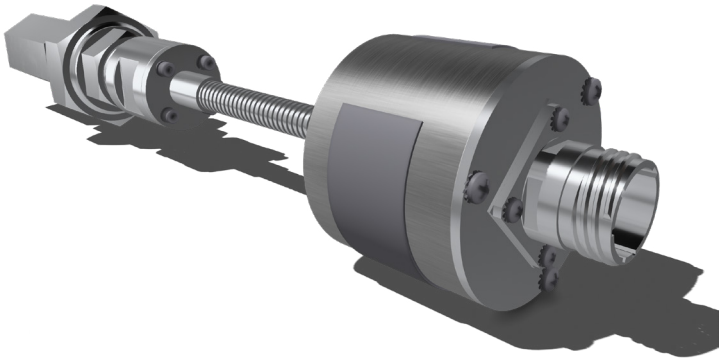
Turbine Combustion Flame Sensor

Turbine Sensor

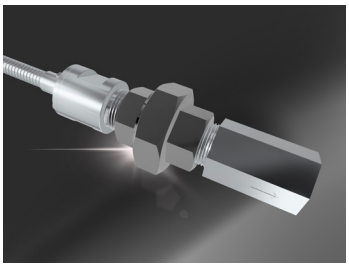
VFS-2000

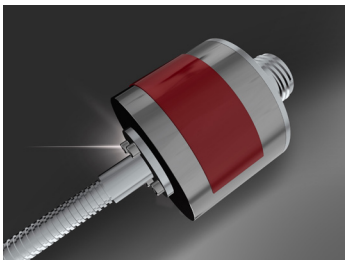
Fireye's flame sensing expertise now extends to combustion turbine applications & flame sensors designed for the turbine environment.



Fully sealed high temperature, high pressure sapphire window at the combustor with high temperature fiber optics for precise flame signal transmission. Remote electronics & solid state ultraviolet (UV) sensitivity.

Fireye turbine combustor flame sensor provides a 4 20 mA flame signal output. Response time to flame is < 150mS. Sensor upgrades tube style and other turbine flame sensors with a reliable high temperature rated installation at the turbinets.



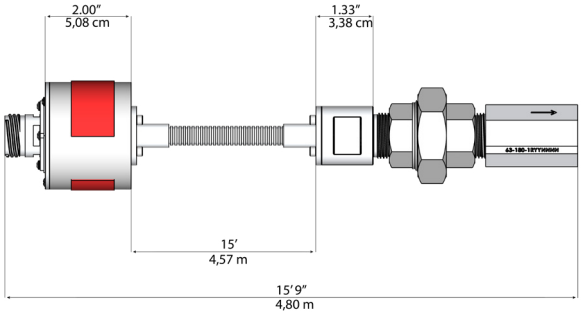


Features

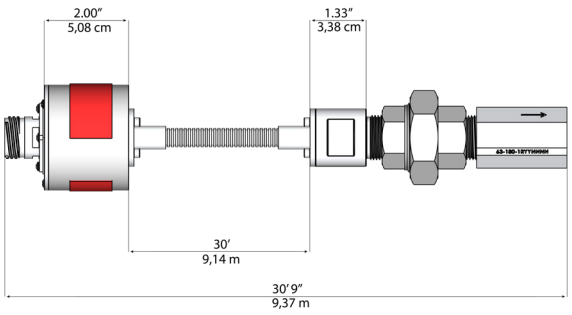
- Solid state design, no tubes or shutters.
- Detects natural gas or fuel oil turbine
- Silicon carbide UV spectrum sensor, fast response time
- Installs with ¾ inch NPT standard gas turbine pipe
- Compact design, removable without turbine interruptions

SIL3

VFS-2000-K15
Turbine Flame Sensor Kit with 15ft Optical Length



VFS-2000-K30
Turbine Flame Sensor Kit with 30ft Optical Length



VFS-2000K15 & VFS-2000-K30 kit complete with:

- Turbine Flame Sensor Head & Electronics assembly
- High Pressure, High Temperature Window (Ref. 63-180)
- Stainless Steel High Temperature Union (Ref. 35-410)
- High temperature electrical cable and prefabricated molded connector 30 feet (Ref. 59-606-xxx)
- UV Enhanced Quartz Fiber Optic (fully sheathed) assembly c/w hot & cold end connections

Turbine Combustion Flame Sensor

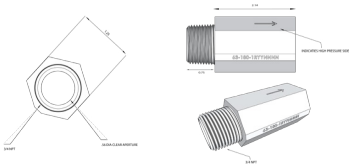
Specifications

DESCRIPTION	VFS-2000-Kxx
Hazardous Area Classification	Class I, Div 2 - (North America) Groups A,B,C & D, II 3 G Ex ec IIC T3C (CE)
Housing Material	Stainless Steel 18-8 (304)
Mounting Connection	3/4 male NPT
Min. Operating Temperature	32°F/-0°C and tested down to -40°C/-40°F
Max. Operating Temperature Hot End	618°F/325°C
Max. Operating Temperature Cool End	284°F/140°C
Humidity	100%
Vibration	Per IEC 60069-2-64, Spectrum A.2. Category 3 FCC Part 15, Subpart B, Class A (30MHZ to 1GHz)
Detection Principe	Ultra-Violet SOLID STATE SENSOR
Sensor	Silicon Carbide Diode
Sensitivity	>4mA@1nW/cm²@310nm
Spectral Range	200nm-400nm
Output	4-20mA DC, current loop
Flame Present Detection Time	175mS (typical < 75mS)
Flame Failure Detection Time	175mS (typical < 75mS)
Power Supply	18-30Vdc
Reverse Polarity Protected	YES
Electrical Connection	5-pin male MIL-DTL-38999 shell, size 15 series III hermetic, scoop proof
SIL Rating	SIL 3
SIL Certicate	EN61508
UL Certificate	UL 353, 5th Ed., Issue Date: 1994-09-23, Revision Date: 2011-11-08
CSA Certificate	C22.2 NO. 24-15, 9th Ed. Issue Date: 2015-01-01
CE Certificate	EUROPEAN COMMUNITY COUNCIL DIRECTIVE 2014/30/EU

DESCRIPTION	63-180
Material	Stainless Steel 316
Window Material	Sapphire Glass
Mounting Connection	3/4 female NPT
High Pressure Window, differential Pressure	27ATM/400PSI/27.5 bar
High Pressure Window, differential Temperature	849°F/454°C

63-180

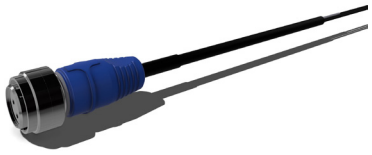
High Pressure, High Temperature Window



DESCRIPTION	59-606-40	59-606-60	59-606-100
Shield	YES	YES	YES
Voltage	18-30Vdc	18-30Vdc	18-30Vdc
Temperature Range	-40°F/-40°C - 284°F/140°C	-40°F/-40°C - 284°F/140°C	-40°F/-40°C - 284°F/140°C
Cable Length	40 feet/9 meter	60 feet/15 meter	100 feet/30 meter

59-606

High Temperature Electrical Cable & Prefabricated Molded Connector



For more information, please contact your local Fireye Distributor.

fireye.com

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