

1 EU-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** FM14ATEX0058X

4 **Equipment or protective system:** FS20X, FS24X, FS24X-9, FS20XP, FS24XP, SS2-A, SS2-AH, SS2-AM, SS2-AN, SS4-A, SS4-A-2, SS4-AS, SS4-AS-2, SS4-AUV, and SS4-AUV-2 Flame Detectors
(Type Reference and Name)

5 **Name of Applicant:** Honeywell Analytics Inc.

6 **Address of Applicant:** 405 Barclay Blvd
Lincolnshire IL 60069-3609
United States of America

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26th February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3053781 dated 30th October 2014

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014
and EN 60529:1991+A1:2000+A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 2 G Ex db IIC T6...T4* Gb

II 2 D Ex tb IIIC T135°C Db

*See Description

Damien Mc Ardle
Certification Manager, FM Approvals Europe Ltd.

Issue date: 18th September 2020

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13 Description of Equipment or Protective System:

The Model FS24X, FS24X-9 and FS24XP Flame Detectors sense the WideBand IR radiant energy of blackbody particulate and molecular emissions generated by both hydrocarbon and nonhydrocarbon flames. The WideBand IR spectral radiant energy wavelengths sensed by the Quad (4) sensors span from approximately 0.4 to 7.0 microns for the FS24X and FS24X-9. The FS24X has a 110° field of view whereas the FS24X-9 has a 90° field of view.

The Model FS19X, FS20X and FS20XP Flame Detectors sense the Ultraviolet and WideBand IR™ radiant energy of blackbody particulate and molecular emissions generated by both hydrocarbon and non-hydrocarbon flames and fires. The WideBand spectral radiant energy wavelengths sensed by the Tri (3) sensors span approximately 0.18 to 3.5 microns for the FS19X/FS20X Detector. The FS19X and FS20X have a 90° field of view.

The Model SS2 Multi-Spectrum Optical Flame Detector is a microprocessor-based device, which sees ultraviolet (UV), visible (VIS), and infrared (IR) spectral regions. The SS2 has a shorter range and faster response capability than the SS4.

The Model SS4 Optical Flame Detector is a digital, configurable, computerized, “smart” unit. This Detector has sensitivity to Type A, B, and C flaming fires. Detectors of this design process Ultraviolet (UV), Wide band Infrared (IR), and Visible (VIS) spectral ranges from ruggedized Solar-blind UV, “Quantum-Effect” IR, and visible sensors correspondingly. The SS4 has a longer range and slower response capability than the SS2 and also has less false alarm vulnerabilities and extra self testing capabilities.

The FSX Flame Detectors have maximum electrical parameters of 32 VDC, 150mA. The SS Flame Detectors have maximum electrical parameters of 32 VDC, 75mA. The enclosures are available with (2) ¾ NPT and/or M25 conduit entries for customer connections.

The enclosures have an ingress protection rating of IP66/67**.

(** only applies to models FS20XP and FS24XP, all other models are rated IP66).

The Temperature Class and ambient temperature range for the various models are as follows:

FS20XP**		T5 Ta= -55°C to +85°C	
FS24XP**		T5 Ta= -55°C to +85°C	
FS20X:	T4 Ta=-40°C to +110°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
FS24X:	T4 Ta=-40°C to +110°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
FS24X-9:	T4 Ta=-60°C to +110°C,	T5 Ta= -60°C to +75°C,	T6 Ta=-60°C to +60°C
SS2-A:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS2-AH:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS2-AM:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS2-AN:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-A:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-A-2:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-AS:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-AS-2:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-AUV:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C
SS4-AUV-2:	T4 Ta=-40°C to +85°C,	T5 Ta= -40°C to +75°C,	T6 Ta=-40°C to +60°C

14 Specific Conditions of Use:

1. Warning: electrostatic hazard do not rub with dry cloth

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2. Consult the manufacturer for dimensional information on the flameproof joint specifications.

15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
10 th November 2014	Original Issue.
23 rd September 2015	<u>Supplement 1:</u> Report Reference: Project ID 3055062 dated 18 th September 2015. Description of the Change: Update the manufacturer's documentation, delete the Models FS18X and FS19X from this certificate as they are no longer manufactured, and update to the latest standard editions.
26 th July 2016	<u>Supplement 2:</u> Report Reference: RR205248 Dated 25 th July 2016. Description of the Change: Minor document changes and update to EU certificate.
27 th November 2018	<u>Supplement 3:</u> Report Reference: RR213214 Dated 21 st November 2018. Description of the Change: Minor document updates and update standard EN60079-0: 2012 to include amendment A11: 2013.
19 th February 2019	<u>Supplement 4:</u> Report Reference: RR215795 Dated 11 th February 2019. Description of the Change: Added new label drawing which does not affect

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Date	Description
	safety.
30 th July 2019	<u>Supplement 5:</u> Report Reference: RR218056 Dated 29 th July 2019. Description of the Change: Certificate transferred from FM Approvals Ltd. notified body number 1725, to FM Approvals Europe Ltd., notified body number 2809.
12 th September 2019	<u>Supplement 6:</u> Report Reference: RR219078 Dated 11 th September 2019. Description of the Change: Consolidation of flame path drawings, updated EN 60079-0:2012+ A11:2013 to EN IEC 60079-0:2018. Corrected name on certificate from Honeywell Analytical Inc to Honeywell Analytics Inc.
15 th October 2019	<u>Supplement 7:</u> Report Reference PR450006 Dated 11 th October 2019. Description of the Change: Addition of Flame Detector Models FS20XP and FS24XP.
18 th September 2020	<u>Supplement 8:</u> Report Reference RR223383 Dated 17 th September 2020. Description of the Change: Update label drawing per US/Can Zone requirements, addition of barcode, minor non safety related corrections. Revised manual to include US/Can zone requirements, consolidated "specific conditions of use".

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Blueprint Report

Honeywell Analytics (126968)

Class No 3615

Original Project I.D. 3053781

Certificate I.D. FM14ATEX0058X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
1701-0110	A	Pheonix, Base, Red, AL 3/4 NPT	PR450006
1701E0119	A	Schedule Document, Flame Enclosure, AL	PR450006
1701E0120	A	Schedule Document, Flame Enclosure, AL	PR450006
1701E0123	E	Nameplate, Pheonix FM (NA, EU, IECEX)	RR223383
1701M5000HL ENG	B	Quick Reference Guide	RR223383
1998M0901	C	IOM - FSX Fire and Flame Detectors, Model FS24X, FS24X QuadBand Triple IR	3055062
1998M0902	C	IOM - FSX Fire and Flame Detectors, Model FS19X & FS20X Series, FS19X & FS20X WideBand IR/ UV	3055062
1998M0906	C	Portable, Explosion-Proof - Model FT-2145 - Used for Testing FSC Model SS2, SS3, and SS4 Detectors	RR213214
1998M0908	D	IOM - Multi-Spectrum Digital Electro-Optical Fire Detectors, Models SS2-A, SS2-AN, SS2-AH, and SS2-AM	RR213214
1998M0911	D	IOM - Multi-Spectrum Digital Electro-Optical Fire Detector, Model SS4-A/-A2	RR213214
1998M0912	D	IOM - Multi-Spectrum Digital Electro-Optical Fire Detector, Model SS4-AS/-AS2	RR213214
1998M0913	D	IOM - Multi-Spectrum Digital Electro-Optical Fire Detectors, Model SS4-AUV/-AUV2	RR213214
1998M0914	C	IOM - Multi-Spectrum Digital Electro-Optical Fire Detector, Model SS4-A/-A2 (CENELEC)	RR205248
1998M902 FS20X	C	Installation Guide and Operating Manual FS20X	3055062
3445-0004	E1	FS20X / FS21X, FS19X, SS4 / SS2, Ruggedized / Self Test Grill	RR213214
6029-001	B	Aluminum Retaining Ring	3046183
6029-002	B	Stainless Steel Retaining Ring	3046183
6029-003	B	Retainer, Housing	3046183
6030	D	Housing Base, Aluminum, 3/4 NPT + M25 Conduit Entry	3046183
6031	E	Housing Base, Stainless Steel, 3/4 NPT + M25 Conduit Entry	3046183
6032-002	B	Cover, Alum Housing	3046183
6032-003	A	Cover, SS Housing	3046183
6032	D	Housing Cover, Aluminum, Large Window	3046183
6033	D	Large Window Housing Cover, Stainless Steel	3046183
6034	B	Aluminum Shim	3046183
6055E001	A	Large Window Enclosure, Flame	PR450006
6096	C	Housing Base, Aluminum, M25 Conduit Entry	3046183
6097	C	Housing Base, Aluminum, 3/4 NPT Conduit Entry	3046183
6098	C	Housing Base, Stainless Steel, M25 Conduit Entry	3046183
6099	C	Housing Base, Stainless Steel, 3/4 NPT Conduit Entry	3046183
6178-001	T	MODEL FS24X Series Installation Guide and Operating Manual	3051814
LB-6093	H	DRAWING TITLE: HOUSING LABELS (FM Can & US, ATEX, IECEX)	RR218056
LB-6095-002	B2	Housing Labels (FM Can & US, ATEX, IECEX, EN54)	RR218056
LB-6095-003	B2	NAMEPLATE EN54, FS24X-9	RR218056