

1 EC-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC**

3 **EC-Type Examination Certificate No:** FM10ATEX0035

4 **Equipment or protective system:** HK40 Solid State Proximity Sensor
(Type Reference and Name)

5 **Name of Applicant:** StoneL

6 **Address of Applicant:** 26271 US Hwy 59
Fergus Falls, MN 56537, USA

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 Ltd, notified body number 1725 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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:

3040158EC dated 29th September 2010

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 60079-0:2012; EN 60079-11:2012; EN 60079-26:2007; EN 60529:1991 + A1:2000

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

11 This EC-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. 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 1 G Ex ia IIC T5 Ga Ta= -40°C to 80°C
IP67



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2015.12.11 14:42:57 Z

Mick Gower
Certification Manager, FM Approvals Ltd.

Issue date: 11th December 2015

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE

to EC-Type Examination Certificate No. FM10ATEX0035

13 **Description of Equipment or Protective System:**

The HK40 Solid State Proximity Sensor provides a solid state switch and LED indication in response to the proximity of a metal target. The Namur proximity sensor is powered by voltages from 5-25 Vdc. For intrinsically safe installations, energy is limited to the sensor by intrinsic safety barriers. The stainless steel, polycarbonate-tipped enclosure fits within an envelope measuring 3.5 x 1 x 1.2 inches (89 x 25 x 31 mm). Access to the field wiring is by way of discrete wires which extend through a single 1/2 inch NPT conduit opening or by a 3 pin connector (in stainless steel). The sensors are encapsulated in urethane potting. The specified operating temperature range for equipment is -40°C to 80°C. The enclosure is rated as IP67.

HK407aSb-c. Solid State Proximity Sensor.

Energy Limitation Parameters:

$U_i = 22V$, $I_i = 120mA$, $P_i = 2.0W$, $C_i = 98nF$, $L_i = 1.56mH$

a= Conduit: 7 or 8

b= Indicator: R, G, E or B

c= Options: 1-5 alpha or numeric digits for special and marketing identification

14 **Special Conditions for Safe Use:**

None

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 EC-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 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 Ltd's ATEX Certification Scheme.

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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
30 th September 2010	Original Issue.
21 st December 2012	<u>Supplement 1:</u> Report Reference: - 3040158rev120828 dated 18 th December 2012 Description of the Change: Typo correction of revision levels of controlled documents in original report and CDL.
04 th June 2012	<u>Supplement 2:</u> Report Reference: 3040158rev130506 dated 28 th May 2013 Description of the Change: Change to model code structure adding Chinese Visual Indicator digits. Minor documentation changes.
28 th August 2014	<u>Supplement 3:</u> Report Reference: 3048434 dated 25 th August 2014 Description of the Change: Update the certificate to latest editions of EN standards.
11 th December 2015	<u>Supplement 4:</u> Report Reference: RR203248 dated 9 th December 2015 Description of the Change: Drawing updates and addition of "Ga" to markings.

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Blueprint Report

StoneL Corporation (1000001486)

Class No 3610

Original Project I.D. 3040158

Certificate I.D. FM10ATEX0035

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
000162	B	MODEL DESCRIPTION, Hawkeye, ATEX Ex ia	5/6/13	Yes (pdf)
105005	E	HAWKEYE Installation & Adjusting Instructions	RR203248	Yes (pdf)
105280	B	HAWKEYE, Installation Manual Addendum	RR203248	Yes (pdf)
105285	C	APPROVALS DRAWING, Certified, Hawkeye, HK, Ex ia	RR203248	Yes (pdf)
200140	A	SCHEMATIC, HAWKEYE, NAMUR	3040158	Yes (pdf)
418301	B	BOARD, UNPOPULATED, HAWKEYE, NAMUR	RR203248	Yes (pdf)
418302	G	BOARD, POPULATED, HAWKEYE, NAMUR, RED	RR203248	Yes (pdf)
418303	G	BOARD, POPULATED, HAWKEYE, NAMUR, GREEN	RR203248	Yes (pdf)
432029	A	URETHANE POTTING, Conathane EN-14, Mixed	3040158	Yes (pdf)
434158	A	CONNECTOR, Hawkeye Insert, W/Leads	3040158	Yes (pdf)