



# Mining And Surface Certification (Pty) Ltd

2015/021934/07



Certificate Number: MASC M/11-421X  
Issued: 31 October 2015  
Expired: 31 October 2018  
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## IA – CERTIFICATE

(Revision 4: Revised as per ARP 0108)

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

Ex – Type Examination

Certificate number: **MASC M/11-421X**  
Equipment: TX5814 & TX6114 Pressure Transmitter  
Serial No: (See “Conditions of Certification”)  
Applicant: Trolex Limited

Address: Hazel Grove  
Stockport  
Cheshire SK7 5DY  
United Kingdom

Manufacturer: Trolex Limited  
Address: Hazel Grove  
Stockport  
Cheshire SK7 5DY  
United Kingdom

### DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM

TX5814 & TX6114 Pressure Transmitters are designed to produce an output signal proportional to the pressure in a fluid. The output signal is configured as a 2 wire 4-20mA output. The options are detailed on the label drawing listed below.

The apparatus comprises a pressure sensor assembly, an amplifier board, and an RFI board, all housed in a stainless steel enclosure.

External connections are made by means of an integral cable with a maximum length of 150m, or by a plug and socket arrangement.

#### Input parameters

$U_i = 16.5V$        $C_i = 0.05\mu F$        $L_i = 0.35mH$        $L_i/R_i = 5\mu H/ohm$

\* The apparatus is identical to that covered by Certificate MECS 01 ATEX 4126X except for the marking label.

**/ . MARKING...**

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**MARKING:**

Baseefa marking remains applicable. The following MASC Certificate number (IA number) must be additionally applied to the equipment.

IA No: MASC M/11-421X

**COMPLIANCE:**

The unit as described above and in MASC Letter **11-421 R4** is hereby certified "Explosion Protected" Ex ia I (-20°C ≤ Ta ≤ 60°C), and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS Standards:

**The evaluation was conducted according to the requirements of:**

- i. **SANS (IEC) 60079-0 : 2009 "Explosive atmospheres – Equipment — General requirements"**
- ii. **SANS (IEC) 60079-11 : 2007 "Explosive atmospheres – Equipment protection by intrinsic safety 'i'"**

Location	Zone 0, 1 & 2	Mining
Hazard Frequency		Continuous as could occur under normal operations
Environment	Group I	Methane / Coal dust
Limiting Temperature		450°C (Methane gas) / 150°C (Coal dust)
Ambient Temperature	-20°C to +60°C	

***The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:***

- i) SANS 10086 requirements;
- ii) Any conditions mentioned in the above report;
- iii) Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v) Any relevant requirements of the MHS Act or the OHS Act.

**SPECIAL CONDITIONS OF USE (X):**

1. The screen of the integral cable may be connected internally to the frame of the apparatus, this must be taken into account when installing the apparatus.
2. Pin 4 of the optional plug/socket arrangement is connected internally to the frame of the apparatus, this must be taken into account when installing the apparatus.
3. The equipment is not capable of withstanding the 500V insulation test required by clause 6.3.12 of EN 60079-11: 2007. This must be taken into account when installing the apparatus.

**/I. CONDITIONS...**

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**CONDITIONS OF CERTIFICATION:**

1. This Certificate remains valid based on a three yearly review covered by an official MASC letter.
2. The apparatus must be additionally marked with the MASC marking details above.
3. This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date.
4. The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by Baseefa and in this approval.
5. The Baseefa certification must remain valid.
6. The extent of the requirements in the ARP 0108 (or regulations) and SANS 10108 on the certification of the equipment must remain unchanged.
7. The Ex quality assurance notification for the equipment must remain valid.

Approved on behalf of MASC



**F du Toit**  
**TECHNICAL SPECIALIST**

**Mining And Surface Certification**

*This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.*

*While every endeavour is made to ensure that a test / assessment is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report issued pursuant to a test / assessment.*

*MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and routine tests have been successfully completed and the product complies with the documentation and standard(s).*

*This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practises.*

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