



Industrial Fixed Flame Detection

Issue: 1V0

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1. FSX Detectors

Quick Reference Chart

		FS24X-2	FS24X-9	FS20X	FS10
SPECTRAL SENSITIVITY	Ultraviolet Band (0.18 – 0.26 μ)			√	
	Visible Band (0.4 – 0.7 μ)	√	√	√	√
	NearBand IR (0.7 μ – 1.1 μ)	√	√	√	√
	WideBand IR1 (1.1 – 3 μ)	√	√	√	√
	WideBand IR1 (1.1 – 3.5 μ)			√	
	WideBand IR2 (3.0 – 5.0 μ)	√	√		
SENSITIVITY (feet)*	Very High	200+	200+	200+	
	High	150	150	150	45
	Medium	100	100	100	30
	Low	50	50	50	15
RESPONSE	Fireball / Quick Response Option (< 500 mS)				√
	Acetylene Long Range Option			√	
OTHER	Field of View (conical)	110°	90°	90°	90°
	HART Option	√	√	√	
	Modbus Built-In	√	√	√	
ENCLOSURES	Aluminum Class I, Div. 1	√	√	√	√
	316 Stainless Steel Class I, Div. 1	√	√	√	√
APPROVALS	FM	√	√	√	√
	cFM	√	√	√	√
	ATEX	√	√	√	√
	IECEX	√	√	√	√
	INMETRO	√	√	√	
	GOST-R	√	√	√	
	SIL 2 Compliant	√	√		
TEST LAMPS	TL-2055	√	√	√	
	TL-1055	√	√	√	
	FS-846-B				√
MOUNT	SM4	√	√	√	√

*Detection distance for a one sq. ft. reference heptane pan fire

2. FSX Detectors

Applications Chart

		FS24X-2	FS24X-9	FS20X	FS10
FINISHING	Aerosol Filling Facilities	●	●	●	●
	Automotive Paint Lines	○	○	○	●
	Curing Ovens	○	○	○	●
	General Finishing	○	○	○	●
	Liquid Paint Spray Line	○	○	○	●
	Paint and Solvent Storage	●	●	●	●
	Powder Coating Booths	○	○	○	●
GENERAL	Aircraft Hangars	●	●	●	○
	Airport Terminals	●	●	●	○
	Cold Storage Warehouses	●	●	●	○
	Engine Test Cells	●	●	●	○
	General Warehouse	●	●	●	○
	Lumber Storage	●	●	●	○
	Marine Engine Rooms	●	●	●	○
	Marine Terminals	●	●	●	○
	PowerPlants	●	●	●	○
OIL, GAS and PETROCHEMICALS	Acetylene Processing and Storage	●	●	●	○
	Chemical Storage	●	●	●	○
	Cogeneration Plants	●	●	●	○
	Crude and Product Tank Farms	●	●	●	○
	Ethanol Production and Storage	●	●	●	○
	Gas Collection Facilities	●	●	●	○
	Gas Compressor Buildings	●	●	●	○
	Gas Processing Plants	●	●	●	○
	Gas Turbine Enclosures	●	●	●	○
	Gasoline Loading Terminals	●	●	●	○
	Isopropanol (IPA) Production and Storage	●	●	●	○
	LNG Storage/Distribution	●	●	●	○
	LPG Storage/Distribution	●	●	●	○
	Methanol Production and Storage	●	●	●	○
	Natural Gas and CNG Plants	●	●	●	○
	Offshore Drilling Platforms	●	●	●	○
	Offshore Production Platforms	●	●	●	○
	Petrochemical Plants	●	●	●	○
	Petroleum Product Pipelines	●	●	●	○
	Petroleum Product Pumping Stations	●	●	●	○
Rail and Truck Loading/Unloading	●	●	●	○	
Refineries	●	●	●	○	
GENERAL	Clean Rooms	○	○	●	○
	Gas Cabinets	○	○	●	○
	Hydrogen Gas Cabinets	○	○	●	○
	Hydrogen Plants	○	○	●	○
	Hydrogen Storage	○	○	●	○
	IPA Stations	○	○	●	○
	Silane Gas Cabinets	○	○	●	○
	Silane Gas Manufacturing	○	○	●	○
	Silane Gas Storage	○	○	●	○

● Recommended ● Suitable ○ Not Recommended

3. Model F24X QuadBand™

Triple IR Fire and Flame Detector (IR/IR/IR/Visible)



Features

- Patented* WideBand IR™ Technology
- Patented* Electronic Frequency Analysis™
- Visible Sensor for optimum false alarm rejection
- Selectable detection sensitivities
- Field-of-View: 110° cone-of-vision (90° cone-of-vision model also available)
- Dual microprocessors for reliable performance
- Real-time clock for accurate time dating of events
- FirePic™ — pre-fire event data storage
- Event log with date and time stamp
- RS-485 Modbus communication
- Non-Isolated 4-20 mA Analog output (sink or source)
- Alarm, Fault and Fire Verification relays
- Automatic optical path and electronic selftest
- Widest operating temperature range
- Patented* Electronics Module for components protection with easy plug-in terminations and field installation
- Two 3/4 in. NPT OR 25 mm conduit entries
- Low Power Consumption
- High RFI and EMI immunity

The FS24X is the latest generation high technology Multi-Spectrum Triple IR (IR/IR/IR/Visible) Fire and Flame Detector, which is part of our FSX family of advanced technology Electro-Optics fire detectors. Using our patented* WideBand IR™, WideBand 4.3 micron IR™, and Visible detection technology, the FS24X is a quantum leap in flame and fire detection. Sophisticated software algorithms and dual microprocessors ensure that the FS24X has the highest fire detection performance combined with optimal false alarm rejection.

110° field of view with a detection range greater than 200 ft.

Benefits

- Detects hydrocarbon and non-hydrocarbon fires in all environmental conditions
- User selectable outputs
- Optimal false alarm rejection for all environmental conditions
- Minimal maintenance for trouble-free operation
- PC software and Interface Module (FSIM) for fault diagnostics, real-time graphics (RTGs), and downloading of FirePics™ and event log
- Suitable for a wide variety of applications
- Easy electronics module replacement
- Test lamps for manual testing

Certifications

- FM:
Class I, Div. 1 & 2, Groups B, C, & D
Class II, Div. 1 & 2, Groups E, F, & G
Class III
- ATEX: II 2 G D
Ex d IIC T4 (Ta: -60 to +110°C), T5 (Ta: -60 to +90°C), T6 (Ta: -60 to +75°C)
- CE:
Complies with EN6000-6-4, EN50130-4, & EN54-10:2002 + A1:2005
- SIL Rating:
FMEDA meets IEC 61508 safety requirements

3. Model F24X QuadBand™

Triple IR Fire and Flame Detector (IR/IR/IR/Visible)



3.1 FS24X-211 Series with 110° Field of View, Standard Temp Range -40° to 85°C

FS24X-211 Series with 110° field of view, standard temp range -40° to 85°C

Part Number	Description
FS24X-211-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-211-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-211-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-211-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-211-21-4	QuadBand™ IR3+ detector, 110° field of view, copper-free aluminum encl., (2) ¾ in. NPT entries INMETRO approved
FS24X-211-22-4	QuadBand™ IR3+ detector, 110° field of view, 316 stainless steel encl., (2) ¾ in. NPT entries INMETRO approved
FS24X-211-23-4	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved
FS24X-211-24-4	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved

3.2 FS24X-212 Series

FS24X-212 Kits

Part Number	Description
FS24X-212-21-1	FS24X-211-21-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-22-1	FS24X-211-22-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-23-1	FS24X-211-23-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-24-1	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-21-4	FS24X-211-21-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-22-4	FS24X-211-22-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-23-4	FS24X-211-23-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-24-4	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.

3. Model F24X QuadBand™

Triple IR Fire and Flame Detector (IR/IR/IR/Visible)



3.3 FS24X-911 Series with 90° field of view, standard temp range -60° to 85°C

FS24X-911 Series with 90° field of view, standard temp range -60° to 85°C

Part Number	Description
FS24X-911-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-911-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-911-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-911-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-911-21-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, for High Background IR Applications
FS24X-911-22-5	QuadBand™ IR3+ Detector, 316 Stainless Steel encl., (2) ¾ in. NPT entries FM, for High Background IR Applications
FS24X-911-23-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, for High Background IR Applications
FS24X-911-24-5	QuadBand™ IR3+ Detector, 316 Stainless Steel encl., (2) M25 entries FM, for High Background IR Applications
FS24X-911-21-6	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX and EN54-10 approved
FS24X-911-22-6	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX and EN54-10 approved
FS24X-911-23-6	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx, ATEX and EN54-10 approved
FS24X-911-24-6	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX and EN54-10 approved

3. Model F24X QuadBand™

Triple IR Fire and Flame Detector (IR/IR/IR/Visible)



3.4 FS24X-912 Series (HART)

FS24X-912 Series

Part Number	Description
FS24X-912-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-21-4	QuadBand™ IR3+ detector, 90° field of view, copper-free aluminum encl., (2) 3/4 in. NPT entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-22-4	QuadBand™ IR3+ detector, 90° field of view, 316 stainless steel encl., (2) 3/4 in. NPT entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-23-4	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-24-4	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.

3.5 Replacement Detector Modules FS24X

Replacement Detector Modules FS24X

Part Number	Description
FS24X-911-10	FS24X Replacement Module - standard temp range
FS24X-912-10	FS24X Replacement Module w/HART - standard temp range

3.6 Accessories FS24X

Accessories

Part Number	Description
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X, SS4, SS2 detectors
PSU-12	Universal charger for Fire Sentry Test Lamps and Interface Kits. For 110-240 VAC with international plugs
TL-2055	IR Test lamp for testing FSX detectors, explosion proof version. Incl universal charger
TL-1055	IR Test lamp for testing FSX detectors, non-explosion proof version. Incl universal charger
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
FSX-A014R	Optional Registered HART Module for FS24X Detectors

3. Model F24X QuadBand™

Triple IR Fire and Flame Detector (IR/IR/IR/Visible)



20.7 Spare Parts FS24X

Spare Parts	
Part Number	Description
FSX-A009	Stainless Steel Grill Kit for FS24X-2 Detectors, for -5 version only
FSX-A010	Stainless Steel Grill Kit for FS24X-9 Detectors, for -5 version only
FSX-A006	Replacement IR Bulb TL1055/TL2055
PW-3123-0005	Battery Pack for FT-2145/TL-1055/TL-2055 Test Lamp

4. Model FS20X

Multi-Spectrum Fire and Flame Detector UV/Dual IR/VIS



The FS20X is the latest generation high technology Multi-Spectrum (UV/Dual IR/VIS) Fire and Flame Detector, which is part of the FSX family of advanced technology Electro-Optical Flame Detectors. Based on the foundation of the highly successful and reliable SS4 detector, the FS20X detector represents a quantum leap in integrating Infrared and Ultraviolet sensing technologies. The FS20X is a fire and flame detector with a proven UV solar-blind Sensor. The FS20X exhibits faster false-alarm free response to fires over a wider temperature range and with a much longer detection range compared to conventional UV/IR detectors.

Solar blind 90° field of view and detection range greater than 200 ft.

Features

- Patented* WideBand IR™ Infrared combined with Ultraviolet
- Detection range greater than 200 ft. to 1 sq. ft. heptane fire
- Patented* Electronic Frequency Analysis
- Visible Sensor for optimum false alarm rejection
- Selectable detection sensitivities
- Solar blind 90° cone-of-vision
- Dual Microprocessors for reliable performance
- Real-time clock for accurate time dating of events
- FirePic™ — Up to 6 pre-fire event data storage
- Event log — Up to 200 events with date and time stamp
- Built-in RS-485 Modbus Communication
- Built-in non-isolated 4-20 mA analog output (sink or source)
- Alarm, Fault and Fire Verification relays
- Automatic Optical Path and Electronic Self-Test
- Widest operating temperature range
- Patented* Electronics Module for components protection with plug-in terminations for easy field installation
- Two 3/4 in. NPT or 25 mm conduit entries
- Low Power Consumption
- High RFI and EMI immunity
- FM, ATEX, CE mark approvals
- Meets SIL 2 requirements

Benefits

- Detects hydrocarbon and non-hydrocarbon fuel fires in all environmental conditions
- Arc welding immunity
- False alarm rejection for all environmental conditions
- Minimal maintenance for trouble-free operation
- PC software and Interface Module (FSIM) for fault diagnostics real-time graphs (RTGs), and downloading of FirePics™ and event log
- Suitable for a wide variety of applications

Certifications

- FM: Class I, Div. 1 & 2, Groups B, C, & D; Class II, Div. 1 & 2, Groups E, F, & G; Class III
- ATEX: II 2 G D; Ex d IIC T4 (Ta: -40 to +110°C), T5 (Ta: -40 to +75°C), T6 (Ta: -40 to +60°C)
- CE: Complies with EN6100-6-4 & EN50130-4, EN54-10:2002 + A1:2005

4. Model FS20X

Multi-Spectrum Fire and Flame Detector UV/Dual IR/VIS



4.1 FS20X-211 Series, standard temp range -40° to 85°C

FS20X-211 Series, standard temp range -40° to 85°C

Part Number	Description
FS20X-211-21-2	DUAL IR/UV Detector Copper-Free Aluminum Encl. with (2) ¼" NPT entries, FM, cFM for Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III
FS20X-211-22-2	DUAL IR/UV Detector 316 Stainless Steel Encl. with (2) ¼"NPT entries, FM, cFM for Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III
FS20X-211-23-3	DUAL IR/UV Detector Copper-Free Aluminum Encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1
FS20X-211-24-3	DUAL IR/UV Detector 316 Stainless Steel Encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1
FS20X-211-21-4	Dual IR/UV Detector Copper-Free Aluminum Encl. with (2) 3/4 in. NPT entries, INMETRO
FS20X-211-22-4	Dual IR/UV Detector 316 Stainless Steel Encl. with (2) 3/4 in. NPT entries, INMETRO
FS20X-211-23-4	DUAL IR/UV Detector Copper-Free Aluminum Encl. with (2) M25 entries, INMETRO
FS20X-211-24-4	DUAL IR/UV Detector 316 Stainless Steel Encl. with (2) M25 entries, INMETRO

4.2 FS20X-212 Series w/HART, standard temp range -40° to 85°C

FS20X-212 Series, standard temp range -40° to 85°C

Part Number	Description
FS20X-212-21-2	Dual IR/UV copper-free aluminum encl. with (2) 3/4 in. entries, FM/cFM, HART module factory installed
FS20X-212-22-2	Dual IR/UV 316 stainless steel encl. with (2) 3/4 in. entries, FM/cFM, HART module factory installed
FS20X-212-23-3	Dual IR/UV copper-free aluminum encl. with (2) M25 entries, ATEX/IECEx, HART module factory installed
FS20X-212-24-3	Dual IR/UV 316 stainless steel encl. with (2) M25 entries, ATEX/IECEx, HART module factory installed
FS20X-212-21-4	Dual IR/UV copper-free aluminum encl. with (2) 3/4 in. NPT entries, INMETRO. HART Module factory installed
FS20X-212-22-4	Dual IR/UV stainless steel encl. with (2) 3/4 in. NPT entries, INMETRO. HART Module factory installed
FS20X-212-23-4	Dual IR/UV copper-free aluminum encl. with (2) M25 entries, INMETRO, HART module factory installed
FS20X-212-24-4	Dual IR/UV 316 stainless steel encl. with (2) M25 entries, INMETRO, HART module factory installed

4.3 Accessories FS20X

FS20X Accessories

Part Number	Description
FSX-A014	Optional HART Module for FS20X Detectors
FVR-01	Field of View Restrictor
PSU-12	Universal charger for Fire Sentry Test Lamps and Interface Kits. For 110-240 VAC with international plugs
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X, SS4, SS2 detectors
TL-1055	IR Test lamp for testing FSX detectors, non-explosion proof version. Incl universal charger
TL-2055	IR Test lamp for testing FSX detectors, explosion proof version. Incl universal charger

4. Model FS20X

Multi-Spectrum Fire and Flame Detector UV/Dual IR/VIS



4.4 Replacement Detector Module for FS20X

Replacement Detector Module for FS20X

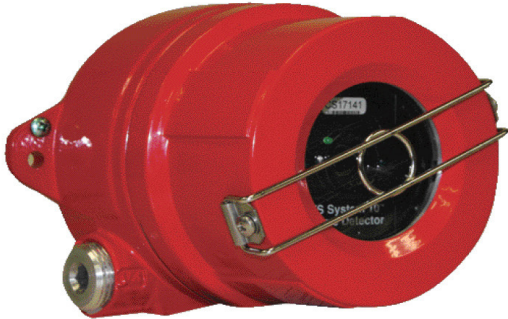
Part Number	Description
FS20X-211-10	FS20X Replacement Detector Module
FS20X-212-10	FS20X Replacement Detector Module w/HART

4.5 Spare Parts FS20X

Spare Parts

Part Number	Description
FSX-A006	Replacement IR Bulb for TL1055 and TL2055
FSX-A011	Grill Kit for the FS20X
PW-3123-0005	Battery Pack for FT-2145/TL-1055/TL-2055 Test Lamp

5. FS10 Fire Detection Systems For Liquid Paint Spray and Electrostatic Powder Coating



A high-speed microprocessor based fire detection and process control system specially designed for liquid and powder coating applications, the FS System 10 quickly detects the presence of a flame, reacts by initiating a shutdown of the electrostatic finishing process in a matter of milliseconds; and effectively interrupts the fire before residues and wet paint films can ignite.

The FS System 10 is the only system that provides a two-stage response: an ALERT for spray gun "fireball" type fires and if the fire continues, a FIRE ALARM is declared in 4-5 seconds.

90° field of view and detection range of 15 ft.

Features

- Multi-Spectral digital electro-optical infrared fire Detector
- Meets requirements of NFPA 33
- Unique two-stage ALERT and FIRE ALARM response
- Immune to false alarms caused by arcs or corona discharges
- Built-in automatic "through the lens" self-test
- Not sensitive to background radiant energy sources such as paint heaters
- Not affected by absorbing smoke or paint solvent mist in liquid pant spray booths
- Sees through paint, powder or oil residue on Detector's lens
- Digital communications with RS-485 interface

Certifications

- Explosion-Proof; Class I, Div. 1 & 2, Groups B, C, & D Class II, Div. 1 & 2, Groups E, F, & G, Class III
- FM, CE

5.1 Card Controller with FS10 Electro-Optical Fire Detector

FS10 fire Detector with card controller. Incl PC software and manual.

Note: Requires backplane card and 24 Vdc.

Card Controller with FS10 Electro-Optical Fire Detector

Part Number	Description
Option-2FL	2FL system: liquid paint spray line applications with two (2) fire signal relay levels
Option-2GF	2GF system: general finishing applications with process control and fire alarm signal relays
Option-2WE	2WE system: powder coating and paint spray line applications with two (2) fire signal relay levels
Option-2WL	2WL system: paint spray line applications with three (3) fire signal relay levels
Option-2GE	2GE system: powder coating and paint spray line applications with two (2) fire signal relay levels
BP-1	Backplane for 1 card controller
BP-2	Backplane for 2 card controllers
BP-4-L9	Backplane for 4 card controllers

5. FS10 Fire Detection Systems For Liquid Paint Spray and Electrostatic Powder Coating

5.2 Spare Parts - FS10 Wall Mount Controller and Card Controller

Spare Parts - FS10 Wall Mount Controller and Card Controller

Part Number	Description
SW-5143-001	Replacement keypad for FS10 wallmount
FS10-CARD-2FL	Liquid paint spray line applications with two (2) fire signal relay levels
FS10-CARD-2GE	Powder coating and paint spray line applications with two (2) fire signal relay levels
FS10-CARD-2GF	General finishing applications with process control and fire alarm signal relays
FS10-CARD-2WL	Paint spray line applications with three (3) fire signal relay levels
FS10-Detector	Model FS10 fire Detector for use with wall mount controller or card controller
FS10-DET-MODULE	Replacement electronics module for fire detector for the above systems

5.3 Detector Cables

Card Controller with FS10 Electro-Optical Fire Detector

Part Number	Description
CAB-50	50 ft. card controller cable. Connects fire detector to controller
CAB-100	100 ft. card controller cable. Connects fire detector to controller

5.4 FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Includes ALARM and FAULT relays. 24 Vdc input. Temperature range (-40°C to +85°C). Approvals: FM, cFM, CSFM for Class I, Div. 2, Groups B, C, & D.

FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Part Number	Description
FS10-R30	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)
FS10-R30-SS	316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)
FS10-R30-EC	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays), Normally Energized with Normally Closed Contacts
FS10-R45	Copper-free aluminum housing 45 ft. sensitivity (latching alarm relays)
FS10-R45-SS	316 stainless steel housing 45 ft. sensitivity (latching alarm relays)
FS10-RN30	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)
FS10-RN30-SS	316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)
FS10-RN45	Copper-free aluminum hsg 45 ft. sensitivity (non-latching alarm relays)
FS10-RN45-SS	316 Stainless steel housing 45 ft. sensitivity (non-latching alarm relays)

5. FS10 Fire Detection Systems For Liquid Paint Spray and Electrostatic Powder Coating

5.5 Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Part Number	Description
FS10-R30-MOD	Replacement electronics module for Model FS10-R30 stand alone fire Detector (latching alert and alarm relays)
FS10-R30-EC-MOD	Replacement electronics module for Model FS10-R30 stand alone fire Detector (latching alert and alarm relays), Normally Energized with Normally Closed Contacts
FS10-R45-MOD	Replacement electronics module for Model FS10-R45 stand alone fire Detector (latching alarm relay)
FS10-RN30-MOD	Replacement electronics module for Model FS10-RN30 stand alone fire Detector (non-latching alert and alarm relays)
FS10-RN45-MOD	Replacement electronics module for Model FS10-RN45 stand alone fire Detector (non-latching alarm relay)

5.6 Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Card Controller with FS10 Electro-Optical Fire Detector

Part Number	Description
FS10R-GR-Kit	Stainless steel grill Kit for FS10-R and FS10-CS Detectors (Killark housing) Kit includes: (1) SS grill, (2) SS brackets, and (2) SS screws
RS-232 Cable	RS232 computer Cable for connection from FS7-130-SX, S7-2175, option-1 or option-2 controllers or interface box to PC
PSU-12	110/220 Vac, 50-60 HZ input /15 Vdc output : universal Charger for interface box or DD Series, FT Series and TL Series test lamps

5.7 Accessories - FS10 Stand Alone (Unitized) and Controller Based Electro-Optical

Fire Detectors

FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Part Number	Description
SM4	Stainless steel swivel mount allows Detector to be pointed in any direction
FS-846-B	Test lamp Battery operated for testing FS10 fire Detectors up to 10 ft.
EXPL-1	EXTENSION POLE FOR DPC-12 Extension Pole for placing and removing Disposable Protective Covers on FS10 Detectors
DPC-12	Disposable protective covers keeps powder or paint off the window lens of the FS10 fire Detector (12 per bag) (for use with FS10 only)
DASA1-P	Air shield for powder applications protects FS10 fire Detector window lens from powder build-up. Supplied with fitting for 1/4 in. tubing (can also be used with FS24X, FS20X, SS4, and SS2)
DASA6-N	Air shield for powder applications protects FS10 Fire Detector window lens from powder build-up. Supplied with fitting for 6 mm tubing

6. FS7 Multi-Spectrum Fire and Flame Detector



The Fire Sentry FS7 Flame Detector provides an intelligent two-stage response to semiconductor wet bench fires:

Stage 1: Alert. This is the first-stage response to a small fire with a heat energy output of 3 kW (the equivalent of a 4-inch diameter polypropylene pool fire). This fire may self-extinguish.

Stage 2: Alarm. If the fire does not self-extinguish, and grows to the Factory Mutual specified heat energy threshold of 13 kW (the equivalent of an 8-inch diameter polypropylene pool fire), the second stage response is activated.

The Fire Sentry FS7-2173 is used with Fire Sentry FS7-130-SX Controller. Controller supplies power to detectors monitors the status of all detectors and communicates with the detectors via the digital RS-485 communication channel. Fire Sentry FS7-2173 is supplied with a standard 20 ft. cable connector. Detectors are connected to the controller using the self-locking connectors and Fire Sentry junction boxes. This allows for fast and easy connections eliminating wiring problems. Each detector can store up to six time and date stamped FirePics™ (pre-event multi-spectral sensor array data) in non-volatile memory. Controller can also store event history table in the non-volatile memory, which contains the time and date stamped alert, alarm and fault histories. FirePics™ and event histories can be retrieved from the controller.

Additional Features and Benefits

- Multi-Spectral digital electro-optical radiant energy infrared fire detector
- Unique two-stage fire detection response
- Immune to false alarm sources
- NOT affected by absorbing smoke, gasses or chemical vapors
- NOT sensitive to background radiant energy from electric heaters and ovens
- Detects hydrocarbon and non-hydrocarbon fires
- Rugged leak-proof, heat-sealed, acidresistant, injection-molded polypropylene housing
- Wide 120° field-of-view
- Digital communication with RS-485 interface
- FirePic™; time and date-stamped digital fire signatures
- Built-in detector automatic self test
- Unitized model design for stand-alone operation

6.1 Detectors

FS7 - Detectors Part

Number	Description
FS7-2173	Viton O-ring. For use with FS7-130-SX Controller
FS7-2173-2RP	Non-Latching Alert and Alarm relays. Viton O-ring.
FS7-2173-2RP-K	Non-Latching Alert and Alarm relays. Kal-rez O-ring.
FS7-2173-KALO	Kal-rez O-ring. For use with FS7-130-SX Controller

6.2 Controller Systems

Controller Systems FS7

Part Number	Description
FS7-130-SX	Multi-Zone Compact Controller, designed to be installed in Fire Panels, which monitors up to 12 Model FS7-2173 Fire Detectors. Programmable for up to 4 zones with relay outputs for ALERT and ALARM. Requires 24 VDC. Approvals: FM & CSFM

6.3 Accessories

FS7 - Accessories Part

Number	Description
FS-746-B	Test Lamp. Battery operated for testing FS7 Fire Detectors up to 10 ft. distance.
FT-S7	Test Lamp. Battery operated for testing FS7 Fire Detectors up to 2 ft. distance.
FS7-2179	Junction Box for connecting Model FS7-2173 Fire Detectors in a daisy chain or star configuration. Complete with (4) Lemo female connectors. Required for Model FS7-130-SX applications.

6.4 Interconnection Cables

FS7 - Interconnection Cables

Part Number	Description
CBMM-5	5 ft. cable with Male/Male Lemo connectors, (Junction Box to Junction Box).
CBMM-10	10 ft. cable with Male/Male Lemo connectors, (Junction Box to Junction Box).
CBMO-20	20 ft. cable with Male Lemo connector/open pigtail, (Junction Box to Model FS7-130-SX Controller or Model S7-2175 Control Panel).
CBMO-50	50 ft. cable with Male Lemo connector/open pigtail, (Junction Box to Model FS7-130-SX Controller or Model S7-2175 Control Panel).

6.5 Spare Parts

Spare Parts

Part Number	Description
PSU-12	110/220 VAC, 50-60 HZ Input /15 VDC Output : Universal Charger for Interface Box or DD Series, FT Series and TL Series Test Lamps
PW-3123-0002	Replacement Battery for FT-S7 Tester (1 required)

7. SS Series of UV and UV/IR Fire and Flame Detectors

Quick Reference Chart

		SS4-A	SS4-AS	SS4-AUV	SS2-AM
SPECTRAL SENSITIVITY	Ultraviolet Band (0.18 - 0.26 μ)	√	√	√	√
	Visible Band (0.4 - 0.7 μ)	√	√		√
	WideBand IR (0.7 - 3.5 μ)	√	√		√
SENSITIVITY (feet)*	Very High	60	60	60	60
	High	45	45	45	
	Medium	30	30	30	
	Low	15	15	15	
RESPONSE	Ultra High-Speed Response (Munitions)				√
	Optimized Response (H4Si, H2, Alcohols, CH4)		√		
	Standard Response	√		√	
OTHER	Field of View	120°	120°	120°	120°
	HART Option	√	√	√	
	Modbus Option				
	4-20 mA Option	√	√	√	
ENCLOSURES	Aluminum Class I, Div. 1	√	√	√	√
	316 Stainless Steel Class I, Div. 1	√	√	√	√
APPROVALS	FM	√	√	√	√
	cFM	√	√	√	√
	ATEX	√	√	√	
	IECEX	√	√	√	
	INMETRO	√			
	GOST-R	√			
	SIL 2 Compliant	√	√	√	
TEST LAMPS/ SOURCE	FT-2145 (Explosion Proof)	√	√	√	√
	DD85001 (Short Range) - Discontinued	√	√	√	√
	85001 - Discontinued			√	
	TS2 - Discontinued				√
MOUNT	SM4	√	√	√	√
	188424				

*Detection distance for a one sq. ft. reference heptane pan fire

8. SS4 Series

Multi-Spectrum™ Electro-Optical Digital Fire & Flame Detector (UV/IR & UV)



SS4-A2 / AS2

The SS4 is a hazardous area certified flame detector for the detection of hydrocarbon (SS4-A2) and non-hydrocarbon fires (SS4-AS2). This multispectrum detector senses radiant energy in the ultraviolet (UV), visible and wideband infrared (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence. The field of view is the widest in the industry with 120° field of view with a range of 60 ft. This means more hazard can be covered by each detector.

120° field of view with range up to 60 ft.

Features

- Multi-Spectrum™: senses ultraviolet, visible and Wide Band Infrared™
- Built-in test for optical “through the lens” testing
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon based fires
- Wide field-of-view and solar-blind
- Adjustable detector sensitivity
- Microprocessor based algorithms: FirePic™, Snapshot™ and Tri-Mode Plot™
- Wide temperature range of operation
- Compatible with standard approved fire alarm panels
- Explosion-proof housing
- Time programmable alarm verification
- FM ATEX mark approvals



SS4-AUV2

While retaining all the features of the standard SS4-A2, the SS4-AS2 is optimized for the detection of ethanol, methanol, hydrogen and natural gas with a range up to 60 ft. range and a field of view of 120°, the UV only Version, SS4-AUV2, is for indoor applications where UV sources such as welding are not present.

120° field of view with range up to 60 ft.

Features

- Senses solar-blind ultraviolet band
- Built-in test for optical “through the lens” testing
- Utilizes long-life, ruggedized UV Sensors
- Detects hydrocarbon and non-hydrocarbon based fires
- Wide field-of-view and solar-blind
- Adjustable Detector sensitivity
- Microcomputer based algorithms: FirePic™, Snapshot™ and UV Plot
- Wide temperature range of operation
- Compatible with standard approved fire alarm panels
- Explosion-proof housing
- Time programmable alarm verification
- FM, ATEX mark approvals

Certifications

- Explosion-proof
- Class I, Div. 1 & 2, Groups B, C and D
- Class II, Div. 1 & 2, Groups E, F and G
- Class III

8. SS4 Series

Multi-Spectrum™ Electro-Optical Digital Fire & Flame Detector (UV/IR & UV)



8.1 SS4 Series

SS4-A2, SS4-AS2, & SS4-AUV2 FM Certification

Part Number	Description
SS4-A2	Aluminum UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT
SS4-A2-SS	Stainless Steel UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT
SS4-AS2	Aluminum UV/IR, FM, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non-latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT
SS4-AS2-SS	Stainless Steel UV/IR, FM, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non-latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT
SS4-AUV2	Aluminum UV, FM, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT
SS4-AUV2-SS	Stainless Steel UV, FM Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT
SS4-A2-M	SS4-A2 Aluminum UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-A2-SS-M	SS4-A2-SS Stainless Steel UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AS2-M	SS4-AS2 Aluminum UV/IR, FM, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non-latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AS2-SS-M	SS4-AS2-SS Stainless Steel UV/IR, FM, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non-latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.

8. SS4 Series

Multi-Spectrum™ Electro-Optical Digital Fire & Flame Detector (UV/IR & UV)



SS4-AUV2-M	SS4-AUV2 Aluminum UV, FM, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AUV2-SS-M	SS4-AUV2-SS Stainless Steel UV, FM Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-A2-H	SS4-A2 Aluminum UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-A2-SS-H	SS4-A2-SS Stainless Steel UV/IR, FM, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AS2-H	SS4-AS2 Aluminum UV/IR, FM, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non-latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) 3/4 NPT with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AUV2-H	SS4-AUV2 Aluminum UV, FM, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AUV2-SS-H	SS4-AUV2-SS Stainless Steel UV, FM Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, CSFM for C1, D1, Groups B,C,D (2) 3/4 NPT with SS4-FSCHCOM SS4 Module HART Factory installed.

SS4-A2, SS4-AS2, & SS4-AUV2 ATEX Certification

SS4-A2-C-E	Aluminum UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25
SS4-A2-CSS-E	Stainless Steel UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25
SS4-AS2-C-E	Aluminum UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) M25
SS4-AS2-CSS-E	Stainless Steel UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25
SS4-A2-C-E-M	SS4-A2-C-E Aluminum UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-A2-CSS-E-M	SS4-A2-CSS-E Stainless Steel UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.

8. SS4 Series

Multi-Spectrum™ Electro-Optical Digital Fire & Flame Detector (UV/IR & UV)



SS4-AS2-C-E-M	SS4-AS2-C-E Aluminum UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AS2-CSS-E-M	SS4-AS2-CSS-E Stainless Steel UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AUV2-C-E-M	SS4-AUV2-C-E Aluminum UV, FM, ATEX, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, ATEX, IECEx Zone 1 (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-AUV2-CSS-E-M	SS4-AUV2-CSS-E Stainless Steel UV, FM, ATEX, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED FM, cFM, ATEX, IECEx Zone 1 (2) M25 with MA420-4 4-20 mA Module for SS4 Detectors New version Factory installed.
SS4-A2-C-E-H	SS4-A2-C-E Aluminum UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-A2-CSS-E-H	SS4-A2-CSS-E Stainless Steel UV/IR, ATEX, Hydrocarbon Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx FOR Zone 1 (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AS2-C-E-H	SS4-AS2-C-E Aluminum UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B,C & D (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AS2-CSS-E-H	SS4-AS2-CSS-E Stainless Steel UV/IR, ATEX, optimised for Non-Hydrocarbons and Silane, Ethanol, Methanol, Hydrogen & Natural Gas Fires, Non Latching Alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AUV2-C-E-H	SS4-AUV2-C-E Aluminum UV, FM, ATEX, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED, FM, cFM, ATEX, IECEx Zone 1 (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.
SS4-AUV2-CSS-E-H	SS4-AUV2-CSS-E Stainless Steel UV, FM, ATEX, Hydrocarbon & Non-Hydrocarbon Fires, indoor applications, Non-latching Alarm LED FM, cFM, ATEX, IECEx Zone 1 (2) M25 with SS4-FSCHCOM SS4 Module HART Factory installed.

8.2 Accessories SS4-AS, SS4-AS2, & SS4-AUV2

Accessories SS4-AS, SS4-AS2, & SS4-AUV2

Part Number	Description
FT-2145	UV/IR Test Lamp with universal charger (FM & ATEX approval)
FVR-01	Field of view restrictor
MA420-4	4-20 mA Module for SS4 Detectors New version
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X and SS4 detectors
SS4-FSCHCOM	SS4 Module HART

8. SS4 Series

Multi-Spectrum™ Electro-Optical Digital Fire & Flame Detector (UV/IR & UV)



8.3 Spares SS4-A, SS4-A, & SS4-AUV2

SS2-A and SS4-AS

Part Number	Description
SS4-MOD-A2	Replacement Electronics Module for SS4-A2 (UV/IR) Detectors. Module only, non-latching LED
SS4-MOD-AS2	Replacement Electronics Module for SS4-AS2 (UV/IR) Detectors. Module only, non-latching LED
SS4-MOD-AUV2	Replacement Electronics Module for SS4-AUV2 (UV) Detectors. Module only, non-latching LED
SS4-MOD-A2-M	Replacement Electronics Module for SS4-A2 (UV/IR) Detectors. Module only, non-latching LED with 4-20mA Output
SS4-MOD-AS2-M	Replacement Electronics Module for SS4-AS2 (UV/IR) Detectors. Module only, non-latching LED with 4-20mA Output
SS4-MOD-AUV2-M	Replacement Electronics Module for SS4-AUV2 (UV) Detectors. Module only, non-latching LED with 4-20mA Output
SS4-MOD-A2-H	Replacement Electronics Module for SS4-A2 (UV/IR) Detectors. Module only, non-latching LED with HART Output
SS4-MOD-AS2-H	Replacement Electronics Module for SS4-AS2 (UV/IR) Detectors. Module only, non-latching LED with HART Output
SS4-MOD-AUV2-H	Replacement Electronics Module for SS4-AUV2 (UV) Detectors. Module only, non-latching LED with HART Output
H200	UV Test Source Module for SS4 Detectors
LAMP-3135-0002	IR Test Lamp Bulb (FT-2145)
LAMP-3125-0002	Replacement lamp for FT-2145
TN2-MOD-PIL	UV Test Lamp Bulb (FT-2145) + Fixture
PW-3123-0005	Battery Pack for Model FT-2145/TL-1055/TL-2055 Test Lamps
PSU-12	Power supply for use with FT-2145 and FT-2145-2; PSU-12 is a Universal Charger for Fire Sentry test lamps and interface Kits. For 110-240 Vac with international plugs

9. SS2-AM Series Ultra-High Speed Digital Fire and Flame Detector (UV/IR)



The Model SS2-AM, (non-latching Fire Alarm relay), and SS2-AML (latching Fire Alarm relay), represent the world's pre-eminent Ultra-High Speed UV/IR technology for Electro-Optical Fire and Flame Detectors, with thousands successfully operating in a multitude of installations worldwide.

This detector senses radiant energy in the Ultraviolet (UV), Visible and WideBand Infrared™ (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence. 120° field of view with range up to 60 ft.

120° field of view with range up to 60 ft.

Features

- Multi-Spectrum senses energy in the UV, Vis and WideBand IR™
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon fires
- Microprocessor based algorithms: FirePic™ and Tri-Mode Plot™
- Wide field of view and solar blind
- Wide temperature range of operation
- Explosion-proof housing
- FS2000™ System compatible or stand-alone operation
- Compatible with approved fire alarm panels
- FM, ATEX mark approvals

9.1 SS2-AM Series

SS2-AM Series

Part Number	Description
SS2-AM	Copper-Free Aluminum Housing UV/IR/VIS High-Speed Electro-Optical Flame Detector, Non-Latching Alarm Relay, ALARM & FAULT Relays, Class I, Division 1, Groups B, C, & D, FM, CSFM, & cFM Approved, 3/4 NPT
SS2-AML	Copper-Free Aluminum Housing UV/IR/VIS High-Speed Electro-Optical Flame Detector, Latching Alarm Relay, ALARM & FAULT Relays, Class I, Division 1, Groups B, C, & D, FM, CSFM, & cFM Approved, 3/4 NPT

9.2 Accessories SS2-AM

Accessories SS2-AM

Part Number	Description
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X, SS4, SS2 detectors
FT-2145	UV/IR Test Lamp with universal charger, (FM & ATEX approval)
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
FVR-01	Field of View Restrictor

9.3 Spares SS2-AM

Spares SS2-AM

Part Number	Description
SS2-MOD-AM	SS2-AM Replacement Electronics Module
SS2-MOD-AML	SS2-AML Replacement Electronics Module
LAMP-3135-0002	IR Test Lamp Bulb (FT-2145)
TN2-MOD-PIL	UV Test Lamp Bulb (FT-2145) + Fixture
PW-3123-0005	Battery Pack for Model FT-2145/TI-1055/TL-2055 Test Lamps

10. Series FSL100 Flame Detectors



The new FSL100 series is the latest generation range of Mid market Flame Detectors from Honeywell Analytics. The range consists of UV, UVIR and IR3 flame detectors. All utilize sophisticated sensing and signal analysis to detect fires quickly while also rejecting false alarms. The FSL100 may be small and lightweight for easy installation but they are designed to work in tough environments both in and out of doors as well as potentially explosive atmospheres. With a large field of view they can detect a range of different types of fire including hydrocarbon and non hydrocarbon sources.

Note: A swivel mount should be ordered with each Flame Detector.

10.1 UV (Ultraviolet) Flame Detector

UV (Ultraviolet) Flame Detector

Part Number	Description
FSL100-UV	UV flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate. FM3260 approval. Red Housing
FSL100-UV-W	UV flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate FM3260 approval. White Housing.

10.2 UVIR (Ultraviolet & Infrared) Flame Detector

UVIR (Ultraviolet & Infrared) Flame Detector

Part Number	Description
FSL100-UVIR	UV/IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate. FM3260 approval. Red Housing.
FSL100-UVIR-W	UV/IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate FM3260 approval. White Housing.

10.3 IR3 (3 Infrared bands) Flame Detector

IR3 (3 Infrared bands) Flame Detector

Part Number	Description
FSL100-IR3	Triple IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate. FM3260 approval. Red Housing.
FSL100-IR3-W	Triple IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate. FM3260 approval. White Housing.

10.4 Accessories

Accessories

Part Number	Description
FSL100-SM21	FSL100 Optional swivel mount
FSL100-TL	FSL100 test lamp, incl. universal charger and carrying case; non EX
FSL100-TLX	FSL100 test lamp, incl. carrying case; intrinsically safe (Pending *)

* Please contact Honeywell representative

10.5 Spare Parts

Accessories

Part Number	Description
FSL100-TLBT	12 Vdc battery for FSL-TL test lamp
FSL100-TLBU	H3 light bulb for FSL-TL test lamp
FSL100-TLCH	Universal charger kit for FSL-TL test lamp

11. Honeywell Analytics Service



Honeywell Analytics Service contact information:

USA Service Workshop
Honeywell Analytics
405 Barclay Blvd.
Lincolnshire, IL 60069
USA
Tel: 800-538-0363 (option #5)
E-mail: ha.us.service@honeywell.com

Calgary Service Department
Honeywell Analytics
Suite 110, 4411 – 6 Street SE
Calgary AB T2G 4E8
Canada
Tel: 1-800-563-2967
Email: haservice.canada@honeywell.com

Honeywell Analytics' global standing for portable, fixed and low level toxic gas detection is backed up with a dedicated team of professionals that takes service and support to a whole new level.

It's your choice...

Whatever industry you're in, we have the levels of support that are right for your business.

It's your business. It's your industry.

And no matter whether you're managing personnel for confined space entry, or securing your plant against gas risks, the process has to keep moving.

The alternative is downtime, or even total shutdown, and then the risks to your business are far greater.

Honeywell provides service levels that make it easy to choose the right kind of support to keep your plant and people safe; to keep your business up and running - because that's our job!

Choose from:

Installation and Commissioning

- Installation, configuration and commissioning
- Functional tests
- Start-up
- Staff training
- Bump testing

Calibration and Surveys

- Instrument calibration equipment certified to national/regional standards
- Site surveys
- Stock surveys

Contract Maintenance

Service and Repair

- On-site/workshop repair and calibration
- Modification and conVersion

11. Honeywell Analytics Service

Field Service:

We have a global network of fully qualified and highly skilled Technical Support Resources and Field Service Specialists ready to support your business. Honeywell Analytics is ready to support you 24 hours a day / 7 days a week in the United States & Canada.

For Monday thru Friday Daytime support please contact Honeywell Analytics and follow the voice prompts. In the US please dial 1-800-538-0363. Technical Support is currently Option 4 then Option 3. In Canada please dial 1-800-563-2967 Option 1 English, Option 2 French. Tech Support is currently Option 2.

For Afterhours and weekend support please contact Honeywell Analytics at 1-847-634-2842. Phone support rates will apply.

Contact Honeywell Analytics

Find out more - www.honeywellanalytics.com

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