1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 03ATEX2243** Issue: **9**

4 Equipment: **Logix Series 500si Digital Positioners (Models si, SD and MD)**

5 Applicant: **Flowserve FCD Corporation**

6 Address: 1350 North Mountain Springs Parkway
Springville
UT 84663
USA

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007 EN 61241-11:2006
IEC 60079-0:2007 (used for guidance in respect of marking)

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 and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

Models 500si

II 1 GD
Ex ia IIC T6 (Ta = -40°C to +40°C)
Ex ia IIC T5 (Ta = -40°C to +55°C)
Ex ia IIC T4 (Ta = -40°C to +85°C)
Ex iaD T120°C Da Ta = -40°C to +85°C

Models 500MD

II 1 GD
Ex ia IIC T6 (Ta = -40°C to +40°C)
Ex ia IIC T5 (Ta = -40°C to +85°C)
Ex iaD T120°C Da Ta = -40°C to +85°C

The following certification code is applied to products that incorporate either the Slotted Type Namur Sensor SJ2-SN, the Slotted Type Namur Sensor SJ2-S1N or the Slotted Type Namur Sensor SJ2-N:

Ex ia IIC T4 (Ta= -40°C to +78°C)
Ex iaD T120°C Da

Project Number 26486

D R Stubbings BA MIET
Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

13 **DESCRIPTION OF EQUIPMENT**

The Logix Series 500 Digital Positioners are single-acting digital positioners. They combine piezo-valve technology with inner-loop feedback to provide control with minimal air consumption. The positioners are configured at the valve. The essential configuration settings do not require a hand-held device or a host system. LED status lights allow the user to determine the condition of the device by visual inspection. The Series 500 Digital Positioners can include an Analog Output Board.

The Series 510 Digital Positioners are installed inside either an epoxy or polyester painted die-cast aluminium enclosure and comprise the following:

- Main circuit board
- Hart Communication Board (fitted to some models)
- Piezo relay
- Hall effect sensor
- Feedback potentiometer
- Connections to two external limit switches, these are Pepperl & Fuchs proximity switches type SJ3.5N that are certified by PTB as intrinsically safe, certificate number 99ATEX2219X marked II 2G, EEx ia IIC T6

A standard temperature version and a low temperature version are available. The standard version is suitable for -20°C and the low temperature for –40°C. The equipment complies with the standards for intrinsic safety with input parameters as follows:

(T11-12) or (T31-32) (Used only for the AO option with the 510 circuit boards and the 520MD with AO option)

Ui	=	30 V
Ii	=	100 mA
Pi	=	800 mW
Li	=	0
Ci	=	20 nF

Variation 1 - This variation introduced the following changes:

i. The option to add the following limit switches was allowed:

- Mechanical switches that are considered to be simple apparatus and identified as DG Subminature switch or Cherry Mechanical Switch, the following safety parameters apply:

  Terminals T1,3,4 and 6, normally open or Terminals T2, 3, 5 and 6, normally closed

  Ui = 28 V
  Ii = 45 mA
  Pi = 315 mW
  Ci = 1 nF
  Li = 1 µH

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

- Hamlin 59045 Reed Proximity Switch, the following safety parameters apply:

  Terminals T1, 3, 4 and 6 input parameters

  Ui = 10.6 V
  Ii = 29.7 mA
  Pi = 79 mW
  Ci = 1 nF
  Li = 1 µH

- Pepperl and Fuchs Namur Proximity Switch NJ2-V3-N, PTB certificate no. PTB 00ATEX2032X, the following safety parameters apply:

  Terminals T1, 2, 3 and 4 input parameters

  Ui = 16 V
  Ii = 52 mA
  Pi = 169 mW
  Ci = 40 nF
  Li = 50 µH

- Pepperl and Fuchs Slotted Type Namur Sensor SJ2-SN, PTB certificate no. PTB 00ATEX2049X, the following safety parameters apply:

  Terminals T1, 2, 3 and 4 input parameters

  Ui = 16 V
  Ii = 52 mA
  Pi = 169 mW
  Ci = 40 nF
  Li = 100 µH

- Pepperl and Fuchs Slotted Type Namur Sensor SJ2-S1N, PTB certificate no. PTB 00ATEX2049X, the following safety parameters apply:

  Terminals T1, 2, 3 and 4 input parameters

  Ui = 16 V
  Ii = 52 mA
  Pi = 169 mW
  Ci = 40 nF
  Li = 100 µH

- Pepperl and Fuchs Slotted Type Namur Sensor SJ2-N, PTB certificate no. PTB 99ATEX2219X, the following safety parameters apply:

  Terminals T1, 2, 3 and 4 input parameters

  Ui = 16 V
  Ii = 52 mA
  Pi = 169 mW
  Ci = 40 nF
  Li = 100 µH

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

ii. The introduction of the following certification code to be applied to products that incorporate either the Slotted Type Namur Sensor SJ2-SN, the Slotted Type Namur Sensor SJ2-S1N or the Slotted Type Namur Sensor SJ2-N:

EEx ia IIC T4 (Ta= -40°C to +78°C)

iii. The introduction of three conditions of certification, clauses 17.5, 17.6 and 17.7, that are associated with the addition of the limit switches.

iv. The composition of the Model Number to be modified.

Variation 2 - This variation introduced the following changes:

i. The replacement of the electronics, the new circuits are schematically identical to those used in the Logix 1200IQ (subsequently renamed as the Logix 3200IQ) certified as Sira 02ATEX2219.

ii. The enlargement of the enclosure utilising the 500SI enclosure previously certified as part of Sira 02ATEX2219.

iii. The elimination of the proximator connection terminals T41-42 and T51-52.

The equipment has the following input parameters:

Terminals 11-12

Ui = 30 V
Ii = 100 mA
Pi = 800 mW
Ci = 30nF
Li = 0

Variation 3 - This variation introduced the following changes:

i. The recognition of modifications to the Main Board which include:

- Removal of capacitor C19 (10µF ±10%)
- Change C59 to 15µF ±10% (was 10µF ±10%)
- Change C9 to 4.7µF ±10% (was 1µF ±10%)
- Change C31 to 22µF ±20% (was 10µF ±20%)
- Change C34 to 22µF ±20% (was 10µF ±20%)

ii. The use of aluminium SS4261 for the enclosure.

iii. The use of an alternative paint (INFRALIT Polyester) on the enclosure.

iv. Minor mechanical changes to housing were recognised

Variation 4 - This variation introduced the following change:

i. The recognition of minor drawing modifications; these changes do not affect the aspects of the product that are relevant to explosion safety

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Variation 5 - This variation introduced the following change:

i. The introduction of the model 505 Positioner that incorporates the following changes:

- Switches SW2, SW3, SW5 and SW6 were removed.
- Switch SW1 was changed from an eight position switch to a four position switch.

Variation 6 - This variation introduced the following changes:

i. An alternative construction was recognised, this utilises new PCBs for the Main Board and User Interface Board.
ii. The introduction of the 500MD Digital Positioners.
iii. The rationalisation of the drawing list.
iv. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 plus Amendments A1 and A2, EN 50020:1999 and EN 50284:1999, were replaced by those currently listed, the markings in section 12 were updated accordingly.

Variation 7 - This variation introduced the following changes:

i. To recognise the inclusion of an optional Analog Output (AO) board to existing 520MD.
ii. The inclusion of additional model options which reflect the alternative constructions and marking introduced by Sira 09ATEX3089.
iii. The introduction of minor, constructional changes to enhance manufacturability.

Variation 8 - This variation introduced the following change:

i. The product was assessed to demonstrate compliance with the requirements of the Dust standard EN 61241-11:2006, which is added to the list of standards in Section 9, and the markings in section 12 were updated accordingly.

Variation 9 - This variation introduced the following changes:

i. The recognition of minor drawing modifications; including instructions for painting the casting, these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
ii. Conditions of Certification 17.3 and 17.4 were amended as a consequence of using revised test voltages.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	12 June 2003	R52A10316A	The release of the prime certificate.
1	28 January 2004	R52A10872A	The introduction of Variation 1, later re-issued 6 August 2004.
2	29 April 2005	R52F13078A	The introduction of Variation 2.
3	6 February 2007	R52A14563A	The introduction of Variation 3.
4	18 March 2008	R52A17817A	The introduction of Variation 4.
5	26 February 2009	R52A19769A	The introduction of Variation 5.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 03ATEX2243**
Issue 9

Issue	Date	Report no.	Comment
6	15 June 2009	R52A19606A	This Issue covers the following changes: • All previously issued certification was rationalised into a single certificate, Issue 6, Issues 0 to 5 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. • The introduction of Variation 6.
7	08 January 2010	R20811A	The introduction of Variation 7.
8	25 August 2011	R25349A/00	The introduction of Variation 8.
9	19 April 2012	R26486A/00	The introduction of Variation 9.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

None

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Each Logix 500 Digital Positioner shall be subjected to a routine dielectric strength test of either 500 Vac rms maintained for at least 60 s, 700 Vdc maintained for at least 60 s, or, 840 Vdc for at least 1 s, between the input terminals and the ground terminal to the requirements of Clauses 10 3 and 11.2 of EN60079-11:2007.

17.4 The Logix 500 Digital Positioners shall be fitted in a die-cast aluminium enclosure (body and cover) that has a magnesium content of less than 6% and is painted with either an epoxy or polyester paint with a maximum thickness less than 0.2 mm. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation, particularly if the equipment is installed in a zone 0 location.

17.5 When the PTB certified slotted switches SJ2-SN, SJ2-S1N, SJ2-N are used, the equipment shall be marked with an upper ambient temperature of 78°C and a temperature class of T4.

17.6 The certified switches NJ2-V3-N, SJ2-SN, SJ2-S1N and SJ2-N shall be installed in accordance with the special conditions for safe use that are detailed in their associated certificates either PTB 00ATEX2049X, PTB 99ATEX2219X or PTB 00ATEX2032X.

17.7 The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Certificate Annexe

Certificate Number: **Sira 03ATEX2243**

Equipment: **Logix Series 500si Digital Positioners**
Logix Series 500MD Digital Positioners

Applicant: **Flowserve FCD Corporation**

Issues 0 to 5 - The drawings listed with these Issues were rationalised and have been superseded by those detailed in Issue 6.

Issue 6

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
Enclosure/Markings				
255004	1 of 1	1	01 Jun 09	Nameplate 500 MD ATEX
214011	1 of 1	5	01 Jun 09	Nameplate 500 si ATEX
Model 520MD				
245118	1 to 5	1	01 Jun 09	Schematic, Main Board
245119	1 to 11	0	01 Jun 09	Trace Layout, Main Board
245120	1 to 3	A	01 Jun 09	PCBA Logix 520MD Main Board
245120.000.000	1 to 17	4	01 Jun 09	BOM, Main Board
221868	1 of 1	0	01 Jun 09	Schematic, Piezo Relay
228005	1 of 1	0	01 Jun 09	Schematic, Pressure Sensor Board, 520IQ
228006	1 to 8	0	01 Jun 09	Trace Layout, Pressure Sensor Board, 520IQ
255204	1 to 3	0	01 Jun 09	PCBA Logix 520MD Pressure Sensor Board
255204.000.000	1 to 4	0	01 Jun 09	BOM, Pressure Sensor Board
245122	1 of 1	1	01 Jun 09	Schematic, Config Board
245123	1 to 7	0	01 Jun 09	PCB, Config Board
245124	1 to 3	0	01 Jun 09	PCBA Logix 520MD Config Board
245124.000.000	1 to 4	3	01 Jun 09	BOM, Config Board
Drawings Shared by All models				
218797	1 of 1	1	14 Sep 04	Piezo Chip -20C, -40C
217137	1 of 1	0	13 Aug 04	Piezo Chip, -40C
179335	1 to 4	1	16 Dec 02	Hall Sensor Board
179336	1 of 1	2	01 Jun 09	Hall Effect Sensor Assy
185959	1 of 1	0	16 Dec 02	Hall Sensor Schematic
1039075	1 of 1	-	16 Dec 02	Piezoinheit Kunststoff
D2-24	1 of 1	2	07 Mar 08	PMV Positioner Cover D2
D2-2(XX)	1 of 1	6	07 Mar 08	PMV Positioner Housing D2
178350	1 to 2	0	16 Dec 02	PCB Cover
Models 505, 510				
188138	1 to 2	1	5 Aug 02	PCBA, Logix 510, Top Assy Dwg without AO
188138.000.000	1 to 17	4	29 Dec 06	BOM, Logix 510 without AO
186507	1 to 2	1	5 Jan 02	PCBA, Logix 510, Top Assy Dwg with AO
186507.000.000	4 to 13	4	14 Dec 05	BOM, Logix 510 with AO
190709.000.000	1 to 9	1	10 Oct 02	BOM, Model 510 without AO
190710	1 to 2	6	07 Mar 08	Schematic, 510 Main Board, without Analog Output
181277	1 to 2	6	07 Mar 08	Schematic, 510 Main Board with Analog Output
181278	4 through 9 of 11	2	02 01 04	Trace Layout, 505/510 Main Board
Models 520, 520si, 520IQ, 520SD				
D2-14-R21	Copper layer 1	1	16 Jan 04	Switch Board D2/500 si Trace Layout

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
D2-14-R21	Copper layer 2	1	16 Jan 04	Switch Board D2/500 si Trace Layout
D2-14-R21	Silkscreen layer 1	1	16 Jan 04	Switch Board D2/500 si Trace Layout
214454	1 to 3	4	07 Mar 08	PCBA 520 Main Board
214454.000.000	1 to 12	4	26 Apr 06	Bill of Material 520 Main Board
214456	1 of 1	0	26 Apr 05	Schematic 520 Main Board
214457	1 to 11	0	26 Apr 05	PCB 520IQ HART Board
214458	1 to 3	1	07 Mar 08	PCBA 520IQ HART Board
214458.000.000	1 to 5	0	26 Apr 06	Bill of Materials 520IQ HART Board
214460	1 to 3	5	07 Mar 08	Schematic 520IQ Main Board
214461	1 to 11	4	07 Mar 08	PCB 520IQ Main Board
221942	1 to 2	2	07 Mar 08	PCBA, Loigix 510SI Top Assy Dwg with AO
221942.000.000	1 to 21	3	07 Mar 08	BOM, Logix 510SI with AO
221943	1 of 1	3	15 Jan 09	PCBA, Loigix 510SI Top Assy Dwg without AO
221943.000.000	1 to 18	4	07 Mar 08	BOM, Logix 510SI without AO

Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Enclosure/Markings				
255004	1 of 1	4	21 Oct 09	Nameplate 500 MD ATEX
214011	1 of 1	7	21 Oct 09	Nameplate 500 si ATEX
Model 520MD				
255446	1 of 1	0	21 Oct 09	Schematic Logix 520MD Analog Output Board
255447	1 to 9	0	21 Oct 09	Trace Layout Logix 520MD Analog Output Board
255448	1 to 3	0	21 Oct 09	PCBA Logix 520MD Analog Output Board
255084	1 of 1	1	21 Oct 09	Wire Harness Logix 520MD AO Board
255448.000.000	1 to 4	0	21 Oct 09	BOM Logix 520MD Analog Board
245124	1 to 3	1	21 Oct 09	PCBA Logix 520MD Config Board
245123	1 to 7	2	21 Oct 09	Trace Layout Logix 520MD Config Board
245120	1 to 3	1	21 Oct 09	PCBA Logix 520MD Main Board
245120.000.000	1 to 29	5	21 Oct 09	BOM Logix 520MD Main Board
Piezo				
217137	1 of 1	1	21 Oct 09	Piezo Chip, -40 to 80C, Logix positioner

The following drawings are replaced with other drawings as noted:

Drawing No.	Rev.	Title	Replaced by
186507.000.000	4	Bill of Materials Logix 510 with AO	221942.000.000
190709.000.000	1	Bill of Materials Model 510 without AO	188138.000.000

The following drawing number and revision has been corrected:

Drawing No.	Rev.	Title	Correct Drawing Number	Rev
225204	1	PCBA Logix 520MD Pressure Sensor Board	255204	0

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Certificate Annexe

Certificate Number: **Sira 03ATEX2243**

Equipment: **Logix Series 500si Digital Positioners**
Logix Series 500MD Digital Positioners

Applicant: **Flowserve FCD Corporation**

Issue 8

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
214011	1 of 1	9	03 Aug 11	Nameplate, Logix 500Si
255004	1 of 1	6	03 Aug 11	Nameplate, Logix 500MD

Issue 9

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
262726	1 of 1	0	26-Feb-03	Cover, Main Housing Painted Black Logix 500
255170	1 of 1	0	26-Feb-03	Cover, Main Housing Painted White Logix 500
262727	1 of 1	0	26-Feb-03	Cover, Main Housing Painted Yellow Logix 500
255156	1 of 1	0	26-Feb-03	Housing, NPT Painted Black Logix 500
262677	1 of 1	0	19-Nov-09	Housing, M20 Painted Black Logix 500

The following drawings have been revised

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Enclosure/Markings				
Model 520MD				
255204	1 to 3	3	09 Oct 09	PCBA Logix 520MD Pressure Sensor Board
Drawings Shared by All models				
255171	1 of 1	1	08 Oct 09	Cover, Main Housing, Machined
255157	1 of 1	0	11 Nov 02	Housing, Machined, NTP, Logix 500
262679	1 of 1	0	11 Nov 02	Housing, Machined, Metric, Logix 500
Models 505, 510				
190710	1 to 2	8	09 Mar 10	Schematic, 510 Main Board, without Analog Output
181277	1 to 2	8	09 Mar 10	Schematic, 510 Main Board with Analog Output
181278	4 to 9 of 11	4	08 Mar 10	Trace Layout, 505/510 Main Board
262648	1 to	0	03 Feb 10	Limit Switch Board Logix 500 **
214454.000.000	1 to 23	5	14 Nov 11	Bill of Material 520 Main Board
214458	1 to 3	2	16 Jan 09	PCBA 520IQ HART Board
214458.000.000	1 to 8	1	14 Nov 11	Bill of Materials 520IQ HART Board
221942	1 to 2	3	15 Jan 09	PCBA, Loigix 510SI Top Assy Dwg with AO
221942.000.000	1 to 20	6	14 Nov 11	BOM, Logix 510SI with AO
221943.000.000	1 to 18	7	14 Nov 2011	BOM, Logix 510SI without AO

The following drawings are replaced with other drawings as noted:

Drawing No.	Rev.	Title	Replaced by
190709.000.000	1	Bill of Materials Model 510 without AO	190709.000.000 was replaced by 221943.000.000 not 188138.000.000 as previously stated.
103907	-	Piezoinheit Kunststoff	217137 (at Issue 7)
D2-24	2	PMV Positioner Cover D2	255171
D2-2(XX)	6	PMV Positioner Housing D2	255157
D2-14-R21	1	Switch Board D2/500 si Trace Layout	262648

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

Certificate Annexe

Certificate Number: **Sira 03ATEX2243**

Equipment: **Logix Series 500si Digital Positioners**
Logix Series 500MD Digital Positioners

Applicant: **Flowserve FCD Corporation**

The following drawing number and revision has been corrected:

Drawing No.	Rev.	Title	Correct Drawing Number	Rev
225204	1	PCBA Logix 520MD Pressure Sensor Board	255204	3

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service
Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com