

## 1 EU - Type Examination Certificate

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **ExVeritas 19 ATEX 0477X** Issue: **1**

4 Equipment: **MSD2 Micro-set Sphere Detector**

5 Manufacturer: **HALL Engineering Services Ltd.**

6 Address: **Hall House, Hayfield Close, Dronfield, Derbyshire, S18 8RP, United Kingdom**

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

**EN IEC 60079-0:2018**

**EN 60079-1:2014**

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

 II 2 G Ex db IIC T6 Gb  $T_a$  -40°C to +75°C

On behalf of ExVeritas



Peter Lauritzen  
Managing Director

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## Schedule

### 13 Description of Equipment or Protective System

The MSD2 Micro-Set Sphere Detector comprises a detector tube containing an encapsulated reed switch, which is rated up to 2A at 250VDC. The detector tube is fitted into a housing, referred to as a top housing, which is itself mounted to a separate housing which is comprised of three main components: a lower detector housing, detector plunger, and spring. These three parts are non-electrical components employed to facilitate the mounting of the detector and do not form part of the protection of the equipment.

The lower detector housing is fitted to the associated pipe wall and the top housing, containing the detector tube, sits in the detector plunger. The movement of detector plunger over the detector tube operates the reed switch. The lower and top housings are secured together by two M8 x 25 hexagonal socket head screws. The top housing must be fitted to a suitably approved Ex d terminal enclosure via the M25 threaded section of the top housing.

#### 13.1 Details of change

The following changes are introduced in issue 1 of the certificate:

- Transfer of the certificate from ExVeritas UK, Notified Body number 2585 to ExVeritas Denmark, Notified Body number 2804. Certificate number remains unchanged.

### 14 Descriptive Documents

#### 14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2009/B/1	2019-06-05	0	Initial issue of the Prime Certificate
R3139/A/1	2021-02-12	1	Issue of the first variation, see section 13.1

#### 14.2 Compliance Drawings:

##### Issue 0

Title:	Drawing No.:	Rev. Level:	Date:
Microset Detector Label Detail Top Housing	D 1234	2	2019-05
Hall Engineering Micro-set Label Detail	D1349	7A	2019-05
Microset Detector Standard Model Sectional Arrangement	B1192	6	2003-06
Microset Detector Standard Model Exploded Assembly	D1757	1	2003-06
Pre-Assembly Details of Flameproof Sphere Detector "Micro-Set"	9691	K	2003-05-12
Micro-set Meter Prover Sphere Detector IOM Manual (8 pages)	HES-MSD2-IOM-R0	-	2019

- Denotes no information provided

##### Issue 1

Title:	Drawing No.:	Rev. Level:	Date:
Microset Detector Label Detail Top Housing	D 1234	3	2021-01
Hall Engineering Micro-set Label Detail	D1349	8	2021-01
Microset Detector Standard Model Sectional Arrangement	B1192	6	2003-06
Microset Detector Standard Model Exploded Assembly	D1757	1	2003-06
Pre-Assembly Details of Flameproof Sphere Detector "Micro-Set"	9691	K	2003-05-12
Micro-set Meter Prover Sphere Detector IOM Manual (8 pages)	HES-MSD2-IOM-R1	-	2021

- Denotes no information provided

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### 15 Conditions of Certification

#### 15.1 Special Conditions for Safe Use

1. The sensor must be mounted to a suitably approved earthed metallic Ex db IIB Gb rated flameproof enclosure to facilitate connection of the sensor flying leads.
2. Under the scope of this approval the equipment has been subjected to Overpressure testing at a test pressure of 30 bar.
3. No repairs are permitted to the M25 threaded flameproof joint (external thread).

#### 15.2 Conditions for Use (Routine tests)

None

### 16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1.

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

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**Issue 1**

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