

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:** FM08ATEX0008X

4 **Equipment or protective system:** Series QX Valve Position Monitor
(Type Reference and Name)

5 **Name of Applicant:** StoneL

6 **Address of Applicant:** 26271 US Hwy 59
Fergus Falls MN 56537
United States

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:

3031681EC dated – 8th February 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-60079-0:2012, EN-60079-1:2007, EN 13463-1:2001, EN 13463-5:2003, and EN 60529 + A1:2000

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 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 2 G c Ex d IIC T5 Ta = -40°C to +80°C; IP67
II 2 G c Ex d IIC T5 Ta = -25°C to +70°C; IP67_E and _F sensors
II 2 G c Ex d IIC T5 Ta = -25°C to +68°C; IP67_N sensors
II 2 G c Ex d IIC T5 Ta = -40°C to +69°C; IP67_A sensors

II 2 G c Ex d IIC T6 Ta = -40°C to +65°C; IP67
II 2 G c Ex d IIC T6 Ta = -25°C to +70°C; IP67_E and _F sensors
II 2 G c Ex d IIC T6 Ta = -25°C to +56°C; IP67_N sensors
II 2 G c Ex d IIC T6 Ta = -40°C to +57°C; IP67_A sensors

Mick Gower
Certification Manager, FM Approvals Ltd.



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com, c=GB
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Issue date: 22nd February 2016

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

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13 Description of Equipment or Protective System:

The Series QX enclosure is a single flameproof compartment. The material of the base and all covers are fabricated from aluminum alloy A356 with an Mg content < 0.45%. Each cover is prevented from opening by means of an M4 set-screw that locks the cover to the base. Up to three; M20 X 1.5 6H, ½ NPT, or ¾ NPT; threaded entries can be provided. The base-to-cover joint and the operating shaft are sealed with Buna-N o-rings. A series of different function modules may be mounted in the enclosure to provide different monitoring of a valve's position.

The electrical ratings vary by function module, but are clearly specified on the product nameplate. The specific markings can be found on drawing 105221.

The specific models described by this Certificate are as follows:

QXabcdefg. Valve Position Monitor

a = Function 2A, 4A, 5A, 7A, BA, CA, 2J, 4J, 5J, 7J, BJ, CJ, 2K, 4K, 5K, 7K, BK, CK, 2M, 4M, 5M, 7M, BM, CM, 2N, 4N, 5N, 6N, 7N, BN, CN, 2V, 4V, 5V, 6V, 7V, BV, CV, 8V, 2W, 4W, 5W, 6W, 7W, 8W, BW, CW, 14, 2P, 4P, 5P, 7P, BP, CP, 2L, 4L, 5L, 7L, BL, CL, 2H, 4H, 5H, 7H, 8H, BH, CH, 2S, 4S, 5S, 7S, BS, CS, 8Y, 2G, 4G, 5G, 7G, BG, CG, 2E, 4E, 5E, 7E, BE, CE, 2F, 4F, 5F, 7F, BF, CF, 33, 53, 73, B3, C3, 35, 5T, 7T, BT, CT, 44, 54, 74, B4, C4, 45, 5R, 7R, BR, CR, 82, 83, 86, 87, 92, 93, 96, 97, 50, 70, BO, CO, 2X, 4X, 6X, 5X, 7X, BX or CX.

b = Enclosure K, N, R, or T.

c = Junction 02, 03, 05 or 06.

d = Shaft output X, S, N, or H.

e = Visual Indicator R, G, C, 1, 2, 3, 4, 5, X, B, E, Y, H, J, K, M, P, N, D, A, S, T, U, V, W, or O.

f = Branding A or M.

g = Options 'Special Unit Digits'.

Note: 'Special Unit Digits' do not affect the integrity of the housing, the electrical safety, or the title plate.

SQa. Valve Position Monitor (Imtex).

a = Construction 1695SR, 1795SR, 2595SR, 4095SR, 4295SR, 5595SR, 7095SR, or 9695SR.

14 Specific Conditions of Use:

To minimize the risk of electrostatic sparking, the equipment shall be cleaned only with a damp cloth.

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
15 th February 2008	Original Issue.
23 rd July 2008	<u>Supplement 1:</u> Report Reference: - Supplement 1 to Report No 3031681EC dated 22 nd July 2008 Description of the Change: The Series QX has been revised to 1) drop the lower rated ambient temperature from -20°C to -40°C, 2) add NPT conduit options, 3) add alternate EPDM environmental seals, 4) add additional function modules, and 5) address electronic component changes on some of the existing function modules.
7 th August 2009	<u>Supplement 2:</u> Report Reference: – Supplement 2 to Report No 3031681EC dated 31 st July 2009 Description of the Change: The Series QX has been revised to address electronic component changes on some of the existing function modules. Street Address revised on Certificate from “26275” to “26271”.
5 th June 2013	<u>Supplement 3:</u> Report Reference: – Report 3031681rev130429 dated 28 th May 2013. Description of the Change: Change to QX (Silver) model code structure adding Chinese Visual Indicator digits. Minor documentation change.
17 th January 2014	<u>Supplement 4:</u> Report reference - 3050368 dated 10 th January 2014 Description of the Change: Product revised to 1) add a temperature class of T6 at a reduced maximum ambient temperature of 65°C, 2) add a stainless steel enclosure option, 3) review the product against Edition 6 of EN 60079-0, 4) Incorporate changes to the installation and adjustment procedures that were required as part of the Intrinsic Safety examination, not included in this Certification, 5) Update the Maxx-Guard PCB Assemblies to reflect a change in manufacturing process, and 6) revise the 6-pole and 12-pole terminal block to remove the 6-pole version.
22 nd February 2016	<u>Supplement 5:</u> Report reference - 3055582 dated 19 th February 2016 Description of the Change: Revision of the existing products and addition of new products. Update ambient temperature ratings. Consolidate model options and addition of new options. Update documentation.

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Blueprint Report

StoneL Corporation (100001486)

Class No 3615 Date Printed Nov 17 2015

Original Project I.D. 2R1A7AE

Certificate I.D. FM08ATEX0008X

<u>Drawing No.</u>	<u>Revision</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
000090	C	Cross Reference, Quartz, Imtex	3031681	Yes (pdf)
000126	F	Schedule Documents, Quartz QX series, ATEX Ex d	3055582	Yes (pdf)
000127	E	Model Description, Quartz QX series, ATEX Ex d	3055582	Yes (pdf)
105026	E	Electrical Information, Quartz QX Series	3055582	Yes (pdf)
105180	D	Enclosure Information, Quartz QX series, M20	3050368	Yes (pdf)
105194	A	Qtz with "V" and "W" Switch, Installation & Adjustment Procedures	3031681	Yes (pdf)
105195	A	Qtz with "14" Switch, Installation & Adjustment Procedures	3031681	Yes (pdf)
105196	B	Qtz w/MaxxGuard Switch, SPST Installation & Adjustment Procedures	3050368	Yes (pdf)
105197	B	Qtz w/MaxxGuard Switch, SPDT Installation & Adjustment Procedures	3050368	Yes (pdf)
105198	B	Qtz with "X" Switch, Installation & Adjustment Procedures	3055582	Yes (pdf)
105199	D	Qtz with "A" Switch, Installation & Adjustment Procedures	3055582	Yes (pdf)
105200	B	Qtz with "E" and "F" Switch, Installation & Adjustment Procedures	3055582	Yes (pdf)
105201	D	Qtz with "N" Switch, Installation & Adjustment Procedures	3055582	Yes (pdf)
105202	C	Qtz with Transmitter, Installation & Adjustment Procedures	3055582	Yes (pdf)
105203	C	Qtz with Xmitter and Switch, Installation & Adjustment Procedures	3055582	Yes (pdf)
105204	A	Qtz Expeditor w/ Mech Sw, Installation & Adjustment Procedures	3031681	Yes (pdf)
105205	A	Qtz Expeditor w/ "Y" Sw, Installation & Adjustment Procedures	3031681	Yes (pdf)
105206	A	Qtz Expeditor ASI Module, Installation & Adjustment Procedures	3031681	Yes (pdf)
105207	B	Qtz with "33" Module, Installation & Adjustment Procedures	3055582	Yes (pdf)
105208	D	Qtz I.S. with "44" & "45" Module, Installation & Adjustment Procedures	3055582	Yes (pdf)
105209	B	Qtz with "92" Module, Installation & Adjustment Procedures	3055582	Yes (pdf)
105210	B	Qtz with "93" Module, Installation & Adjustment Procedures	3050368	Yes (pdf)
105213	A	Qtz with "96" Module, Installation & Adjustment Procedures	3031681	Yes (pdf)
105214	A	Qtz with "97" Module, Installation & Adjustment Procedures	3031681	Yes (pdf)
105216	B	Qtz Expeditor DvcNet Module, Installation & Adjustment Procedures	3055582	Yes (pdf)
105217	A	Qtz Expeditor F/F Module, Installation & Adjustment Procedures	3031681	Yes (pdf)
105221	D	Product Marking, Quartz QX series, ATEX Ex d	3055582	Yes (pdf)
105222	D	Installation Addendum, Quartz QX series, ATEX Ex d	3055582	Yes (pdf)
105223	A	Hazardous Location Assessment, Quartz QX series	3031681	Yes (pdf)
105242	B	Quartz, External Visual Indicator Detail	3055582	Yes (pdf)
105382	A	Qtz with "35" Module, Installation & Adjustment Procedures	3055582	Yes (pdf)
110027	A	Anodizing Specification, Quartz QX series	3031681	Yes (pdf)
200011	D	Schematic, 4-20 mA transmitter, Qtz	3031681	Yes (pdf)
200022	G	Schematic, SST (33), Dual Sensor	3031681	Yes (pdf)
200031	D	Schematic, SST sensor, green & red	3031681	Yes (pdf)
200037	E	Schematic, Dual Sensor, Daughter	3031681	Yes (pdf)
200043	E	Schematic, FF Mother Board 93	3037261	Yes (pdf)
200044	F	Schematic, FF CPU/MAU Board	3031681	Yes (pdf)
200047	A	Schematic, DPDT	3031681	Yes (pdf)
200051	H	Schematic, ASi (96)	3032991	Yes (pdf)
200134	A	Schematic, Dual module, Namur, Ext. Range	3031681	Yes (pdf)
200219	C	Schematic, 45 Dual Module, Namur	3055582	Yes (pdf)
200220	C	Schematic, 35 Dual Module, SST	3055582	Yes (pdf)
200252	B	Schematic, 92 Dual Module, Devicenet	3055582	Yes (pdf)
412001	A	Switch, Micro, V3, SPDT "V" silver Mechanical	3031681	Yes (pdf)
412016	A	Switch, P&F namur, NJ2-V3-N-V5, w/solder posts, "N"	3031681	Yes (pdf)
412018	A	Switch, DPDT Double Break, 88-104	3031681	Yes (pdf)
412021	A	Switch, bare reed, SPST, Ampere R146IT	3031681	Yes (pdf)
412041	A	Sensor, P&F namur, NBB2-V3-EO-V5, w/solder posts, "E"	3031681	Yes (pdf)

412042	A	Sensor,P&F namur,NBB2-V3-E2-V5,w/solder posts,"F"	3031681	Yes (pdf)
412059	F	PCB Assembly, SPST "P" Maxx-Guard	3050368	Yes (pdf)
412060	D	Circuit Board Coplete From Suupplier For 4120	3055582	Yes (pdf)
412061	G	PCB Assembly, SPST "L" red Maxx-Guard	3050368	Yes (pdf)
412062	G	PCB Assembly, SPST "L" green Maxx-Guard	3050368	Yes (pdf)
412063	F	Switch, PCB assy, red "K"	3050368	Yes (pdf)
412064	F	Green board K sw	3050368	Yes (pdf)
412068	G	Switch,PCB assy,"H"	3050368	Yes (pdf)
412069	J	Switch,PCB assy,red "S"	3055582	Yes (pdf)
412070	J	Switch,PCB assy,grn "S"	3055582	Yes (pdf)
412071	J	SPDT yellow Y board	3055582	Yes (pdf)
412072	J	SPDT red Y board	3055582	Yes (pdf)
412088	A	Switch,bare reed,SPDT,Hermetic HSR-V933	3031681	Yes (pdf)
412145	B	Sensor, Namur, P&F "A" Sensor	3031681	Yes (pdf)
412150	A	Switch, SPDT, Low Power, 1 Amp Max	3031681	Yes (pdf)
412154	D	Switch, Board Assy., "G"	3050368	Yes (pdf)
412157	A	Switch, SAIA-Burgess X3M3, SPDT "W", Gold contacts	3031681	Yes (pdf)
412170	B	Switch,PCB assy,"M"	3055582	Yes (pdf)
414178	C	Block, Terminal, Black, 6 & 12 Pole	3050368	Yes (pdf)
414180	A	Block, Terminal, Grey, 6 Pole	3031681	Yes (pdf)
414716	A	Block, Terminal, Weidmuller, 6 Point	3031681	Yes (pdf)
414717	B	Block, Terminal, Beau, 8 Pt.	3031681	Yes (pdf)
414718	B	Block, Terminal, Beau, 10 Pt.	3031681	Yes (pdf)
414719	B	Block, Terminal, 12 point PCB mount, Beau	3031681	Yes (pdf)
418007	F	Transmitter board 4-20 (PHEONIX) 1/7/16 XQ	3031681	Yes (pdf)
418022	A	PCB, Unpopulated, Maxx-Guard switch	3055582	Yes (pdf)
418025	Q	Board,Dual Module,SST,Populated	3055582	Yes (pdf)
418026	P	Board,Dual Module,Namur,Populated	3055582	Yes (pdf)
418027	H	Board, Unpopulated, SST Module	3037261	Yes (pdf)
418028	H	Board, Unpopulated, Namur Module	3031681	Yes (pdf)
418033	A	Board,SST sensor,unpopulated	3031681	Yes (pdf)
418034-35	J	Board,SST sensor,populated,green & red	3055582	Yes (pdf)
418057	G	Board, Daughter, Dual Sensor, Unpopulated	3032991	Yes (pdf)
418059	M	Board, Daughter, Dual Sensor, Populated	3031681	Yes (pdf)
418064	B	Board,DPDT,unpopulated	3031681	Yes (pdf)
418068	B	Board, Unpopulated, 4-20mA Transmitter	3031681	Yes (pdf)
418072	F	Foundation Fieldbus, Unpopulated Brd.	3037261	Yes (pdf)
418073	R	Foundation Fieldbus, Populated Brd.,Mother 93	3037261	Yes (pdf)
418074	C	FF, CPU/MAU Board, Unpopulated	3031681	Yes (pdf)
418075	L	FF, CPU/MAU Board, Populated	08/17/2011	Yes (pdf)
418102	K	Asi, New Unpopulated Board	3055582	Yes (pdf)
418103	O	ASi, New Populated Board	3055582	Yes (pdf)
418201	C	Board, AS-i extended addressed, populated	3055582	Yes (pdf)
418412	C	Board, 45 Dual Module, Unpopulated	3055582	Yes (pdf)
418413	C	Board, 45 Dual Module, Populated	3055582	Yes (pdf)
418415	C	Board, 35 Dual Module, Unpopulated	3055582	Yes (pdf)
418416	C	Board, 35 Dual Module, Populated	3055582	Yes (pdf)
418470	B	Board, 92 Dual Module, Unpopulated	3055582	Yes (pdf)
418471	B	Board, 92 Dual Module, Populated	3055582	Yes (pdf)
422004	A	Potentiometer,Spectrol,10K,5%tol,.25%lin	3031681	Yes (pdf)
422020	A	Potentiometer,JDK,10K,10%tol,.1%lin	3031681	Yes (pdf)
432022	A	Dow Corning, Sylgard, 170A/170B mixed	3031681	Yes (pdf)
432029	A	Urethane potting, Conathane EN-14 black, mixed	3031681	Yes (pdf)
432038	B	Urethane potting, Epic Resins D9970 clear, mixed	3055582	Yes (pdf)
434365	B	Block, Terminal , Sauro, 8 Pt, Hoz	3055582	Yes (pdf)
434366	B	Block, Terminal , Sauro, 10 Pt, Hoz	3055582	Yes (pdf)