



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 04ATEX2335X** Issue: **3**

4 Equipment: **Intelligent Automation (IA) Series Pressure Transmitter**

5 Applicant: **Invensys Systems Inc. Shanghai Foxboro Co. Ltd. Foxboro Eckardt GmbH**

6 Address: 33 Commercial Street 161 Cao Bao Road Pragstrasse 83
Foxboro Shanghai 200233-1 D-70376 Stuttgart
MA 02035 China Germany
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 50014:1997 EN 50284:1999 EN 50020:2002

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:

 II 1G
EEx ia IIC T4 (Ta = -40°C to + 80°C)

Project Number 52A16583B
C. Index 13

D R Stubbings BA MIET
Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

**Sira 04ATEX2335X
Issue 3**

13 DESCRIPTION OF EQUIPMENT

The IA Series Pressure Transmitter is a pressure measurement instrument that uses a silicon strain gauge assembly (Neck Board). The unit is connected using a two way terminal block and the measurement signal is transmitted to remote receivers over the same two wires that supply power to the transmitter electronics. Externally, it comprises an aluminum enclosure with an optional display window. The enclosure contains a three board PCB stack, pressure sensor assembly and terminal board. The PCB stack is formed from the Display Board, encapsulated MAU Board, and Sensor Interface/Processor Board. There are two additional assemblies, the terminal board and the Neck Board. The Neck Board and the MAU board are fully encapsulated.

The terminal block has the following FISCO compliant input parameters:

U_i	=	17.5 V
I_i	=	380 mA
P_i	=	5.32 W
C_i	=	2.1 nF
L_i	=	2 μ H

The following is the model code identification: IDPaa-b*****E*****
IGPaa-b*****E*****
IAPaa-b*****E*****

Where: I - indicates the Intelligent Automation series
DP - indicates differential pressure
GP - indicates gauge pressure
AP - indicates absolute pressure
aa - indicates the valid sensor type are 10, 20, 25, 50
b - indicates communications protocol, F = Fieldbus
E - indicates certificates type ATEX intrinsic safe (ia)
* - indicates any characters for options not affecting the type of protection

Variation 1 - This variation introduced the following changes:

- i. The introduction of Shanghai Foxboro Company Limited, 161 Cao Bao Road, Shanghai 200233-1, China as an alternative manufacturing site:

Variation 2 - This variation introduced the following changes:

- i. The introduction of Foxboro Eckardt GmbH, Pragstrasse 83, D-70376 Stuttgart, Germany as an alternative manufacturing site:

Variation 3 - This variation introduced the following changes:

- i. The model code identification was clarified.
- ii. The use alternative parts to replace discontinued components was permitted.
- iii. Drawings were updated to show the latest versions of software.
- iv. Two zero resistors and one unpopulated resistor were added to alter the gain stage circuit from 10 times to 3.3 times.



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Sira 04ATEX2335X
Issue 3

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	15 September 2005	R52A12557A	The release of prime certificate.
1	10 January 2006	R51A14280A	The introduction of Variation 1.
2	24 May 2006	R51A14881A	The introduction of Variation 2.
3	22 May 2007	R52A16583A	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue X, Issue 0 to referenced above are only intended to reflect the history of the previous certification and have not been issued as a document in this format.The introduction of Variation 3.Conditions of certification clauses 17.3 and 17.4 were combined.

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

15.1 As aluminium is used at the accessible surface of this equipment, in the event of rare incidents, ignition sources due to impact and friction sparks could occur. This shall be considered when the IA series Pressure Transmitter is being installed in locations that specifically require group II, category 1G equipment.

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 The manufacturer may substitute on the approved label affixed to the equipment the name and address of the Shanghai Foxboro Company Limited or Foxboro Eckardt GmbH for the name and address of Invensys Systems Inc..

Certificate Annexe



Certificate Number: Sira 04ATEX2335X
Equipment: Intelligent Automation (IA) Series Pressure Transmitter
Applicant: Invensys Systems Inc.
 Shanghai Foxboro Co. Ltd.
 Foxboro Eckardt GmbH

Issue 0

	Number	Sheet	Rev.	Date	Description
Terminal Block:	D0149HN	1 to 2	C	21 Jun 05	PWA FieldBus FISCO terminal block
	D0149HP	1 of 1	B	21 Jun 05	PWB FieldBus FISCO terminal block
	10111QX	1 to 2	C	02 Jun 05	Schematic FieldBus FISCO terminal block
	Number	Sheet	Rev.	Date	Description
Fisco MAU Board:	10111QW	1 of 1	A	23 Aug 04	FISCO FieldBus Panel Informational Drawing
	D0149HL	1 to 4	A	23 Aug 04	FISCO FieldBus MAU PWA
	D0149HM	1 of 1	A	23 Aug 04	FISCO FieldBus MAU PWB
	10111QV	1 to 6	OA	16 Aug 04	FISCO Schematic MAU Board
	Number	Sheet	Rev.	Date	Description
Fisco SI Board:	D0149HE	1 to 3	A	13 Apr 04	PWA Sensor Interface / Processor for FISCO FieldBus
	D0149HH	1 of 1	A	13 Apr 04	PWB Sensor Interface / Processor for FISCO FieldBus
	10111QP	1 to 5	OA	19 Feb 04	Schematic Processor/Sensor Interface for FISCO FieldBus
	Number	Sheet	Rev.	Date	Description
Neck Board:	D0149GM	1 to 2	D	11 Mar 02	PWA IASPT Neck Board
	D0149WT	1 of 1	J	11 Mar 02	PWB IASPT Neck Board
	10111CQ	1 to 2	L	14 Jan 02	Schematic IASPT Neck Board
	Number	Sheet	Rev.	Date	Description
Display Board:	D0149XB	1 to 3	D	28 Mar 01	PWA Digital Indicator circuit for IASPT
	D0149XC	1 of 1	D	27 Mar 01	PWB Digital Indicator circuit for IASPT
	10111CK	1 to 5	D	16 Mar 01	Schematic Digital Indicator circuit for IASPT
	Number	Sheet	Rev.	Date	Description
General:	D0162UU	1 of 1	A	08 Sep 04	FISCO FieldBus Electronics Module
	10121EL	1 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	2 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	3 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	4 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	5 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	6 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	7 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	8 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	9 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	10 of 16	T	11 Feb 05	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	11 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	12 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	13 of 16	K	24 Jul 01	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	14 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	15 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
	10121EL	16 of 16	N	23 Jun 02	IASPT Structure Agency Information Drawing (FM ONLY)
X0180HG	1 to 2	A	21 Nov 03	Potting Compound	

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Applicant: Invensys Systems Inc.
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	Number	Sheet	Rev.	Date	Description
FoxComp Part Numbers:	PO188AB	1 of 1	-	02 Aug 05*	1206 Series Thick Film Resistor
	PO188RY	1 of 1	-	02 Aug 05*	1206 Series Thick Film Resistor
	PO187PF	1 of 1	-	02 Aug 05*	0805 Series Thick Film Resistor
	PO187PW	1 of 1	-	02 Aug 05*	0805 Series Thick Film Resistor
	PO187PZ	1 of 1	-	02 Aug 05*	0805 Series Thick Film Resistor
	PO187QR	1 of 1	-	02 Aug 05*	0805 Series Thick Film Resistor
	PO187QV	1 of 1	-	02 Aug 05*	0805 Series Thick Film Resistor
	PO153KN	1 of 1	-	02 Aug 05*	Schottky Diode
	PO202DH	1 of 1	-	02 Aug 05*	1N5920B Zener Diode
	PO185ET	1 of 1	-	02 Aug 05*	0603 Series Thick Film Resistor
	PO185FV	1 of 1	-	02 Aug 05*	0603 Series Thick Film Resistor
	PO185DT	1 of 1	-	02 Aug 05*	0603 Series Thick Film Resistor
	PO185CJ	1 of 1	-	02 Aug 05*	0603 Series Thick Film Resistor
	PO185DH	1 of 1	-	02 Aug 05*	0603 Series Thick Film Resistor
	PO207CC	1 of 1	-	02 Aug 05*	40mA Fast Acting Fuse
	PO204CS	1 of 1	-	02 Aug 05*	Melf Resistor
	PO204BN	1 of 1	-	02 Aug 05*	Melf Resistor
	PO204FW	1 of 1	-	02 Aug 05*	Melf Resistor
	PO204AT	1 of 1	-	02 Aug 05*	Melf Resistor
	PO153HS	1 of 1	-	02 Aug 05*	Two Diode Array
	PO153KQ	1 of 1	-	02 Aug 05*	Twelve Diode Array
	PO202FD	1 of 1	-	02 Aug 05*	1SMB5922BT3 Zener Diode
	* Date stamped by Sira	BF161ZJ	1 of 1	-	02 Aug 05*
	10120RL	1 to 2	A	29 Jul 05	Data Plate, Marking

Issue 1

No new drawings were introduced.

Issue 2

No new drawings were introduced.

Issue 3

	Number	Sheet	Rev.	Date	Description
FISCO SI Board:	DO149HE	1 to 4	B	29 Jan 07	PWA Sensor Interface/Processor for FISCO FieldBus
	10111QP	1 to 6	B	26 Jan 07	Schematic Processor/Sensor Interface for FISCO FieldBus
	Number	Sheet	Rev.	Date	Description
FISCO SI Board: Premium version	D0149HF	1 to 4	B	12 Mar 07	PWA Sensor Interface/Processor for FISCO Premium
	D0149HJ	1 of 1	A	15 Dec 06	PWB Sensor Interface/Processor for FISCO Premium
	10111QQ	1 of 6	B	26 Jan 07	Schematic Sensor Interface/Processor for FISCO Premium
	Number	Sheet	Rev.	Date	Description
General: Premium version	D0162UV	1 of 1	A	18 Dec 06	FF Electronics Premium module

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