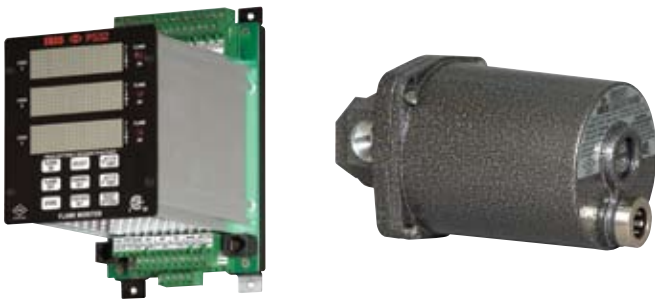




**Tailor-Made For The  
Toughest Environments**

# Honeywell has a wide array of discriminating flame monitoring systems for industrial and difficult flame detection applications.



## The Perfect Team

Honeywell has teamed with IRIS Systems to distribute industrial flame detection systems. Tailor made for the unique demands of industrial processes, the CS550B dual UV/IR viewing head delivers flame discrimination in the toughest environments. With automatic setup, three channels and the ability to monitor UV and IR flame components simultaneously or separately, the RP532 signal processor offers improved burner up time and reliability. Honeywell and IRIS Systems industrial flame monitoring systems provide the perfect blend of form, function and flame detection.

## Flexible Programming

Three methods of viewing head programming offer user flexibility; automatic, manual or factory defaults. Signal processors have keypads (model dependent) or may be connected to FlameTools software. Each viewing head has independent configuration. Certain models allow two sets of configuration data per viewing head. The RP531 processor has an available detachable programming plate, which reduces cost on large installations. With the plate, the RP531 has the same functionality of the RP532 processor.

## X-Ray and Gamma Ray Immune

All viewing heads are immune to X-Rays and Gamma rays, making them ideal for myriad industrial applications.

## Flexible Application

- Wide array of products to meet broad industry needs
- Signal processors available in AC or DC versions
- Universal AC power inputs: 85-264VAC, 50/60Hz
- Independent configuration for each sensor
- FM and CSA approved
- Hazardous location viewing head models: Class 1, Div 2, Groups A, B, C & D, T5 and T4A
- Proportional 0/4-20mA flame signal output
- Flame and self-check relays
- Viewing head adjustable UV and IR gain settings
- Viewing head temperature indication
- Multiple high pass IR flicker frequency settings
- Electronic shutter for UV viewing head self-check
- Quick disconnect cable connection included
- Compact UV and IR detectors perfect for pilot monitoring
- UV Flare stack application specific model

## Dual UV/IR Viewing Heads

Dual UV and IR sensing capabilities are housed within the same detector to provide application flexibility. Their ability to discriminate between all types of fuels, the main flame and unwanted background, make them uniquely suited for multiple industrial processes. Monitor UV and IR simultaneously or separately with the RP532 signal processors.

## Individual UV and IR Viewing Heads

Multiple housing sizes and gain settings in both UV and IR to fit your application. Perfect for single and multiple burner applications and pilot monitoring.







### Key Application Attributes

- Lifecycle Costs: Separate signal processor and viewing head for ease of maintenance
- Set-Up:
  - > Wide spectral response for a variety of difficult to site applications
  - > Adjustable “Flame On” and “Flame Off” points for added discrimination
  - > Digital processing means you work with numbers – reduced field set-up time
  - > Ability to set-up and store settings in memory for ease of replacement
  - > Wide gain adjustment and multiple flicker frequency setting capability to prevent flame out in single or multiple burner (tangential / opposed) applications

### Burner Management System Interface

Each signal processor has a 0/4-20mA scalable flame signal output, two SPDT or SPST flame relays, and one SPDT or SPST self-check relay. The RP532 and RP531 signal processors also have a 24VDC auxiliary output and three N.O. alarm relays. Signal processors may also be linked to BMS using Modbus RTU protocol for monitoring and diagnostics.

### Remote Configuration, Monitoring, Diagnostics

Easily interface multiple signal processors through FlameTools software for remote configuration, monitoring and diagnostics. Each signal processor is Modbus RTU capable with selectable parity and baud rate settings. Link up to 31 or 63 signal processors (model dependent), in a single daisy chain loop, to FlameTools software. Refer to the applicable manual for connection method (RJ-11, RJ-45, 2-wire twisted pair, stereo jack).

### Typical Applications

*Your ultimate source of supply, Honeywell's industrial flame monitoring systems are perfect for industries such as petroleum/refineries, petrochemical, utility/power generation, pulp, paper and metals processing. Their ability to discriminate in the toughest environments, tailors them for industrial process boilers, black liquor recovery boilers, co-generation boilers, grate fired boilers, cement or lime kilns, Claus reactors (H<sub>2</sub>S), thermal oxidizers and gas turbines. Honeywell's industrial flame monitoring systems are uniquely suited for single or multiple burner applications, exotic fuels, hostile environments and burner types including combination, low NOx, tilting, opposed fired, hydrogen, duct and register. In addition, Honeywell's flame detection systems interface with a broad range of industrial process burner management systems.*

# The Honeywell-IRIS Industrial Flame Monitoring Family

	Purpose	Model	Picture	Used With	Description	Type		
SIGNAL PROCESSORS	Amplify & condition viewing head signal, provide 0/4-20mA proportional output signal, monitor viewing head output	RP532A1026		(2) CS55xB and (1) CS70x/CS80x	Signal processor with mounting base, plug-in terminals, 3 channels, 3 tri-color alphanumeric scrolling displays, keypad and status LEDs	AC		
		RP532D1034				DC		
		RP531A1002		(2) CS55xB and (1) CS70x/CS80x	Signal processor with mounting base, plug-in terminals, 3 channels and status LEDs. Compatible with RP532U detachable program module/keypad.	AC		
		RP531D1024				DC		
		RP522A1004		(2) CS55xB	Signal processor with mounting base, plug-in terminals, 2 channel toggle, 4-digit alphanumeric display, keypad and status LEDs	AC		
		RP522D1018				DC		
		RP222A1006		(1) CS256B	Signal processor for UV flare stack monitoring with mounting base, plug-in terminals, 1 channel, 4-digit alphanumeric display, keypad and status LEDs	AC		
		R700A1000		(1) CS70x/CS80x	Signal processor with DIN rail mounting, plug-in terminals, 1 channel, 2-digit numeric display, keypad and status LEDs	AC		
		R700S1012				DC		
		R800S1008			Signal processor with DIN rail mounting, terminals, 1 channel and status LEDs	AC		
		VIEWING HEADS	Monitor flame, provide proportional flame signal to signal processor	CS550B1009		RP532A RP532D	Viewing head with digital display(s), quick disconnect plug, IR high pass filter and 0-699 gain selections, 0-99 UV gain selection, where applicable	UV/IR
				CS552B1025				RP531A RP531D
CS556B1033	RP522A RP522D			UV				
CS256B1017				RP222A	Watchdog III UV flare stack viewing head with digital display, quick disconnect plug and 0-99 gain selection	UV		
CS702A1004				RP532A RP532D	Viewing head with quick disconnect plug, 15-ft cable, aluminum housing with over center latches, 1-9 gain selection	IR		
CS706A1012						RP531A RP531D	UV	
CS802A1020				R700A R700S R800S	Viewing head with quick disconnect plug, 15-ft cable, stainless steel housing with friction twist lock, 1-9 gain selection	IR		
CS806A1038						UV		

\* Typically for gas applications, UV viewing heads are used while for oil or coal applications, IR viewing heads are used. The fuel used must be capable of maintaining a constant flame.

Applications*	Programmed Via	Output(s)	Voltage	Ambient Temperature Range	Enclosure	Approvals	
Multi-burner and multi-fuel applications, Difficult flame detection / discrimination	Keypad or FlameTools Software	0/4-20mA scalable 24Vdc@50mA aux out (6) SPDT flame relay (1) SPDT self-check relay (3) N.O. alarm relay Power to detector(s)	85-264 Vac, 50/60 Hz	FM: -40°F to +140°F (-40°C to +60°C) CSA: 32°F to +125°F (0°C to +52°C)	NEMA 1	FM, CSA	
			22-26 Vdc				
	RP532U1032 Program Interface or FlameTools Software		85-264 Vac, 50/60 Hz			32°F to +122°F (0°C to +50°C)	FM, CSA
			22-26 Vdc				
Flare stack pilot monitoring	Keypad or FlameTools Software	0/4-20mA scalable (2) SPDT flame relay (1) SPDT self-check relay Power to detector(s)	85-264 Vac, 50/60 Hz	32°F to +140°F (0°C to +60°C)	CSA Special Acceptance		
		22-26 Vdc					
Single burner applications	Keypad	0/4-20mA scalable (2) SPDT flame relay (1) SPST self-check relay Power to detector	85-264 Vac, 50/60 Hz	32°F to +140°F (0°C to +60°C)	FM, CSA		
	Model 800 Freeware	0/4-20mA scalable (non-isolated) (2) SPST flame relay (1) SPST self-check relay Power to detector	85-264 Vac, 50/60 Hz				
Multi-burner and multi-fuel applications, Difficult flame detection / discrimination, Low NOx	Signal Processor	Flame signal to signal processor	Supplied by Signal Processor	-40°F to +122°F (-40°C to +50°C)	IP67 - NEMA 4X	CSA for Class 1, Div 2, Groups A, B, C and D, T5 and FM	
Flare stack pilot monitoring				-40° F to +140°F (-40°C to +80°C)		CSA Special Acceptance	
Single burner applications, Pilot monitoring				-40°F to +185°F (-40°C to +85°C)	IP67 - NEMA 4/4X with tightened connector and UV cable protection	FM and CSA for Class 1, Div 2, Groups A, B, C and D, T4A	

# Viewing Head and Signal Processor Compatibility Chart

					SIGNAL PROCESSOR				
					Honeywell OS Number	RP532A1026	RP532D1034	RP531A1002	RP531D1024
					Description	Signal processor with 3 channels, keypad		Signal processor with 3 channels. Compatible with RP532U detachable program module/keypad	
					Type	AC	DC	AC	DC
VIEWING HEADS	Honeywell OS Number	Description	Type	Picture					
	CS550B1009	Viewing head with digital display(s), quick disconnect plug	UV/IR		•	•	•	•	
	CS552B1025		IR		•	•	•	•	
	CS556B1033		UV		•	•	•	•	
	CS256B1017	Flare stack viewing head with digital display, quick disconnect plug	UV						
	CS702A1004	Compact viewing head with quick disconnect plug, 15-ft of cable, over center latches	IR		•	•	•	•	
	CS706A1012		UV		•	•	•	•	
	CS802A1020	Compact viewing head with quick disconnect plug, 15-ft of cable, friction twist lock	IR		•	•	•	•	
	CS806A1038		UV		•	•	•	•	

**SIGNAL PROCESSORS**

RP522A1004	RP522D1018	RP222A1006	R700A1000	R700S1012	R800S1008
Signal processor with 2 channel toggle, keypad		Flare Stack Signal processor with 1 channel, keypad	Signal processor with 1 channel, keypad		Signal processor with 1 channel
AC	DC	AC	AC	DC	AC
					
•	•				
•	•				
•	•				
		•			
			•	•	•
			•	•	•
			•	•	•
			•	•	•

# Honeywell-IRIS Industrial Flame Monitoring Accessories

Model	RP532U1032 Program Interface Module/ Keypad	50036824-001 FlameTools Software for PCs	50036824-422 Communication Module, USB to RS-422	50036824-005 Program cable, RS-232 to RS-485	50036824-328 4 Conductor cable with braided shield	50036824-330 4 Conductor cable with braided shield	50036824-782 Connector cable with LED, 15-ft cable with braided shield
RP532		X	X <sup>1</sup>				
RP531	X	X	X <sup>1</sup>				
RP522		X	X <sup>1</sup>				
RP222		X	X <sup>1</sup>				
R700							
R800				X			
CS550					X		
CS552					X		
CS556					X		
CS256					X		
CS702						X	X <sup>2</sup>
CS706						X	X <sup>2</sup>
CS802						X	X <sup>2</sup>
CS806						X	X <sup>2</sup>

1. Depending on signal processor communication connection method, further wiring may be required. Refer to the applicable manual for connection method (RJ-11, RJ-45, 2-wire twisted pair).

2. Component comes standard with device specified.

## Learn More

For more information please contact your Honeywell distributor. Or visit <http://customer.honeywell.com>.

## Automation and Control Solutions

In the U.S.:

Commercial/Industrial Combustion Controls  
Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422-3992

In Canada:

Honeywell Limited  
35 Dynamic Drive  
Toronto, Ontario M1V 4Z9  
[www.honeywell.com](http://www.honeywell.com)

