



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.:	IECEx SIR 05.0053U	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 5	Issue 4 (2017-09-05)
Date of Issue:	2023-04-11		Issue 3 (2010-04-21)
			Issue 2 (2008-08-22)
			Issue 1 (2007-04-23)
Applicant:	Dynamet Limited Hermitage Lane Industrial Estate Mansfield Nottingham, NG18 5ER United Kingdom		
Ex Component:	MSH*** and MSH-P *** Gas Sensors		
<i>This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).</i>			
Type of Protection:	Flameproof		
Marking:	MSH *** and MSH-P *** Gas Sensors Ex db I Mb and/or Ex db IIC Gb MSHia *** and MSHia-P *** Gas Sensors Ex db+ia I Ma and/or Ex db IIC Gb		

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Director Operations, UK & Industrial Europe

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom





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Issue No: 5

Manufacturer: **Dynamet Limited**
Hermitage Lane Industrial Estate
Mansfield
Nottingham, NG18 5ER
United Kingdom

Manufacturing locations: **Dynamet Limited**
Hermitage Lane Industrial Estate
Mansfield
Nottingham, NG18 5ER
United Kingdom

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 component 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-26:2014](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/CSAE/ExTR23.0023/00](#)
[GB/SIR/ExTR08.0099/00](#)

[GB/SIR/ExTR06.0002/00](#)
[GB/SIR/ExTR10.0071/00](#)

[GB/SIR/ExTR07.0027/00](#)
[GB/SIR/ExTR17.0179/00](#)

Quality Assessment Report:

[GB/BAS/QAR07.0004/09](#)



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Ex Component(s) covered by this certificate is described below:

The Type MSH*** Gas Sensors are a range of 'plug-in' sensors which may be rated at up to 30 V with a maximum power dissipation of up to 0.8 W. The sensors comprise a small cylindrical enclosure manufactured in stainless steel with integral electrical connection pins at the rear and a stainless steel sinter to facilitate the ingress of the sample gas at the front. The interior of the enclosure comprises a small chamber, which may contain a range of electro-catalytic, infrared or pyroelectric gas detectors, all with energy storage capability no greater than 0.04 mJ.

Design option:

The replacement of the sinter with a two-layer mesh to become a Type MSH-P *** Gas Sensor.

SCHEDULE OF LIMITATIONS:

1. The sensors have been assessed as suitable for use within an ambient temperature range of -20°C to +60°C, whilst producing a maximum external surface rise of 45 K in normal operation.
2. The devices shall be effectively protected from impact.
3. These devices are intended for use at atmospheric pressure and shall not be used in pressures exceeding 1.1 bar.
4. The connection pins shall be protected from dust and moisture by an enclosure with an Ingress Protection rating of at least IP 54 in accordance with IEC 60079-0.
5. The devices shall not be installed or removed when an explosive gas atmosphere is present.
6. The sensor may be supplied with a metallic closing disc around the connection pins. This may need to be considered with respect to creepage and clearance distance when the device is incorporated into equipment.
7. The Type MSHia *** and Type MSHia-P *** shall be supplied by an intrinsically safe supply coded Ex ia with a maximum output voltage of 6.0 Vd.c. and a maximum output power of 0.8 W.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 5, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed 6 was replaced by IEC 60079-0:2017 Ed 7.

Annex:

[IECEX SIR 05.0053U Issue 5 Annexe.pdf](#)

Annexe to: IECEx SIR 05.0053U Issue 5
Applicant: Dynament Limited
Apparatus: MSH*** and MSH-P *** Gas Sensors



Full certificate change history

Issue 1 - this Issue introduced the following changes:

1. The Applicant's name and address was changed:

From:	To:
Status Scientific Controls Ltd	Dynament Limited
Hermitage Lane Industrial Estate	Premier House
Mansfield	The Village
Nottinghamshire NG18 5ERUK	South Normanton
	Derbyshire DE55 2DS
	UK

2. The use of alternative materials for the closing disc through which the connection pins pass, the disc may be manufactured from non-metallic materials having a tracking index greater than CTI 175 or may be manufactured from metal, a special point for noting applies.

Issue 2 - this Issue introduced the following changes:

1. The introduction of the Gas Sensors Type MSHia *** and Type MSHia-P ***, this involves changing the coding for Group I gases and specifying that the devices shall be supplied by an intrinsically safe supply coded or Ex ia having a maximum output voltage of 6.0 V d.c. and a maximum output power of 0.8 W, a special point for noting was introduced.
2. An amendment of the labelling details was recognised.

Issue 3 – this Issue introduced the following change:

1. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest IEC 60079 series of standards, the documents originally listed, IEC 60079-0 : 2004 Ed 4, IEC 60079-1 : 2003 Ed 5 and IEC 60079-26 : 2006 Ed 2, were replaced by those currently listed

Issue 4 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007-10, IEC 60079-1:2007-04 and IEC 60079-26:2006 were replaced by IEC 60079-0:2011, IEC 60079-1:2014 and IEC 60079-26:2014, the markings were updated accordingly to recognise the new standards.
2. The Applicant/Manufacturer's address was changed
From Premier House, The Village, South Normanton, Derbyshire DE55 2DS, UK
To Hermitage Lane Industrial Estate, Mansfield, Nottingham, NG18 5ER United Kingdom.

Issue 5 – this Issue introduced the following change:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed 6 was replaced by IEC 60079-0:2017 Ed 7.