



# 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](http://www.iecex.com)

Certificate No.: IECEx TSA 05.0004X issue No.: 0 Certificate history:

Status: Current

Date of Issue: 2005-05-24 Page 1 of 4

Applicant: **Samson Controls Pty Ltd**  
Units 13-15, 61-71 Beauchamp Road  
Matraville NSW 2036  
Australia

Electrical Apparatus: **Electro-Pneumatic Positioner Models 3766 and 3767**  
Optional accessory:

Type of Protection: **Ex ia / Ex n**

Marking: **Ex ia I/IIC T6 IP65**  
**Ex n I/IIC T6 IP65**  
**IECEx TSA 05.0004X**

Approved for issue on behalf of the IECEx  
Certification Body:


Ujen Singh

Position:

Quality and Certification Manager

Signature:  
(for printed version)

Date:

  
24-05-2005

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](http://www.iecex.com).

Certificate issued by:

**TestSafe Australia**  
919 Londonderry Road  
Londonderry NSW 2753  
Australia





# IECEx Certificate of Conformity

Certificate No.: IECEx TSA 05.0004X

Date of Issue: 2005-05-24

Issue No.: 0

Page 2 of 4

Manufacturer: **Samson AG Mess-Und Regeltechnik**  
Weissmüllerstrasse 3  
60314 Frankfurt  
Germany

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:

<b>IEC 60079-0 : 2000</b> Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 1999</b> Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
<b>IEC 60079-15 : 1987</b> Edition: 1	Electrical apparatus for explosive gas atmospheres - Part 15: Type of protection 'n'

*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:
AU/TS/05.008	2003/014161



# IECEx Certificate of Conformity

Certificate No.: IECEx TSA 05.0004X

Date of Issue: 2005-05-24

Issue No.: 0

Page 3 of 4

## Schedule

### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Electro-Pneumatic Positioner Models 3766 and 3767 are intended for attachment to pneumatic control valves and serves for converting control signals of (0)4 to 20 mA from a control device into a pneumatic signal pressure of 6 bar max. The media used are non-combustible gases.

#### Type 3767:

The positioner consists of an i/p converter module and a position indicator module. It can also contain an optional inductive limit switch that has been separately certified under the certificate IECEx TUN 04.0016X.

#### Type 3766:

The positioner consists of a position indicator module. It can also contain an optional inductive limit switch that has been separately certified.

The input signal to the i/p converter is in the range of (0)4 to 20 mA or 1 to 5 mA, depending on the coil version. The pneumatic amplifier of the positioner following the i/p converter is supplied with the pneumatic standard signal in the 0.2 to 1 bar range. This pressure generates a force at the diaphragm that is compared to the feedback spring via the lever. When the forces are unbalanced, the nozzle/baffle system continues to supply pressure via the amplifier to the valve actuator until the resulting change in travel has fed back the force balance. The travel continues to change until the force on the diaphragm and the load moment of the lever/feedback spring assembly are balanced.

Reversal of the operating direction is achieved by relocating the reversing plate and by attaching the positioner to the opposite side of the control valve. Amplification can be changed by means of the proportional band restrictor. The airflow can be adapted to the application by means of the flow rate restrictor. The pressure controller provided serves for keeping the air supply constant for the internal cascade pressure.

**CONDITIONS OF CERTIFICATION:** YES as shown below  
The i/p converter and position indicator are passive two-terminal networks that may be connected to any certified intrinsically safe circuit, provided the maximum values of  $U_i$ ,  $I_i$  and  $P_i$  are not exceeded.  
The inductive limit switch provides "on-off" indication at the limit of the valve stem position. These signals are available to the external connections at screw terminals "41/42" and "51/52".  
The following parameters shall be taken into account during installation:

	i/p converter '41', '42'	Position indicator '31', '32'	Inductive Limit Switch '41', '42' or '51', '52'
The i/p converter and position indicator are passive two-terminal networks that may be connected to any certified intrinsically safe circuit, provided the maximum values of $U_i$ , $I_i$ and $P_i$ are not exceeded.			
Maximum input voltage $U_i$	28 V d.c.	25 V d.c.	16 V
Maximum input current $I_i$	0.1 A	0.1 A	25 mA
Maximum input power $P_i$	0.7 W	1 W	64 mW
Maximum Internal Capacitance $C_i$	0 mF	0 mF	30 nF
Maximum Internal Inductance $L_i$	0 mH	0 mH	100 mH



# IECEX Certificate of Conformity

Certificate No.: IECEx TSA 05.0004X

Date of Issue: 2005-05-24

Issue No.: 0

Page 4 of 4

**Additional information:**

The documents considered for this certification are attached in the Annexe.

### Drawing List for IECEx TSA 05.0004X

The following documents were assessed in Test Report 26285. The documents listed give a full and correct specification of the safety aspects of the electrical equipment.

Document No.	Document Title	Issue	Date
3767-6 6-R	Single-acting Elektropneumatic Positioner	6	2002/12/18
3767-66 6-R	Elektropneumatic Positioner with Position indicator	6	2002/12/18
1050-0638 S	Terminal block	Orig.	2000/09/05
1050-0641 T	Attachmentschematic Positioner	Orig.	2000/09/29
1050-0540 T	1/2" USA gland	Orig.	2000/05/05
1050-0238 S	Steckverbinder .vst. (717)	Orig.	1995/02/20
1050-0239 S	Steckverbinder .vst. (727)	Orig.	1995/02/22
1050-0240 T	Codierung-Steckverbinder .vst. (727)	Orig.	1995/02/28
1050-0640 S	Steckverbinder .vst.	Orig.	2000/09/29
1050-0244 T	Watertight vent valve	Orig.	1996/03/26
1050-0317 T	Watertight vent valve	Orig.	1996/03/26
1050-0454 T	Filter disk	Orig.	1997/09/23
1050-0362 T	Schild (Prüfstellen-Original)	d	2005/04/20
1050-0323 T	Schild (Prüfstellen-Original)	Orig.	2005/04/20
1050-0368 T	Schild (Prüfstellenoriginal)	e	2005/04/20
1050-0733 T	Schild (Prüfstellenoriginal)	e	2005/05/06
1050-0774 T	Schild (3767 Warning Label)	Orig.	2003/05/13
6112-2 R	i/p Umformer	2	1999/11/30
1050-0564 T	Plunger coil	Orig.	1999/08/16
1050-0565	Complled according to drawing No. 1050-0564 T	Orig.	1999/07/30
1050-0566 S	Beam, complete	Orig.	1999/07/30
1050-0567 R	Diodenblock vollst	Orig.	1999/08/23
1050-0318 S	Sensorträger .vst.	1	2000/03/13
1050-0319 S	Position indicator	1	2000/12/14
1050-0320 R	Position indicator – Module	1	2000/12/04
1050-0357 S	2-L Messumformer (Stellungsrueckmelder)	1	1996/10/15
1050-0359 S	Printed Circuit Board (Logic Board)	Orig.	1996/10/22
1050-0329 S	Ribbon cable	Orig.	1996/10/24