mV Thermocouple



The Q340A premium thermocouples generate 30mV. They are used to sense the pilot flame on gas-fired heating systems. The Q340's have the maximum amount of Copel, which provides long-lasting service.

- Push-in clip, split nut, and adapter assembly for easy pilot burner installation.
- Male nut connector for Pilotstat® safety control power units.
- Available in a variety of lead lengths.

**Application:** Thermocouple

**Voltage:** 30 mV; Open circuit output – 26 mV to 32 mV

**Temperature Ratings:** Hot Junction – 1400°F; Cold Junction – 780°F  
(Hot Junction – 760°C; Cold Junction – 416°C)

**Approvals:** CSA International: 112395

|   | Material Number | Length           | Connection Type             | Resistance | Includes                 |
|---|-----------------|------------------|-----------------------------|------------|--------------------------|
| U | Q340A1066/U     | 18 in. (457 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
| U | Q340A1074/U     | 24 in. (610 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
| U | Q340A1082/U     | 30 in. (762 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
| U | Q340A1090/U     | 36 in. (914 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
| U | Q340A1108/U     | 48 in. (1219 mm) | 11/32 32 Male Connector Nut | 0.03 ohms  | Adapter and Push In Clip |

U Universal Service Parts

## Q390 Thermocouple



The Q390A thermocouples generate 30mV that is used to sense the pilot flame on gas-fired heating systems.

- Push-in clip, split nut, and adapter assembly for easy pilot burner installation.
- Male nut connector for Pilotstat® safety control power units.
- Available in a variety of lead lengths.

**Application:** Thermocouple

**Voltage:** 30 mV; Open circuit output – 26 mV to 32 mV

**Temperature Ratings:** Hot Junction – 1400°F; Cold Junction – 780°F  
(Hot Junction – 760°C; Cold Junction – 416°C)

**Approvals:** CSA International: 112395

|  | Material Number | Length           | Connection Type             | Resistance | Includes                 |
|--|-----------------|------------------|-----------------------------|------------|--------------------------|
|  | Q390A1095/U     | 18 in. (457 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
|  | Q390A1046/U     | 24 in. (610 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
|  | Q390A1053/U     | 30 in. (762 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
|  | Q390A1061/U     | 36 in. (914 mm)  | 11/32 32 Male Connector Nut | 0.02 ohms  | Adapter and Push In Clip |
|  | Q390A1103/U     | 48 in. (1219 mm) | 11/32 32 Male Connector Nut | 0.03 ohms  | Adapter and Push In Clip |

# Thermopiles and Thermocouples Selection Guide

## Q370A Thermocouple



The Q370 Thermocouple is a quick dropout thermocouple that generates 30mV.

- The Q370 has various adapters for different mounting possibilities in various pilot burners.

**Application:** Thermocouple

**Voltage:** 30 mV; Output after 60 S: 22mV minimum

**Drop Out Time:** 30 sec

**Temperature Ratings:** Hot Junction – 650°C ± 50°C; Cold Junction – 415°C

| Material Number | Description  | Length              | Resistance          |
|-----------------|--|---------------------|---------------------|
| Q370A 1014      | This 30 mV Thermocouple includes 900 mm leads with 8 adapters. | 35 1/2 in. (900 mm) | 0.025 to 0.031 ohms |

## Thermocouple and Thermopile Accessories

| Material Number | Description         |   |
|-----------------|---------------------|---|
| 394530/U        | Thermocouple Tester |  |

## Thermopiles and Thermocouples Selection Guide

| Thermocouples     |             |             |                   |                  |          |                  |
|-------------------|-------------|-------------|-------------------|------------------|----------|------------------|
| Lead Length (in.) | Universal   | Tradeline   | Cross Reference   |                  |          |                  |
|                   |             |             | White-Rodgers     | Robertshaw       | Husky    | Johnson Controls |
| 18                | Q340A1066/U | Q390A1095/U | H06E-518, H06E-18 | —                | K16BT-18 | K19AT-18         |
| 24                | Q340A1074/U | Q390A1046/U | H06E-524, H06E-24 | 1970-24, 1980-24 | K16BT-24 | K19AT-24         |
| 30                | Q340A1082/U | Q390A1053/U | H06E-530, H06E-30 | 1970-30          | K16BT-30 | K19AT-30         |
| 36                | Q340A1090/U | Q390A1061/U | H06E-536, H06E-36 | 1970-36, 1980-36 | K16BT-36 | K19AT-36         |
| 48                | Q340A1108/U | Q390A1103/U | H06E-548, H06E-48 | —                | K16BT-48 | K19AT-48         |

| Thermopiles       |           |                |   |  |
|-------------------|-----------|----------------|---|--|
| Lead Length (in.) | Universal | Connection     | Includes  | Replaces                                   |
| 35                | Q313U3000 | Spade Terminal | Push-In clip, PG9 adapter, 1/2" attaching nut, Split nut, spade to QC adapter | Q313A1022, Q313A1139, Q313A1170, Q313A1188 |
| 47                | Q313A1055 |                | 1/2" attaching nut  |  |