

**Australian/New Zealand  
Certification Scheme for  
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT  
ANZEx Scheme**

***Certificate of Conformity***

Certificate No.: ANZEx 12.3015X

Issue No.: 0

Date of Issue: 2012-07-12

**Applicant:** Trolex Ltd  
Newby Road, Hazel Grove  
Stockport, Cheshire SK7 5DY  
United Kingdom

**Electrical Apparatus:** TX6363 Infrared Gas Sensor / Transmitter

**Type of Protection:** Ex ia

**Marking Code:** Ex ia I (Ta = 60 °C)  
Ex ia d IIB T4 (Ta = 44 °C) IP54

**Manufacturer:** Trolex Ltd  
Newby Road, Hazel Grove  
Stockport, Cheshire SK7 5DY  
United Kingdom

**Manufacturing Location(s):** As above

*The EPEE certification database located at <http://www.anzex.com.au> shows the validity of this Certificate.*

	<p><b>Certificate issued by:</b></p> <p style="text-align: center;"><b><i>TestSafe Australia</i></b> 919 Londonderry Road, Londonderry NSW 2753 <b>Australia</b> Phone: +61 2 4724 4900 Fax: +61 2 4724 4999 <a href="http://www.testsafe.com.au">http://www.testsafe.com.au</a></p>	 <p style="text-align: center;"><a href="http://www.jas-anz.org/register">www.jas-anz.org/register</a></p>
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*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication MP87.1:2008.*

**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:*

- |                      |   |
|----------------------|---|
| AS/NZS 60079.0:2005  | Electrical apparatus for explosive gas atmospheres – Part 0: General requirements (including Amendment 1) |
| AS/NZS 60079.11:2006 | Explosive atmospheres – Part 11: Equipment protection by Intrinsic safety ‘i’                             |
| AS 60529:2004        | Degree of protection provided by enclosures (IP code)   |

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

**ASSESSMENT & TEST REPORTS:**

*The equipment listed has successfully met the assessment and test requirements as recorded in:*

Test Report No. and Issuing Body:	<b>33545, TestSafe Australia</b>
Quality Assessment Report No. and Issuing Body:	<b>GB/SIR/QAR07.0017/02, Sira</b>

File Reference:	<b>2012/001029</b>
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 **UTEN SINGH**

*Signed for and on behalf of issuing body*

**Quality & Certification Manager**

*Position*

2012-07-12

*Date of Issue*

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

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### Schedule

#### EQUIPMENT:

The TX6363 Infra Red Gas Sensor / Transmitter takes a signal from a component-certified gas sensing head (Ex 'ia' for Group I but Ex 'd' for Group II) that is mounted on the sensor board in the sensor enclosure; this signal is conditioned and an analogue signal is then transmitted to other monitoring equipment. The sensing head can detect both flammable and toxic gases. The signal requires compensation for pressure and temperature changes, so a pressure sensor is fitted on the pressure sensor PCB and a temperature-measuring integrated circuit is located on the sensor head PCB.

The equipment comprises an output board connected to an optional display board plus a control board, which is connected to two sensor conditioning boards (pressure sensor and infra-red sensor). The main unit is housed in a metal-loaded polycarbonate housing, with a polycarbonate window. The sensor is housed in an enclosure manufactured from polycarbonate, stainless steel or brass and may be mounted on the main unit or installed in a remote location connected by up to 10 m of cable. The window and polycarbonate sensor enclosure do not contain anti-static filler.

Opening the main enclosure gains access to eight terminals, of which only terminals 1 to 5 are used. Connection information is given on an internal label. A ribbon cable connects the main circuit to the sensor.

There are four versions of the equipment:

- 1 Group I, 4 to 20 mA
- 2 Group I, 5 to 15 Hz
- 3 Group I, 0.4 to 2 V
- 4 Group II 4 to 20 mA

#### CONDITIONS OF CERTIFICATION:

It is a condition of safe use that the following parameters shall be taken into account during installation:

		$U_i$	$I_i$	$P_i$	$C_i$	$L_i$	$U_o$	$I_o$	$P_o$	$C_o$	$L_o$
<b>Group I 4 – 20 mA</b>	T1 – T2	16.5 V	-	-	0	0	16.5 V	0.374 A	1.54 W	5.85 $\mu$ F	1.65 mH
	T4 – T3	16.5 V	-	-	769 nF	0	7.14 V	0.18 A	0.323 W	-	-
	T5 – T3	16.5 V	-	-	1.24 $\mu$ F	0	7.14 V	0.21 A	0.378 W	-	-

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		U <sub>i</sub>	I <sub>i</sub>	P <sub>i</sub>	C <sub>i</sub>	L <sub>i</sub>	U <sub>o</sub>	I <sub>o</sub>	P <sub>o</sub>	C <sub>o</sub>	L <sub>o</sub>
Group I 0.4 – 2 V	T1 – T2	16.5 V	-	-	0	0	16.5 V	29 mA	0.12 W	5.85 μF	277 mH
	T4 – T3	16.5 V	-	-	769 nF	0	7.14 V	0.18 A	0.323 W	-	-
	T5 – T3	16.5 V	-	-	1.24 μF	0	7.14 V	0.21 A	0.378 W	-	-
Group I 5 – 15 Hz	T1 – T2	16.5 V	-	-	0	0	-	-	-	-	-
	T4 – T3	16.5 V	-	-	232 nF	0	7.14 V	0.18 A	0.323 W	-	-
	T5 – T3	16.5 V	-	-	1.24 μF	0	7.14 V	0.21 A	0.378 W	-	-
Group IIB 4 – 20 mA	T1 – T2	15 V	-	-	0	0	15 V	0.34 A	1.27 W	1.7 μF	0.6 mH
	T4 – T3	15 V	150 mA	0.6 W	1.48 μF	0	7.14 V	0.18 A	0.323 W	-	-
	T5 – T3	15 V	300 mA	1.2 W	2.6 μF	0	7.14 V	0.21 A	0.378 W	-	-

**DOCUMENTS:**

Document No.	Sheets	Document Title	Issue	Date
P5432.01	2	Certified Circuit Diagram Head PCB Assemblies	E	2011-05-19
P5432.02	1	General Arrangement	F	2010-11-11
P5432.11	1	Head PCB Sensor Head PCB Artwork	A	2001-06-28
P5432.17	1	Output PCB Artwork	E	2011-02-22
P5432.57	1	Fixing of Pull Up Resistors	A	2007-02-27
P5432.60	1 of 5	Certified Circuit Diagram MkII Output PCB (Overall Circuit)	E	2011-03-15
P5432.60	2 of 5	Certified Circuit Diagram MkII Output PCB GpI & GpIIB 4mA to 20mA Output Version	E	2011-03-22
P5432.60	3 of 5	Certified Circuit Diagram MkII Output PCB GpI 0.4V to 2V Output Version	E	2011-02-17
P5432.60	4 of 5	Certified Circuit Diagram MkII Output PCB GpI 5Hz to 15Hz Output Version	E	2011-02-17
P5432.60	5 of 5	Certified Parts List MkII Output PCB	E	2011-02-17

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Certificate No.: **ANZEx 12.3015X**

Issue No.: **0**

Date of Issue: **2012-07-12**

<b>Document No.</b>	<b>Sheets</b>	<b>Document Title</b>	<b>Issue</b>	<b>Date</b>
P5460.24	1	PCB Artwork (5 – 15Hz)	A	1997-07-07
P5460.109	1	Circuit Diagram 5 – 15Hz Module P.C.B.	A	1998-05-18
P5487.100	1	Alpha-Numeric LCD Board Certified Circuit Diagram	C	2002-03-06
P5487.101	1	PCB Artwork	E	2002-03-06
P5432.35	1	Certification Labels (AUS)	B	2012-07-02