

UNIFLAME - UNITIZED FLAME DETECTOR WITH AMPLIFIER

Forney's Uniflame series flame detectors utilize micro-processor based technology in combination with solid state infrared (IR), ultraviolet (UV), or dual (IR and UV) sensors.

Three models are properly suited for gaseous, liquid, solid, or combination fuel firing.

The infrared model uses an infrared sensor sensitive to radiation prevailing in both #2 and #6 oil or coal fired applications. The Ultraviolet Model employs an ultraviolet sensor detecting radiation prevalent in gas or #2 oil fired applications. The MultiSpectral Model incorporates both the ultraviolet and infrared sensors to detect the radiation from any variety of the three fuels. The configuration of each detector allows for application on wall fired or tilting-tangentially fired burners.

An adjustable flame relay resides in the body of the Uniflame detector, eliminating the need for a remote amplifier. The Uniflame series flame detectors work on an amplitude and frequency (flame flicker) principle providing the best tuning control where high discrimination is required. The appropriate flicker frequency and amplitude gain is automatically configured in the AutoTune mode and can be manually adjusted via the Edit mode.

- **AUTOMATIC AND MANUAL ADJUSTMENT** of the flame relay "on" and "off" thresholds.
- **OPTICALLY ISOLATED 4-20MA** flame signal output for remote signal indication.
- **SPST FLAME RELAY** for BMS safety interlock and independent SPST alarm relay.
- **FOUR SELECTABLE PROGRAM FILES** capable of storing separate setpoints based on fuel, load or process conditions.
- **REMOTE RS485 COMMUNICATIONS** via Windows 95/98/NT user software for tuning and flame analysis.
- **ELECTRONIC SELF CHECK** - no mechanical shutter which reduces maintenance costs.
- **FULLY SELF DIAGNOSTIC** and displayed via eight character alphanumeric LED display.
- **SAFE 24 VDC OPERATION** to ensure safe working environment for the plant.



FLAME DETECTORS



Re-powering your world





UNIFLAME - UNITIZED FLAME DETECTOR

PRODUCTS AND ACCESSORIES

| | |
|-------------------------|-----------------|
| UNIFLAME SOLID STATE IR | Part #401111-01 |
| UNIFLAME SOLID STATE UV | Part #401112-01 |
| UNIFLAME DUAL SPECTRUM | Part #401113-01 |

MECHANICAL:

| | |
|---------------------|--|
| Housing Material: | Die-cast aluminum with silver polyester powdercoat finish |
| Weight: | 3.8 lbs (1.73 kg) |
| Environmental: | NEMA 4X, IP66 |
| Mounting: | 1" NPT female pipe mount secured with locking collar (fiber optics available on IR & UV models) |
| Cooling Air: | Clean, dry, cool; 10 SCFM (17 Nm ³ /hr) 6" w.c. (4.95 mbar) above furnace pressure |
| Temperature Rating: | -40°F to +150°F (-40°C to +65°C) |
| Humidity: | 0% to 95% relative humidity, non-condensing |

ELECTRICAL:

| | |
|-------------------------|--|
| Input Power: | 24 Vdc (+10%/-15%), 0.35A |
| Electrical Connection: | 12-pin, quarter-turn quick-disconnect |
| Relay Output: | Flame Relay, SPST (N.O. contacts) Fault Relay, SPST (N.C. contacts) |
| Contact Rating: | Minimum: 10 mA @ 5 VDC Maximum: 2A @ 240 VAC (resistive) 2A @ 30 VDC (resistive) |
| Analog Output: | 4-20 mA DC current referenced to 24VDC, max. connected load is 750 ohms. |
| Status Indication: | Eight (8) character, alphanumeric LED Display (scrolling capability) |
| Operator Interface: | Four (4) pushbutton style keys |
| UV Sensor / Wavelength: | Super Blue Silicone / 295-320nm |
| IR Sensor / Wavelength: | Indium Gallium Arsenide (In Ga As) / 700-1700nm |

