

## U2 ALL-IN-ONE



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# FLAME DETECTION SYSTEM

## U2 ALL-IN-ONE

### KEY FEATURES

- Display:
  - Full character 4 digit scrolling LEDs visible in the dark or sunlight;
  - 3 Discrete single color LEDs flashing with the sensor signal;
- Red IR, Blue UV Solid state, Green UVtron:
  - Green status LED (heartbeat flashes with self checking operation);
  - Separate Red LED for relay status (hardware connected to flame relay);
- Touch Screen:
  - Full control through the tempered glass touch sensor
  - Two button interface;
  - Circular scroll finger interface / Touch Wheel;
- Inputs: 24Volt DC supply 0.15amp max current
- Outputs: Two normally-open contacts for self-check and flame relays with shared common. Contacts rated at 2A, 250VAC or 30VDC:
  - Flame relay;
  - Self check relay;
  - 4 to 20mA or 0 to 20mA flame strength;
- Power: 22-26VDC, 120mA max
- Output relay contacts SPST: 2A, 30VDC or 250VAC
- FFRT: 1-3 second nominal, 2-4second max
- Time Delay On: 0-3 seconds
- Fuses: Automatically resettable

### MECHANICAL FEATURES

- Aluminum housing with tempered glass sight window
- The U2 can be connected either through a detachable connector or a pipe fitting (PF) for installation with conduit.
- Ambiental Temperature : -40°C to +70°C
- Degree of protection: IP66, NEMA 4x
- Housing dimensions: Ø118x155mm
- Weight: 2,8kg
- Paint: Silicone free powder coat
- Mounting/Process Connection: 1"NPT female
- Pipe fit Conduit Connection(-PF): 3/4" NPT

### OPTICAL FEATURES

- Optical:
  - Fused Silica Lens (UV grade);
  - Viewing angle 5° for both UV sensors and 1° for the IR sensor;
- The U2 is available in several models to provide different options. Each model includes one, two or three sensor which share the same optical axis.
- Three sensor configuration:
  - Infrared Photodiode = 1400nm with flicker detector filter;
  - UV Photodiode = 310nm with flicker detector filter;
  - UVtron = 210nm UV detector;

# FLAME DETECTION SYSTEM

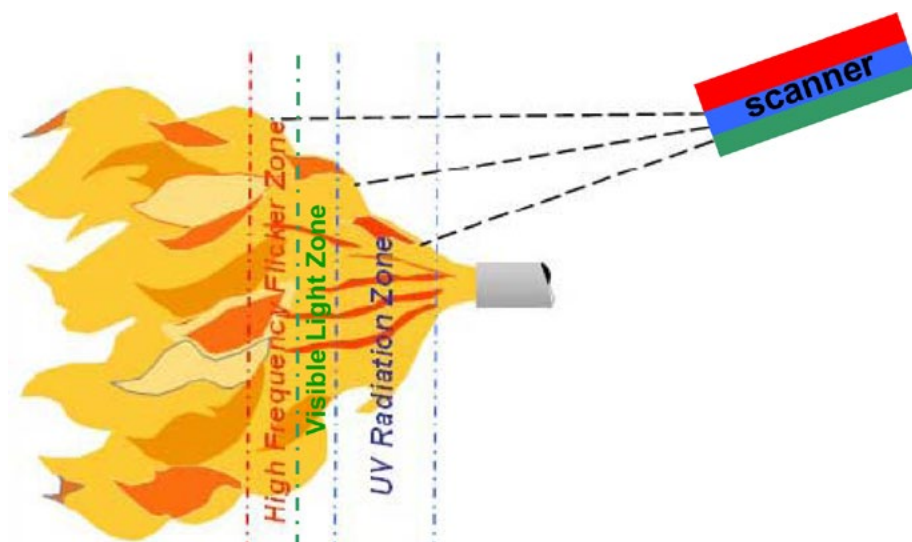
## U2 ALL-IN-ONE

### INDUSTRIAL FLAME MONITORING

- Integrated IR / UV Viewing Head & Signal Processor



- The U2 has a unique touchscreen interface
  - Circular scroll finger "touch wheel" menu structure (similar to iPod®)
- U2-1010 Multi-burner/fuel, Low NOx, Difficult flame detection, limited space



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### APPROVALS

- FM-U.S. :
  - CLASS I, II, III DIV 1 GROUPS A, B, C, D, E, F & G, T6 (\* Not for use in acidic or aliphatic hydrocarbon atmospheres. \*\* Must be sealed at the enclosure.) (-PF version)
  - CLASS I, II, III DIV 2 GROUPS A, B, C, D, E, F, G, T5
  - IECEx FMG 13.0023X Ex d IIC T6 Gb IP66 (-PF version)
  - IECEx FMG 13.0033X Ex nA nC IIC T5 Gc IP66
  - INMETRO NCC 14.03257X Ex d IIC T6 Gb IP66 (-PF version) - Temperature range: -40°F to + 185°F (-40°C to +70°C)
  - INMETRO NCC 14.03257X Ex nA nC IIC T5 Gc IP66 - Temperature range: -40°F to + 185°F (-40°C to +70°C)
  - KTL 14-KB4BO-0575X Ex d IIC T6 Gb IP66 (-PF version) - Temperature range: -40°F to + 185°F (-40°C to +70°C)
  - KTL 14-KB4BO-0575X Ex nA nC IIC T5 Gc IP66 - Temperature range: -40°F to + 185°F (-40°C to +70°C)
- SIL3 capable certified
- EN298:2012

### ACCESSORIES

- Flame amplifier
- Cable
- Swivel joint
- Purge air coupler

### APPLY TO

- Heaters
- Boilers
- Burners

### USE

- Recommended for gas and oil flames

### MANUFACTURER

Combustion and Energy Srl  
Part number:

- U2-1010S or U2-1010S-PF
- U2-1012S or U2-1012S-PF
- U2-1016S or U2-1016S-PF
- U2-1018S or U2-1018S-PF

