InTense Flame Sensors

VFS-2000

Fireye's flame sensing expertise now extends to intense high presure, high temperature and high vibration combustion applications.

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 InTense flame sensor provides a loop powered 4-20mA flame signal output representing flame brightness from a very low level. Response time to Flame On or Flame Off is 175ms (typical < 75ms). Sensor upgrades tube style sensors with a reliable high temperature rated installation at the combustion face.

SIL3

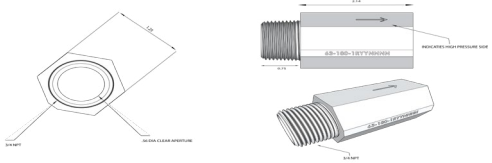
Features

- Solid state design, no tubes or shutters
- Detects hydrogen, 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

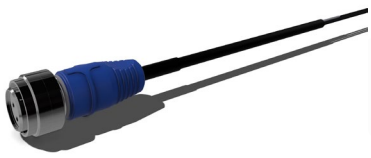
Applications

- Gas Turbines
- Furnaces & Kilns
- Incinerators
- Down-Fired Reformers
- Molten Metal Processing
- Industrial Ovens

63-180
High pressure, high temperature window



59-606-x
High temperature electrical cable & molded connector

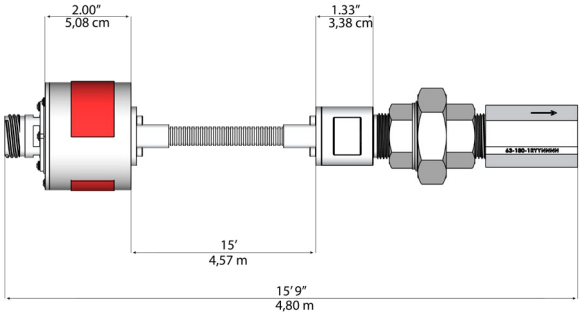


59-621-x
High temperature armoured electrical cable & molded connector

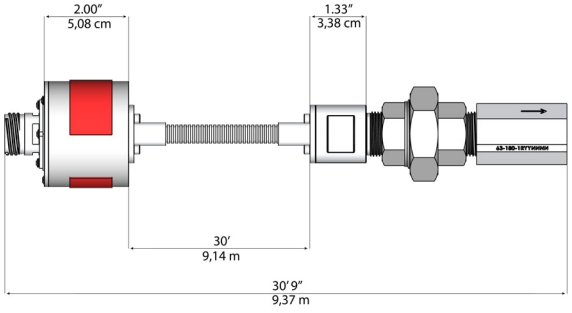
fireye.com

InTense Kits

VFS-2000-K15 - Kit with 15ft / 4.6m optical length



VFS-2000-k30 - Kit with 30ft / 9.1m optical length



Kits complete with: InTense flame sensor head & amp - electronics assembly, High pressure, high temperature window (Ref. 63-180), Stainless steel high temperature union (Ref. 35-410) and UV Enhanced quartz fiber optic (fully sheathed) assembly, hot & cold end connections (15ft or 30ft)

InTense Flame Sensors

Specifications

DESCRIPTION	VFS-2000
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
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

High pressure, high temperature window

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

Stainless steel high temperature union

DESCRIPTION	35-140
Material	Stainless Steel 316
Mounting Connection	3/4 female NPT both sides

High temperature electrical cable c/w molded connector & high temperature armoured electrical cable c/w moulded connector

DESCRIPTION	59-606-40	59-606-60	59-606-80	59-606-100	59-621-40	59-621-60	59-621-80	59-621-100
Shield	Yes				Armored (ATEX / IECeX)			
Voltage	18-30Vdc							
Temp. Range	-40°F/-40°C - 284°F/140°C							
Cable Length	40ft / 12.1m	60ft / 18.1m	80ft / 24.3m	100ft / 30.4m	40ft / 12.1m	60ft / 18.1m	80ft / 24.3m	100ft / 30.4m

For more information, please contact your local Fireye Distributor.

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