



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx SIR 04.0023X Issue No: 4 Certificate history:
Status: **Current** Page 1 of 4 [Issue No. 4 \(2013-01-16\)](#)
Date of Issue: **2013-01-16** [Issue No. 3 \(2010-05-26\)](#)
[Issue No. 2 \(2005-05-26\)](#)
Applicant: **Flowserve Inc**
1350 North Mountain
Springs Parkway
Springville
Utah, 84663
United States of America
Electrical Apparatus: **Logix 3200 IQ / MD Series Digital Positioners**
Optional accessory:
Type of Protection: **Flameproof**
Marking: Ex d IIB+H2 T5
(Ta = -20°C to +55°C) or (Ta = -40°C to +55°C)

*Approved for issue on behalf of the IECEx
Certification Body:*

C Ellaby

Position:

Deputy Certification Manager

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



IECEX Certificate of Conformity

Certificate No: IECEx SIR 04.0023X Issue No: 4
Date of Issue: 2013-01-16 Page 2 of 4
Manufacturer: **Flowsolve Inc**
1350 North Mountain
Springs Parkway
Springville
Utah, 84663
United States of America

Additional Manufacturing
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition:4.0
IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0:Equipment - General requirements
Edition:5
IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEX ATR:	File Reference:
UK/SIR/04/R53L11754A	55A/11048
GB/SIR/ExTR10.0108/00	GB/SIR/QAR07.0005/03
GB/SIR/ExTR12.0320/00	



IECEx Certificate of Conformity

Certificate No: IECEx SIR 04.0023X

Issue No: 4

Date of Issue: 2013-01-16

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Positioner Operation - The series of Logix 3200 Series Digital Positioners are electric feedback instruments. They form a series of positioners derived from the basic Logix 1000 family types of positioners. Positioning is based on a balance of two signals; one proportional to the command input signal and the other proportional to the valve stem position. The supply pressure for the piezo valve is tapped off the main supply and is filtered as it passes through a field replaceable, coalescing filter element in the module. Next, it passes through an internal pressure regulator that regulates it to approximately 22 psig. The piezo valve has an internal orifice that restricts the flow and air consumption and further controls the air to a working range of 6-12 psig,. A temperature compensated hall effect sensor mounted on a circuit board senses the spool valve position. The hall effect sensor and circuitry create an inner feedback loop, which determines how much current to send to the piezo valve for a desired spool valve position. The piezo valve in the feedback loop varies the output pressure to 6-12 psig, proportional to the digital position algorithm. When the command and stem position signals are equal, the system will be in equilibrium and the valve stem will be in the position called for by the command signal. If these opposing signals are not equal, the spool valve will move up (or down) and, by means of the pressure modulator, change the output pressures and flow rate. This will cause the actuator piston to move until the signal of the position sensor equalises with the command.

CONDITIONS OF CERTIFICATION: YES as shown below:

The maximum constructional gap (i_C) is less than that required by Table 1 of IEC 60079-1:2003 as detailed below:

Flamepath	Maximum Gap (mm)	Comment
Bushing/Feedback shaft	0.0635	Cylindrical spigot joint
Bushing/main enclosure	0.00	Interference fit
Flame arrester/Main enclosure	0.00	Interference fit (three fitted circular)
Flame arrester/Main enclosure	0.00	Interference fit (three fitted circular)
Window/Main Cover	0.0508	Flanged joint



IECEX Certificate of Conformity

Certificate No: IECEx SIR 04.0023X

Issue No: 4

Date of Issue: 2013-01-16

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:

1. Correction to certification code included

Issue 2 – this Issue introduced the following changes

1. Correction to marking

Issue 3 – this Issue introduced the following changes

1. Update of the product name to Logix 3200 IQ/MD, Series Digital Positioners
2. Include multi-concept, 'Mylar' label
3. Rationalisation of the drawing package

Issue 4 – this Issue introduced the following changes:

1. The recognition of the following drawing modifications:

Drawings 198769 & 198770

- * Notes regarding declaration of conformance and batch lot requirements were include.

Drawing 126165

- * The minimum flamepath between shaft and bushing was corrected.

- * The flamepath dimensions between window and main cover were adjusted.

- * A typographical error on flame arrestor dimension on section B-B was corrected.

Drawing 126174

- * The flamepath dimensions between window and main cover were adjusted.