



1 TYPE EXAMINATION CERTIFICATE

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

3 Type Examination Certificate No: **FM07ATEX0035X**

4 Equipment or protective system: **Logix 3400IQ Series Digital Valve Positioner**
(Type Reference and Name)

5 Name of Applicant: **Flowserve FCD Corporation**

6 Address of Applicant: **1350 North Mountain Springs Parkway
Springville, UT 84663, 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. 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 3027196EC dated 7th September 2007

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 60079-15:2005, and 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 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 3 G Ex nA nL IIC T6 Ta = -20°C to 60°C, IP 65

Andrew Was
General Manager, FM Approvals Ltd.



Member of the FM Global Group

Issue date: *27th September 2007*

This certificate replaces any and all previously issued certificates with the same certificate number

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

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SCHEDULE



to Type Examination Certificate No. FM07ATEX0035X

13 Description of Equipment or Protective System:

The Logix 3400IQ digital positioner is a two-wire Foundation Fieldbus registered, LinkMaster (LAS) digital valve positioner. The positioner is configurable through the local user interface. The Logix 3400IQ utilizes the FF protocol to allow two-way remote communications with the positioner. The Logix 3400IQ positioner can control both double- and single-acting actuators with linear or rotary mountings. The positioner is completely powered by the Foundation Fieldbus signal.

The equipment operates from a 9Vdc to 32Vdc
Maximum operating current, under normal conditions, is 23 mA.

The equipment requires an air supply of 207 to 1034 kPa at an air consumption rate of less than 0.5 Nm³/hr at 414 kPa.

The equipment operates over an ambient temperature range of -20°C to +60°C. The enclosure is manufactured of either cast powder-painted aluminum (enclosure options 0, 2, 3, 4, or 5) or stainless steel (enclosure option 1). The enclosures are dimensionally identical and differ only in construction material and surface treatment.

Field wiring entries are by way of either two ½" NPT entries or two M20 entries, depending upon the configuration ordered.

34ab15def20g00. Digital Valve Positioner.

Maximum input voltage:
U_i = 32V

a = Diagnostics: 0 = Standard, 1 = Advanced
b = Enclosure: 0 = Painted cast-aluminum, 1 = Stainless steel, 2 = Aluminum, Automax, black paint, 3 = Aluminum, Automax, food grade white paint, 4 = Aluminum, Accord, black paint, 5 = Aluminum, Accord, food grade white paint
d = Shaft: D6 = DD shaft, 316SS, N6 = NAMUR shaft, 316 SS
e = Conduit entry: E = ½" NPT, M = M20
f = Action: 04 = 4-way, double-acting, 03 = 3-way, single-acting, 4V = 4-way vented, double-acting, 3V = 3-way vented, single-acting,
g = Gauges: 0G = SS with brass internals, psi (bar/kPa), 0S = SS with SS internals, psi (bar/kPa), KG = SS with brass internals, psi (kg/cm²), KS = SS with SS internals, psi (kg/cm²), 0U = No gauges

14 Special Conditions for Safe Use:

1. *To prevent the risk of electrostatic sparking, the equipment's mechanical pressure gauges shall be cleaned only with a damp cloth.*
2. *Using the box provided on the nameplate, the user shall permanently mark the protection type chosen for the specific installation. Once the type of protection has been marked it shall not be changed.*

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.

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to Type Examination Certificate No. FM07ATEX0035X

16 Test and Assessment Procedure and Conditions:

This 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

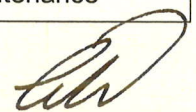
Drawing No:	Revision	Title / Description
126173	0	Casting, Main Cover
126174	1	Cover
130821	3	Flame Arrester
130822	3	Flame Arrester
130911	0	Washer, Seal Ring
130912	1	Retaining Ring
130913	1	Window
130914	3	Shaft Bearing
137745	0	Cover, Spool Valve
137748	0	Cover, User Interface
139765	0	Stainless Steel, User Interface
141390	2	Cover, Driver Module
171209	0	Stainless Steel, Main Cover
185155	1	Feedback Shaft DD
191647	0	Schematic, Pressure Sensor Board
191648	2	PCB, Pressure Sensor Board
192035	0	Stainless Steel, Modulator Cover
192456	2	PCBA, Pressure Sensor Board
192865	0	Logix Hall Sensor T- Board Schematic
192866	1	Logix Hall Sensor T- Board PCB
192867	4	PCBA, Hall Sensor Board

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Drawing No:	Revision	Title / Description
198769	4	Stainless Steel NPT Housing
198770	4	Stainless Steel M-20 Housing
198775	3	Main Housing
198776	3	Stainless Steel, Main Housing M-20
215803	0	Feedback Shaft Namur
221867	0	PCB, Piezo Board
221868	0	Schematic, Piezo Board
221869	0	PCBA, Piezo Board
221962	1	Schematic, User interface Board
221963	1	Logix 3400IQ User Interface PCB
230253	0	Logix 3400IQ Fieldbus Board Schematic (Honeywell P/N 51309788)
230254	0	Logix 3400IQ Fieldbus Board PCB (Honeywell P/N 51309786-001)
230285	1	Assembly Drawing, Logix 1400, Ref Honeywell P/N 51309787
234076	2	Logix 3400IQ Main Board Schematic
234077	2	Logix 3400IQ Main Board PCB
234305	0	Logix 3400IQ User Interface PCBA
234364	0	Logix 3400IQ Main Board PCBA
234401	1	Connection Diagram
234408	0	ATEX Label
192456.000.000	1	BofM, Pressure Sensor Board
192867.000.000	1	BofM, Hall Sensor Board
221869.000.000	0	BofM, Piezo Board
234305.000.000	0	BofM, User Interface
234306.000.000	1	BofM, Fieldbus Board
234364.000.000	1	BofM, Main Control Board
LGENIM3401-00	06-06	3400IQ User Instructions, Installation, Operation, Maintenance



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

Supplement 1 to
 Type Examination Certificate No. FM07ATEX0035X
 in accordance with Clause 6 of Annex III to Directive 94/9/EC.

Equipment or protective system: **Logix 3400IQ Series Digital Valve Positioner**
 (Type Reference and Name)

Name of Applicant: **Flowserve US Inc.
 Springville Operations**

Address of Applicant: **1350 North Mountain Springs Parkway
 Springville UT 84663
 USA**

The examination and test results are recorded in confidential report number 3027196EC supplement 1 dated 1st August 2008

Description of the supplements and modifications:

- 5 **Name of Applicant**
 Changed to Flowserve US Inc. Springville Operations from Flowserve FCD Corporation
- 13. **Description**
 To incorporate a re-designed Fieldbus Board.
- 17 **Approved Drawings**
 The following drawings have been replaced.

Old Drawing No:	Rev	New Drawing No:	Rev	Title / Description
230253	0	234377	0	Logix 3400 D/MD FB BRD
230254	0	234378	0	Logix 3400 Fieldbus Board
230285	1	245298	0	PCBA Fieldbus Board Gandolf Design
234306.000.000	1	245298.000.000	01	BoM Fieldbus Board



Ron Webb
 Deputy Certification Manager, FM Approvals Ltd.

Issue date: 1st August 2008

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

Supplement 2 to
Type Examination Certificate No. FM07ATEX0035X
in accordance with Clause 6 of Annex III to Directive 94/9/EC.

- 4 **Equipment or protective system:** **Logix 3400IQ/MD Series Digital Valve Positioner**
(Type Reference and Name)
- 5 **Name of Applicant:** **Flowserve US Inc.**
Springville Operations
- 6 **Address of Applicant:** **1350 North Mountain Springs Parkway**
Springville, UT 84663, USA

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

Report 3027196rev100129 dated 9 March 2010

and Report 3027196rev091201 dated 12 March 2010

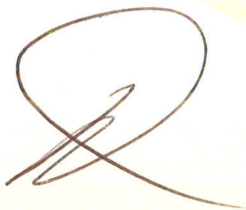
Description of the supplements and modifications:

- 12 **The marking of the equipment or protective system when fitted with this option shall include:**

FM07ATEX0035X
II 3 G Ex nA nL IIC T6 Ta = -20°C to 60°C IP65

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

1. Change product type to Logix 3400IQ and Logix 3400MD Series
2. Modification of the model code structure as a result of introducing MD as an alternative to the IQ designation.
3. Component changes to Fieldbus board 234394
4. Mechanical drawing changes and manufacturing options added



Ron Webb
Deputy Certification Manager, FM Approvals Ltd.
Issue date: 21st September 2010

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Supplement 2 to
 Type Examination Certificate No. FM07ATEX0035X
 in accordance with Clause 6 of Annex III to Directive 94/9/EC.

17 Approved Drawings:

Old Drawing No:	Rev	New Drawing No:	Rev	Title / Description
126173	0	126173	1	Casting, Cover Main Housing, Logix 3000 Digital Positioner, Die cast
130913	1	130913	2	Window, LED Display, Logix 1000
141390	2	141390	3	Cover, Driver Module Logix 1000
192456	2	192456	3	PCBA, Pressure Sensor Board, Logix 3200IQ
192456.000.000	1	192456.000.000	3	BofM, Pressure Sensor, Logix 3200IQ
192867.000.000	1	192867.000.000	2	BofM, Hall Sensor T-Board, Logix 3200IQ
198770	4	198770	6	Housing, Stainless Steel M20 Conduit threads, Logix 3200IQ
198775	3	198775	6	Housing, Logix 3000 Series Die-Cast
198776	3	198776	5	Housing, Logix 3000 Series, M-20 Conduit Threads, Die-Cast
221869.000.000	0	221869.000.000	1	BofM, Piezo Board, Logix 3200IQ
234364	0	234364	1	PCBA, Main Board, Logix 3400IQ
234408	0	234408	2	Nameplate, Logix 3400IQ, FM/ATEX
234305.000.000	0	234305.000.000	1	BofM User Interface Board, Logix 3400IQ, IS Design
234377	0	234377	3	Logix 3400 D/MD FB BRD
245298	0	245298	2	PCBA, Fieldbus Board, Gandolf Design
245298.000.000	1	245298.000.000	4	BofM Fieldbus Board, Gandolf Design
LGENIM310	066	LGENIM3400	00	3400IQ User Instructions
-		255009	1	Nameplate, Logix 3400MD, FM/ATEX
-		LGENIM3404	00	3400MD User Instructions

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