

# *Certification of*

## EXPLOSION PROTECTED ELECTRICAL EQUIPMENT

### AUSEx Scheme

# Certificate of Conformity

**Certificate No:** AUS Ex 04.3959      **Issue 0:** Original Issue 23/09/2004

**Date of Expiry:** 31/12/2006

**Certificate Holder:** Industrial Scientific Corporation  
1001 Oakdale Road  
Oakdale, PA 15071-1500  
U.S.A.

**Electrical Equipment:** Model iTRANS Gas Monitor

**Type of Protection:** Encoder enclosure: Ex d IIC T6 ( $T_{amb} = 55\text{ }^{\circ}\text{C}$ )  
Sensor enclosure: Ex d IIB+H<sub>2</sub> T6 ( $T_{amb} = 55\text{ }^{\circ}\text{C}$ )

**Marking Code:** Encoder enclosure: AUS Ex 04.3959 Ex d IIC T6 ( $T_{amb} 55\text{ }^{\circ}\text{C}$ ) IP66  
Sensor enclosure: AUS Ex 04.3959 Ex d IIB+H<sub>2</sub> T6 ( $T_{amb} 55\text{ }^{\circ}\text{C}$ )

**Manufactured By:** Industrial Scientific Corporation  
1001 Oakdale Road  
Oakdale, PA 15071-1500  
U.S.A.

*Issued by:*



919 Londonderry Road Londonderry NSW 2753  
Australia

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*This certificate is granted subject to the conditions as set out in Standards Australia Miscellaneous Publication MP69 and the Procedure (Doc Q7134) of the scheme.*

*The electrical equipment and any acceptable variation to it specified in the schedule to this certificate and the identified documents, was found to comply with the following standards:*

AS/NZS 60079.0:2000 Electrical apparatus for explosive gas atmospheres Part 0: General requirements.  
AS/NZS 60079.1:2002 Electrical apparatus for explosive gas atmospheres Part 1: Flameproof enclosures 'd'  
AS 1939-1990 Degrees of protection provided by enclosures of electrical equipment (IP Code)

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

*The equipment listed successfully met the examination and test requirements as recorded in*

*Test Report No: TestSafe 24434*

*File Reference: TestSafe 2003/014067*



*Signed for and on behalf of issuing authority*

*Quality & Certification Manager  
Position*

*23/09/2004  
Date of Issue*

Ex 04.3959

*This certificate and schedule may not be reproduced except in full.*

*This certificate is not transferable and remains the property of the issuing body to whom it must be returned in the event of it being revoked or not renewed.*

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## Schedule

**Certificate No:** AUS Ex 04.3959

**Issue:** 0

**Date of Issue:** 23/09/2004

**Certified Equipment:**

The iTrans gas monitor is a fixed point gas detector. Each monitor consists of a main electronic module which is fitted with up to two sensors, either integral to the iTrans main unit or mounted remotely up to a distance of 250 m. In the case of a remote sensing head installation, the sensing heads are integral with an enclosure which is identical to the main enclosure but which only contains a terminal PCB. The remote enclosure and the main enclosure are connected via flexible cable or conduit in accordance with the requirements for installations in hazardous areas. The main housing and remote housing are cast aluminum alloy designated ZL401 with maximum magnesium content of 0.3% by mass. The sensor housing is constructed of aluminum alloy LD31 with maximum magnesium content of 0.9% by mass.

The iTrans can be powered from a 12 to 28 VDC supply, and provides a 4-20mA control signal for each sensor channel. A digital interface is also available. Gas readings are displayed for each channel on an LED display, viewable through the instrument window.

The iTrans sensors includes oxygen, and a number of toxic gas sensors. Toxic gas sensors include Carbon Monoxide (CO), Nitric Oxide (NO), Ammonia (NH<sub>3</sub>), Hydrogen Sulfide (H<sub>2</sub>S), Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Chlorine (Cl<sub>2</sub>), Chlorine Dioxide (ClO<sub>2</sub>) with H<sub>2</sub>S filter, Hydrogen Cyanide (HCN), Carbon Monoxide - Hydrogen Null (CO - H<sub>2</sub>), Carbon Dioxide (CO<sub>2</sub>), and Hydrogen Chloride (HCl).

The iTrans may optionally be used with the separately certified (AUS Ex 3960) sensor Module P/N: 7701-5857

The iTrans is available with an optional relay board, allowing the unit to directly control external devices. Two of the relays can be programmed for alarm activation, while the third relay is a fault protection relay. The relays are rated 5A at 30V AC/DC.

**Conditions of Certification:**

None

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## AUSEx Scheme

Addendum to Certificate No. Ex 04.3959

### Drawings Schedule

Drawing No.	Title	Rev.	Date
1703A9520-500	STD: LABEL, BLANK, 1.25 X .25, WHT	4	10-Sep-1996
1708A8568-500	STD: COMPOUND, SEALING, KILLARK SC	0	21-Aug-2000
3700A0352-600	DTL: FLAME ARRESTOR 1.500X.093 100U	4	25-Nov-2003
7701A8067-300	ASSY: SENSOR, LEL, FIXED POINT	1	27-Dec-2000
7701B8067-000	B/M: SENSOR, LEL, FIXED POINT	1	27-Dec-2000
7702A2101-600	DTL: GLASS, VIEW, ITRANS	1	11-Mar-2004
7702A2127-600	DTL: RING, TIGHTEN, ITRANS	0	08-Jan-2003
7702A2226-500	STD: SCREW, LOCK, SS, M3X16.0, ITRANS	0	27-Feb-2004
7702A2333-600	DTL: OVERLAY, ITRANS	0	08-Jan-2003
7702A2481-600	DTL: PLATE, WARNING, ITRANS	0	09-Jan-2003
7702A2499-600	DTL: THREAD INSERT, SS, ITRANS	0	08-Jan-2003
7702A2671-600	DTL: PLUG, SMART SENSOR, ITRANS	2	26-Mar-2004
7702A3539-600	DTL: ASSEMBLY, TOP HOUSING, ITRANS	1	26-Feb-2004
7702A3851-300	ASSY: SEALED HOUSE, SMART SEN., ITRANS	1	27-Feb-2004
7702A5385-600	DTL: PLATE, BLANK, ITRANS	0	27-Feb-2004
7702A5401-600	DTL: MARKINGS, ITRANS, AUS.	2	08-Sep-2004
7702A5484-600	DTL: MARKINGS, AUS, ITRANS, COMB MDL	1	05-Aug-2004
7702A5534-600	DTL: MARKINGS, AUS, O2, SENSOR MDL	1	05-Aug-2004
7702A5633-600	DTL: MARKINGS, AUS, ITRANS, SENSR, H2S	1	05-Aug-2004
7702A5666-600	DTL: MARKINGS, AUS, ITRANS, SENSOR, CO	1	05-Aug-2004
7702A5716-600	DTL: MARKINGS, AUS, ITRANS, SENSOR, H2	1	05-Aug-2004
7702A5807-600	DTL: MARKINGS, AUS, ITRANS, REMT ENCL	2	08 Sep-2004
7702A6078-600	DTL: TERMINAL PCB, REMOTE, ITRANS	2	28-Jul-2004
7702B2150-000	B/M: PCB, MAIN HEAD, ITRANS	0	27-Feb-2004
Pages 1 and 2 of 2			
7702B2176-000	B/M: PCB, ANALOG, ITRANS	0	27-Feb-2004
Pages 1 and 2 of 2			
7702B2184-000	B/M: PCB, TERM, RELAY, ITRANS	0	26-Feb-2004
7702B2549-000	B/M: PCB, POWER, SENSOR, ITRANS	0	27-Feb-2004
7702B2556-000	B/M: PCB, PUBLIC SENSOR, ITRANS	0	27-Feb-2004
Pages 1 and 2 of 2			
7702B2572-600	DTL: HOUSING, SMART SENSOR, ITRANS	2	25-Aug-2004

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### Drawings Schedule continued

Drawing No.	Title	Rev.	Date
7702B2606-000	B/M: SMART SENSOR,LEL,ITRANS	0	26-Feb-2004
7702B3760-000	B/M: PCB,TERMINAL,ITRANS	0	27-Feb-2004
7702B3828-000	B/M: SMART SENSOR,H2S,ITRANS	0	26-Feb-2004
7702B3836-000	B/M: SMART SENSOR,CO,ITRANS	0	26-Feb-2004
7702B3919-000	B/M: MODULE,ASSEMBLY,ITRANS	0	26-Feb-2004
7702B3919-300	ASSY: MODULE,ASSEMBLY,ITRANS	0	26-Feb-2004
7702B3927-000	B/M: SMART SENSOR,O2,ITRANS	0	26-Feb-2004
7702B3935-000	B/M: SMART SENSOR,H2,ITRANS	0	26-Feb-2004
7702B5930-000	B/M: ITRANS REMOTE SENSOR ENCLOSURE	3	01-Sep-2004
7702B5930-300	ASSY: ITRANS REMOTE SENSOR ENCLOSURE	3	20 Jul-2004
7702B5963-000	B/M: ENCLOSURE,REMOTE,ITRANS	0	11-May-2004
7702B6078-000	B/M: TERMINAL PCB,REMOTE,ITRANS	1	28-Jul-2004
7702C2093-600	DTL: TOP HOUSING,ITRANS	0	08-Jan-2003
7702C2143-600	DTL: LOWER HOUSING,ITRANS	0	08-Jan-2003
7702C2150-300	ASSY: PCB,MAIN HEAD,ITRANS	0	27-Feb-2004
7702C2176-300	ASSY: PCB,ANALOG,ITRANS	0	27-Feb-2004
7702C2184-300	ASSY: PCB,TERM,RELAY,ITRANS	0	26-Feb-2004
7702C2549-300	ASSY: PCB, POWER,SENSOR,ITRANS	0	27-Feb-2004
7702C2556-300	ASSY: PCB, PUBLIC, SENSOR,ITRANS	0	27-Feb-2004
7702C2606-300	ASSY: SMART SENSOR,LEL,ITRANS	0	26-Feb-2004
7702C2606-600	DTL: SMART SENSOR,ITRANS	0	09-Jan-2003
7702C2663-600	DTL: CAP,SMART SENSOR,ITRANS	1	27-Feb-2004
7702C3760-300	ASSY: PCB,TERMINAL,ITRANS	0	27-Feb-2004
7702C3828-300	ASSY: SMART SENSOR,H2S,ITRANS	0	26-Feb-2004
7702C3836-300	ASSY: SMART SENSOR,CO,ITRANS	0	26-Feb-2004
7702C3927-300	ASSY: SMART SENSOR,O2,ITRANS	0	26-Feb-2004
7702C3935-300	ASSY: SMART SENSOR,H2,ITRANS	0	26-Feb-2004
7702C5963-000	B/M: ENCLOSURE,REMOTE,ITRANS	0	11-May-2004
7702C5963-300	ASSY: ENCLOSURE,REMOTE,ITRANS	0	11-May-2004
7702C6359-000	B/M: ENCL ASSY,REMOTE SENSOR,ITRANS	0	13-Jul-2004
7702C6359-600	DTL: ENCL ASSY,REMOTE SENSOR,ITRANS	0	13-Jul-2004

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### Drawings Schedule continued

Drawing No.	Title	Rev.	Date
7810B4635-000 Pages 1 and 2 of 2	B/M: ITRANS GAS MONITOR	1	26-Feb-2004
7810C4635-300	ASSY: ITRANS GAS MONITOR	1	26-Feb-2004

**Additional Information:**

None

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