

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: **FM08ATEX0015X**
4 Equipment or protective system: **MODEL EN44 AND EG44 SERIES VALVE POSITION MONITORS**
(Type Reference and Name)
5 Name of Applicant: **StoneL Corporation**
6 Address of Applicant: **26275 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 3031598EC dated 8th July 2008.

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 60079-0:2006; EN 60079-11:2007; EN 60079-26:2007 and EN 60529:2001.

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 Ta = -40°C to 80°C, IP67**

Andrew Was
General Manager, FM Approvals Ltd.

Issue date: **8th July 2008**



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

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SCHEDULE

to EC-Type Examination Certificate No. FM08ATEX0015X

13 Description of Equipment or Protective System:

The EN44 and EG44 are valve position monitors which consist of one printed circuit board mounted in a polycarbonate enclosure with two NAMUR proximity sensors. The circuitry of the Model EN44 and EG44 monitors are identical. The differences between the two models are described below.

The external connection of the EN44 models consist of screw terminals with wiring brought into the enclosure via cable glands or conduit entries. The external connections of the EG44 models consist of plug connectors.

The electronic components are encapsulated under Conathane EN-14 black Urethane potting compound manufactured by Cytec Industries. The EG44 models are completely potted and the EN44 models are fully potted up to the terminals for wire connections. LEDs are potted within the polycarbonate enclosure, which has a clear polycarbonate window cemented into the side to allow the LEDs to be visible under the potting.

EN44abcd-e. Valve Position Monitor.

Energy Limitation Parameters:

$U_i = 22V$, $I_i = 120mA$, $P_i = 2W$, $C_i = 98nF$, $L_i = 1.56mH$.

a= Enclosure: D or A.

b= Junction: 02, 05 or 11.

c= Visual Indication: X, G, R, F, 1, 2, N, D, L, S, T or 0.

d= Branding: A, M or N.

e= Options: X.

Note: X = 'Special Unit Digits' not to affect the integrity of the housing, the electrical safety, the electrical components, or the title plate.

EG44a23bc-d. Valve Position Monitor.

Energy Limitation Parameters:

$U_i = 22V$, $I_i = 120mA$, $P_i = 2W$, $C_i = 98nF$, $L_i = 1.56mH$.

a= Enclosure: D or A

b= Visual Indication: X, G, R, F, 1, 2, N, D, L, S, T or 0

c= Branding: A, M or N

d= Options: X.

Note: X = 'Special Unit Digits' not to affect the integrity of the housing, the electrical safety, the electrical components, or the title plate.

14 Special Conditions for Safe Use:

Parts of the enclosure are non-conducting and may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions which might cause a build up of electrostatic charge on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

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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.

17 Approved Drawings

Drawing No:	Revision	Title / Description
000082	C	MODEL DESCRIPTION, ECLIPSE, EN, ATEX Ex ia
000094	B	MODEL DESCRIPTION, ECLIPSE, EG, ATEX Ex ia
000101	B	SCHEDULE DOCUMENTS, ECLIPSE, EN/EG SERIES Ex ia
105020	B	ELECTRICAL DATA, ECLIPSE, EN/EG SERIES ATEX
105043	B	PRODUCT LABELING, ECLIPSE EN/EG Ex ia
105073	E	EN Series Installation Manual
105113	B	Installation Manual Addendum EN and EG series
105149	B	EG Series Installation Manual
200134	A	SCHEMATIC, DUAL NAMUR SENSOR, EXT. RANGE
414717	B	BLOCK, TERMINAL, 8 POINT PBC MOUNT
418028	H	BOARD, UNPOPULATED, NAMUR
418280	D	BOARD, POPULATED, NAMUR ECLIPSE
432029	A	URETHANE POTTING, CONATHANE EN-14, MIXED
434085-86	A	LED, RED & GREEN
434145	A	CONNECTOR, DC Male Insert, 4 PIN
434282	A	ASSEMBLY, SENSOR HEAD, 150 T

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