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

Certificate No.:	IECEx TSA 14.0037X	Issue No: 1	Certificate history:
			Issue No. 1 (2016-02-17)
Status:	**Current**	Page 1 of 4	Issue No. 0 (2014-10-24)
Date of Issue:	**2016-02-17**		
Applicant:	**Hawk Measurement Systems Pty. Ltd.** 15-17 Maurice Court, Nunawading VIC 3131 **Australia**		
Electrical Apparatus:	**CGR Series Centurion Guided Radar**		
Optional accessory:			
Type of Protection:	**Ex d ia tb**		
Marking:	Ex ia/d [ia Ga] IIC T6 Ga/Gb Ex ia tb [ia Da] IIIC T85°C Da Db -40°C to +60°C		

Approved for issue on behalf of the IECEx Certification Body: Ujen Singh

Position: Quality and Certification Manager

Signature:
(for printed version)

Date: 17 FEBRUARY 2016

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.

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia

Test Safe AUSTRALIA

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Manufacturer:	**Hawk Measurement Systems Pty. Ltd.** 15-17 Maurice Court, Nunawading VIC 3131 **Australia**	
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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2014-10 Edition:3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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

Test Report:

AU/TSA/ExTR15.0038/00

Quality Assessment Report:

AU/SIM/QAR13.0004/03

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Hawk Centurion Guided Radar series equipment is a continuous Level and Interface Measurement unit. The Hawk CGR unit uses low power high frequency RF pulses using TDR principles to measure liquids and solids in contact with the sensing probe. The CGR series consists of a sensing probe and an electronic control amplifier mounted in a flameproof and dust protection housing. These units are mounted directly at the level measurement point – usually at the top of a vessel with the probe directed downwards in contact with the material product surface. The Ex d housing with control amplifier is intended to be installed in Gb or Db hazardous locations and the "ia" sensing probe in Ga or Da hazardous location. The electronic control amplifier provides intrinsic safety output that supplies the probe, which is an intrinsic safety simple device.

Units are available as a process transmitter with either 2 wire loop power (CGR2) or 4 wire options (CGR4). Intrinsic safety probe is a metallic cylindrical shape which can vary in length and diameter and is connected to the Ex d, tb housing via probe seal and separately certified IECEx cable gland IECEx BAS 06.0013X.

The enclosure is a dual compartment housing 9080 series made of stainless steel or aluminium with epoxy finish and is fitted with electronics and a terminal block. The housing 9080 Series is of a cylindrical shape comprising a base with two covers making threaded joints with the base. One cover is blind metal and another is with a cemented tempered glass window. This enclosure is component certified for d IIC and tb IIIC under IECEx SIR 12.0150U.

The equipment provides two threaded entries (M20x1.5 or M25x1.5 or ¼" NPT or ¾" NPT or ½ BSP) for external connection which can be fitted with suitable certified gland.

CONDITIONS OF CERTIFICATION: YES as shown below:

For Group III application, the aluminium Ex tb housing with epoxy finish has a non-conducting coating and may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue1:
- Inclusion of IEC 60079-26:2014 for Group II application and resulting change of marking.
- Inclusion of IEC 60079-31:2013 for the housing and cable gland and addition of Group III marking.
- Inclusion of Group III assessment for IEC 60079-11:2011 report.
- Condition regarding cable selection is removed due to the reduced maximum power dissipation of 0.9W specified by the manufacturer.
- Um specified in the condition of this certificate issue 0 is now moved to Annex and listed with other electrical safety parameters
- Minor drawing changes which do not affect type of protection.

Annex:

Annex of IECEx TSA 14.0037X-1.pdf

IECEx Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEx TSA 14.0037X	Issue No.:	1

Electrical Safety Parameters

Supply circuit

Um	= 250 V AC.
Un	= 14 V to 28 V DC.
In	= 4 to 20 mA.
Max. power dissipation	= 0.9 W

Surface temperature increases

Electronics enclosure	= ambient temperature + 2.5 K
Sensor Probe	= process/ambient temperature + 2.4 K

Drawing list pertaining to Issue 1 of this Certificate:

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
HAW-S-PCB-HOLDER	1	Plastic PCB Holder	02	2014-10-13
HAW-S-TDR2.5-EXIA-PRB	1	TDR2.5 Ex ia Probe Illustration	07	2016-02-02
HAW-S-TDR2.5-PARTNO-STRUCTURE	1	TDR2.5 Part No Structure Illustration	05	2015-11-25
PCB-CGRa*	4	CENTURION GUIDED RADAR PCB	01	2014-10-13
SCH-CGRa	1	CENTURION GUIDED RADAR CIRCUIT	03	2016-01-21
HAW-S-TDR2.5-Exia	1	TDR 2.5 Probe Ex 'ia'	06	2015-11-25
HAW-S-CGR-EXD-OV	1	CGR Exd Configuration Overview	06	2015-11-24
HAW-S-CGR-X04-SEAL	1	CGR 4mm Probe Seal	01	2015-10-12
HAW-S-CGR-X06-SEAL	1	CGR X06 Probe Seal	01	2015-10-12
HAW-S-CGR-X08-SEAL	1	8MM CGR Probe Seal	01	2015-10-08
HAW-S-LABEL-CGRA	1	CGRa Label	05	2015-11-25
SI0050	16	Safety Instructions - CGR - Zone 0/1	1.9	2016-02-02
SI0051	16	Safety Instructions – CGR –Zone 20/21	1.1	2016-02-02

* drawing unchanged from issue 0 of this certificate.

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