



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 13ATEX2261X** Issue: **0**

4 Equipment: **Micro Motion Specific Gravity Meter (SGM) and  
Micro Motion Gas Density Meter (GDM)**

5 Applicant: **Mobrey Ltd**

6 Address: **158 Edinburgh Avenue  
Slough, SL1 4UE  
United Kingdom**

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012      EN 60079-11:2012      EN 13463-1: 2009      EN 13463-5:2011

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

	II 2G c T6 Ex ia IIC T6 Gb	Micro Motion Specific Gravity Meter (SGM): SGM3*****3Z*
	II 2G Ex ia IIC Tj Gb	Micro Motion Gas Density Meter (GDM): GDM*****3Z*
	II 2G c T4 Ex ia IIC T4 Gb	Micro Motion Specific Gravity Meter (SGM): SGM3*****2Z*
	II 2 G Ex ia IIC T4 Gb	Micro Motion Gas Density Meter (GDM): GDM*****2Z*

j The temperature class is dependent on the maximum process temperature as outlined in Special Conditions For Safe Use 15.2

Project Number 29300

P J Walsh  
Technical Advisor

This certificate and its schedules may only be reproduced in its entirety and without change.

**Sira Certification Service**

Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900  
Fax: +44 (0) 1244 681330  
Email: [info@siracertification.com](mailto:info@siracertification.com)  
Web: [www.siracertification.com](http://www.siracertification.com)



## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

Sira 13ATEX2261X  
Issue 0

#### 13 DESCRIPTION OF EQUIPMENT

The Micro Motion Specific Gravity Meter (SGM) and the Micro Motion Gas Density Meter (GDM) comprise of a transmitter and a sensor used for the measurement of fluid density and/or viscosity and to create I/O signals from data transmission. The transmitter and sensor together form a density/viscosity meter.

The GDM consists of the transmitter and the sensor while the SGM consists of the GDM surrounded by an aluminium gas reference chamber of fixed volume that is initially pressurized with the gas intended for measurement. The SGM and the GDM devices are both available with an optional display module. A more detailed list of specifications, methods of operation and an assessment for mechanical hazards can be found under Report R29300A.

The SGM/GDM transmitter has the following entity parameters:

Input		Power supply (connector J1)	mA output with HART (connector J2)	Configurable output (Connector J3)	RS485 communication port (connector J5)	
					Barrier Type 1	Barrier Type 2
Voltage	Ui (Vdc)	30	30	30	18	17.22
Current	Ii (mA)	484	484	484	100	484
Power	Pi (W)	2.05	2.05	2.05	-	-
Max. internal capacitance	Ci (pF)	0	0	0	1000	1000
Max. internal inductance	Li (µH)	0	0	0	0	0
Output						
Voltage	Uo (Vdc)	-	-	-	9.51	9.51
Current	Io (mA)	-	-	-	480	480
Power	Po (W)	-	-	-	0.786	0.786
Max. external capacitance	Co (pF)	-	-	-	85000	85000
Max. external inductance	Lo (µH)	-	-	-	154	25

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	15 August 2013	R29300B/00	The release of the prime certificate.

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 13ATEX2261X  
Issue 0

- 15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)
  - 15.1 The SGM equipment is suitable to withstand a low energy of impact only prescribed in EN 13463-1:2001: Clause 8.4.1, additional protection shall be provided to ensure that it cannot be subjected to mechanical stresses.
  - 15.2 The temperature class is defined by the ambient and process temperature as shown in the charts below.

Specific Gas Density Meter (SGM):

Model SGM3\*\*\*\*\*3Z\*

Temperature class	Ambient temperature	Process temperature
T6	-18°C to +65°C	-18°C to +65°C

Model SGM3\*\*\*\*\*2Z\*

Temperature class	Ambient temperature	Process temperature
T4	-18°C to +65°C	-18°C to +65°C

Gas Density Meter (GDM):

Model GDM\*\*\*\*\*3Z\*

Temperature class	Ambient temperature (Ta)	Process temperature (Tp)
T6	-40°C to +**°C	-40°C to +80°C
T5	-40°C to +**°C	-40°C to +95°C
T4	-40°C to +**°C	-40°C to +125°C

Model GDM\*\*\*\*\*2Z\*

Temperature class	Ambient temperature (Ta)	Process temperature (Tp)
T4	-40°C to +**°C	-40°C to +125°C

\*\*Refer to the formula below.

If  $T_p \leq 65^\circ\text{C}$ ,  $T_a \text{ max} = 65^\circ\text{C}$ .

If  $T_p > 65^\circ\text{C}$ ,  $T_a \text{ max} = -0.161 (T_p - 65^\circ\text{C}) + 65^\circ\text{C}$

- 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)
 

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.



## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

Sira 13ATEX2261X  
Issue 0

#### 17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The equipment incorporates a previously certified transmitter for the Micro Motion Specific Gravity Meter (SGM) or the Gas Density Meter (GDM) under IECEx BVS 13.0009X. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device, and the manufacturer shall inform Sira of any modifications of the device that may impinge upon the explosion safety design of the product.
- 17.4 It is the manufacturer's responsibility to ensure all the relevant routine test requirements as required under the Pressure Equipment Directive (97/23/EC) are complied with.

This certificate and its schedules may only be reproduced in its entirety and without change.

# Certificate Annexe

Certificate Number: Sira 13ATEX2261X  
Equipment: Micro Motion Specific Gravity Meter (SGM)  
and Micro Motion Gas Density Meter (GDM)  
Applicant: Mobrey Ltd



## Issue 0

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
30985039	1 to 2	02	14 Aug 13	SGM GA
30985029	1 to 3	05	14 Aug 13	SGM Marking
78125052	1 to 3	01	14 Aug 13	GDM GA
78125046	1 to 3	04	14 Aug 13	GDM Marking
78125053	1 of 1	01	14 Aug 13	SGM/GDM Wiring Connections

This certificate and its schedules may only be reproduced in its entirety and without change.