

UV Flame Detector

Ultraviolet Optical Sensor

Net Safety's Single UV (Ultra-violet) flame detector delivers high performance detection designed to meet the strict industry performance requirements.

A precisely tuned spectrum of radiation must be recognized and confirmed by our advanced UV sensor to initiate a fire condition, yet it is immune to incandescent or fluorescent lighting, heaters or sunlight — so false alarms are considerably reduced.

The Single UV is designed for simple installation and lower maintenance costs while delivering superior safety performance.



- Lowest Power Consumption of Any Flame Detector On the Market
- Wide Voltage Range Allows For Greater Stability and System Compatibility
- Manual and Automatic Testing of Optical Surfaces — Constatly Monitors Internal Electronics
- Designed for Extreme Conditions, Operational From -50°C — +75°C
- Compact and lightweight for ease of installation — Fully adjustable swivel mount is included
- 3 Year Warranty Electronics / 2 Years on Sensors
- 120 Degree Field of View!
- Field-selectable Sensitivity and Delay Settings Allows Operators To Fine Tune At Installation Site
- Global Certifications and Approvals

Enclosed in a rugged, explosion-proof housing, the Single UV uses the latest in modular microprocessor and UV sensor technology — delivering accurate and reliable monitoring for hydrocarbon and metal-based fires.

It's capable of stand-alone operation or can be connected to a variety of control devices to create a dependable fire monitoring system. The user can define sensitivity and time delay settings and the built-in testing routines ensure continuous operation.

The Single UV has a Field of View of up to 120 degrees and is available with Analog, Relay, and HART Protocol output configurations, including a wide operating voltage range of 10-32 Vdc with low power consumption.

Net Safety has engineered a superior UV flame detector that is simple to operate and maintain while delivering all the security and performance required for high-risk, industrial installations!

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Specifications

	ANALOG	RELAY	HART
Operating Voltage Range	10 to 32 Vdc		
Power Consumption at 24 Vdc *with Heater	Nom 45 mA / 1.1 W Max 115 mA / 2.76 W * Nom 90 mA / 2.16 W Max 165 mA / 3.96 W	Nom 45 mA / 1.1 W Max 95 mA / 2.28 W * Nom 90 mA / 2.16 W Max 145 mA / 3.48 W	Nom 71 mA / 1.7 W Max 173 mA / 3.36 W * Nom 106 mA / 2.22 W Max 223 mA / 5.36 W
Power Consumption at 32 Vdc *with Heater	Nom 35 mA / 1.12 W Max 105 mA / 3.36 W * Nom 70 mA / 2.24 W Max 140 mA / 4.48 W	Nom 35 mA / 1.12 W Max 80 mA / 2.56 W * Nom 70 mA / 2.24 W Max 115 mA / 3.68 W	Nom 57 mA / 1.72W Max 158 mA / 5.06 W * Nom 92 mA / 2.84 W Max 193 mA / 6.18 W
Temperature Range	Certified -40°C to +75°C (-40°F to +167°F) / Operational -50°C to +75°C (-58°F to +167°F)		
Field of View	120 degrees horizontal / 95 degrees vertical		
Spectral Range	UV Radiation 185 to 260 nanometres (1850 to 2600 angstroms)		
Time Delay	DIP switch selectable to 0, 3, 5, 7 seconds		
Sensitivity Settings	DIP switch selectable to 8, 16, 24 or 32 counts per second		
Response Time	<6 seconds [depending on fuel source, fire size and distance]		
Enclosure Material	Red powdercoat with clear anodizing, copper-free aluminum (optional stainless steel), factory sealed housing		
Humidity Range	0 to 95% RH, non-condensing		
Weight (with swivel)	2.1 Kg/4.5 lb (Stainless Steel option 3.4 Kg/7.5 lb) - does not include junction boxes		
Outputs	0 to 20 mA - Into a maximum loop impedance of 800 Ohms at 32 V dc or 150 Ohms at 11.0 V dc. Non-isolated loop supply	Form C contacts rated 1 Amp at 30 Vdc, 0.5 Amp at 125 Vac. Selectable energized/de-energized, latching/non-latching Fire relay Fault relay factory set as energized/non-latching, cannot be modified	HART Communication Protocol
Certifications/Approvals	CSA - Class I, Division 1, Groups B, C and D - Temperature code T5 - CANADA: Class 1, Zone 1, Ex d IIB + H2 T5 ANSI/UL - Class I, Division 1, Groups B, C and D - Temperature code T5 - UNITED STATES: Class 1, Zone 1, AEx d IIB + H2 T5 ATEX/IECEX - Ⓜ II 2 G Ex d II B+H2 T5 Gb GOST-R - 1Ex d II BT5/H2 INMETRO - BR-Ex d II B+H2 T5 Factory Mutual (FM) 3260 Performance Certification ABS Marine NEMA Type 4X • IP66 - Enclosure ratings		
Warranty	3 Years Electronics / 2 Years Sensors		

ORDERING INFORMATION

UVS-A	4-20mA Analog Output
UVS-AR	4-20mA Analog output with a Fire and Fault alarm relay (JB-MPR-A/S included)
UVS-AH	4-20mA Analog Output and HART Communication Protocol (JB-MPHF-A/S included)
UVS-AHR	4-20mA Analog Output and Fire and Fault Alarm Relays and HART Communication Protocol (JB-MPHFR-A/S included)

ADDITIONAL APPROVALS : -X (ATEX/IECEX)
ENCLOSURE MATERIAL: Stainless Steel (-SS) [Aluminum is Standard]
ADDITIONAL FEATURES : -H (Heated Optics)

Ordering Matrix Example:

UVS-AHR-X-SS-H

(Detector - Output - Additional Approval - Enclosure Material - Optional Features)

NOTE: Specify flammable source when ordering

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Specifications con't - Termination Boxes - Accessories

Summary of Distances

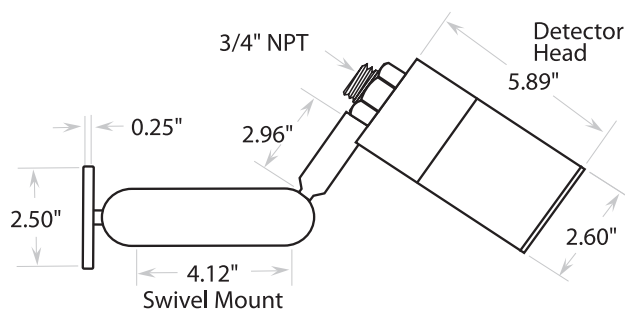
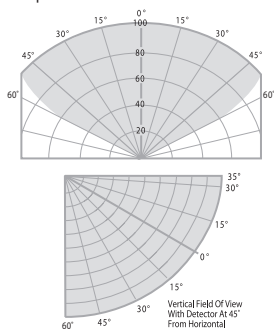
Fuel	Fire Size	Typical Response
n-heptane	1' x 1'	< 8.5sec @ 150 ft.
gasoline	1' x 1'	< 3sec @ 120 ft.
methane	30" plume	< 3sec @ 120 ft.

Immunity False Alarm Stimuli

Stimuli	Immunity Range
Direct/Indirect Sunlight	total
1500W Heater	10 ft
Halogen, Incandescent Light	3 ft
Florescent Light	10 ft

Example Field of View - Methane

32" plume - indicated in feet - consult factory for other flame types



TERMINATION BOXES

Class 1, Division 1, Groups BCD - Class 1, Zone 1 – Enclosure rated NEMA 4X, IP67 (See man-0081 for full specifications)

JB-MPS-A/S	Termination box - Analog Output - Switch (for remote MVI testing) & Test Jacks - Aluminum or Stainless Steel
JB-HRTCOM-A/S	Separated HART Communication Input Kit (JB-MPH-A with installed HPT-001) - Aluminum or Stainless Steel

ACCESSORIES

LAT-120	Laser alignment tool assembly - used to define area of coverage for all NSM flame detectors
AIR-SHIELD	Air Shield assembly (aluminum), supplied clean instrument air keeps lens clear in areas with heavy airbourne particulate
HPT-001	HART Communicator port - Intrinsically Safe connection mounts to connected JB-MPHF & JB-MPHFR
FH-SHROUD	Field of View Restrictor Anodized (Red) for "S" series fire detectors (aluminum)
UN-MK-41	1" Pipe Mounting kit - Stainless steel
UN-MK-42	2" Pipe Mounting kit - Stainless steel
UN-MK-43	3" Pipe Mounting kit - Stainless steel
SSK-4	Sun shade kit/rain guard for "S" series flame, stainless steel - mounts directly to flame detector
SSK-1	Sun shade kit for "S" series flame, stainless steel - mounts directly to flame detector
TL-MP-KIT	Universal test lamp kit - certified rechargeable hand-held unit - produces accurate fire simulation (UV and IR sources)
TL-MP-KIT-X	Universal test lamp kit [ATEX] - certified rechargeable hand-held unit - produces accurate fire simulation (UV and IR sources)

HEADQUARTERS:
FLAME AND GAS DETECTION
Emerson Process Management
Net Safety Monitoring Inc.
2721 Hopewell Place NE
Calgary, Alberta, Canada T1Y 7J7
T +1 (403) 219 0688
T 1 866 FIREGAS
F +1 (403) 219 0694
www.net-safety.com

HEADQUARTERS:
GAS CHROMATOGRAPHS
Emerson Process Management
Rosemount Analytical
5650 Brittmoore Road
Houston, TX 77041 USA
T +1 (713) 827 6380
T 1 866 422 3683
F +1 (713) 827 3865
www.raihome.com

HEADQUARTERS:
PROCESS ANALYTICAL
Emerson Process Management
Rosemount Analytical
6565 P Davis Industrial Parkway
Solon, OH 44139 USA
T +1 (440) 914 1261
T 1 800 433 6076
F +1 (440) 914 1262
www.raihome.com

HEADQUARTERS:
LIQUID ANALYTICAL
Emerson Process Management
Rosemount Analytical
2400 Barranca Parkway
Irvine, CA 92606 USA
T +1 (949) 757 8500
T 1 800 854 8257
F +1 (949) 474 7250
www.raihome.com

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™Please refer to manuals for complete specifications.