



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 06ATEX1115X** Issue: **8**

4 Equipment: **Mobrey S18\*\* Range of Flameproof Horizontal Float Switches**

5 Applicant: **Delta Mobrey Limited**

6 Address: Riverside Business Park  
Dogflud Way  
Farnham  
Surrey, GU9 7SS 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 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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/A11:2013      EN 60079-1:2014      EN 60079-26:2015      EN 13463-1:2009

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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:

**Submerged in vented tank application**



II 2 G  
Ex db IIC T6 Gb  
(-20°C ≤ Ta ≤ +60°C)

**Outside tank mounted application**



II 1/2 G  
Ex db IIC T6...T2\* Ga/Gb  
(-20°C ≤ Ta ≤ +60°C)

\* The temperature class depends upon the process temperature, see special condition for safe use.

Project Number 0748

Signed:

Title: Director of Operations

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Utrechtseweg 310,  
6812 AR, Arnhem,  
Netherlands



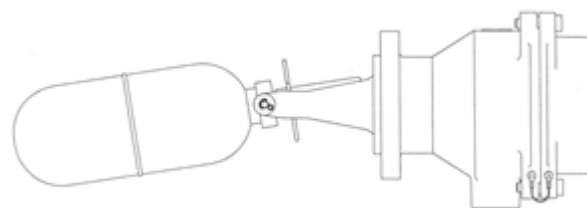
**SCHEDULE**

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**13 DESCRIPTION OF EQUIPMENT**

The S18\*\* Range of Flameproof Horizontal Float Switches, as detailed in Figure 1, are manufactured from aluminium bronze. They comprise a cylindrical two-part enclosure that consists of a base and a spigoted cover that is secured by three, M6 x 1.0, hexagon socket head cap screws. The enclosure contains a microswitch based switching mechanism, with an integral permanent magnet. The S18\*\* Switches are intended to monitor liquid level inside a vessel to which the enclosure base has a circular flange plate, rated to 18 bar, to facilitate installation. There is a boss on the base side-wall, this contains a female, M20 x 1.5, threaded hole that accommodates a suitable, cable entry device.



**Fig. 1: S18\*\* Flameproof Horizontal Float Switch**

Below the flange plate, there is a fork arrangement that supports a float assembly. The float assembly contains a permanent magnet, which interacts with the magnet inside the enclosure to detect the change in liquid level.

**Design Options**

- The enclosure may be manufactured from gunmetal or stainless steel.
- The wet side faces of the fork flange may be coated in PTFE or similar material.
- Alternative flange plate forms may be used.
- Alternative float assemblies may be used.
- Alternative microswitches, as detailed below, may be used:

Mechanism Type	D	D6	P	P6
<b>Contact Material</b>	Silver	Silver	Gold Plate	Gold Plate
<b>Medium Temperature</b>	-30°C to +400°C		-100°C to +250°C	
<b>Insulation Value</b>	(live to earth) > 100 MΩ			
<b>Terminals</b>	M4 Screw	6 Way Block	M4 Screw	6 Way Block

Rating	AC	DC Inductive	DC Resistive
<b>Max Voltage V</b>	440	240	240
<b>Max Current A</b>	5*	1	2
<b>Max Power</b>	2000 VA	35 W	70 W
<b>Power Factor</b>	0.4 min.	-	-
<b>Time Constant</b>	-	40 ms max.	-

\* Below 210°C the maximum current is 8 A

**Note P & P6 Types:** The plating of gold contact switches may be permanently damaged if these mechanisms are used to switch circuits above the following limits:

DC Inductive	DC Resistive
24 V 2 mH/200 mA	300 V 12 mA
24 V 750 mH/10 mA	24 V 250 mA



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**Variation 1** - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents previously listed in section 9, EN 60079-0:2004, EN 60079-1:2004, EN 60079-26:2004 and EN 13463-1:2001, were replaced by those currently listed, the markings in section 12 were updated accordingly.

**Variation 2** - This variation introduced the following changes:

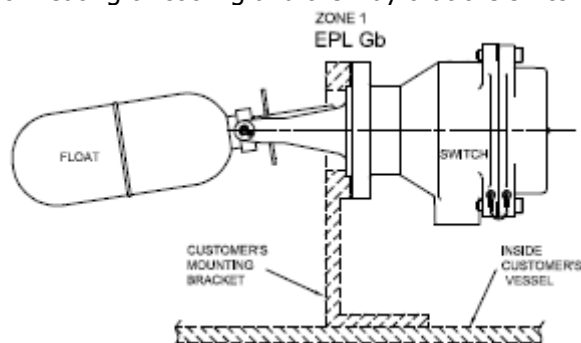
- i. The Type Identification/Part Number structure was changed, this was recognised on the associated label drawing which was reviewed and the notes on this drawing was clarified as required. The title of the certificate and the product description were amended to accommodate this change.

**Variation 3** - This variation introduced the following change:

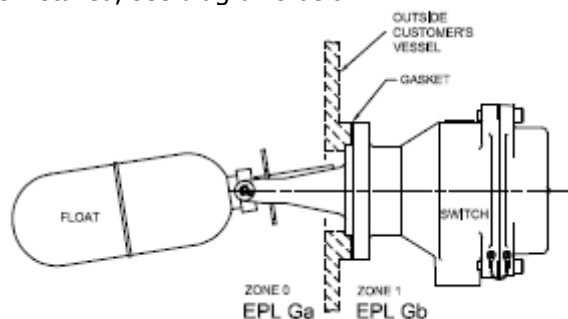
- i. The Applicant's name was changed from Mobrey Limited to Rosemount Measurement Limited, the address is unchanged.

**Variation 4** - This variation introduced the following change:

- i. To permit the removal of gunmetal as a material of manufacture.
- ii. The Product Marking was reviewed and revised to take into account ratings of the external source of heating or cooling and the way that the switches are installed, see diagrams below:



**Submerged in vented application (II 2G)**



**Outside tank mounted application (II 1/2G)**

- iii. Minor changes made to drawings 71097/1171 and 71097/1172 were recognised.
- iv. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2009 and EN 60079-26:2007 were replaced by EN 60079-0:2012/A11:2013 and IEC 60079-26:2014 respectively.

**Variation 5** - This variation introduced the following change:

- i. To permit the use of alternate stainless steel drive screws for securing the product name plate.
- ii. The introduction of Nickel or Tin plating to the external component surfaces of components manufactured from aluminium bronze.
- iii. The external component surfaces of the 'DRY' side of the float switches may be optionally be supplied with a paint coating. Requiring a Condition of Manufacture to be introduced.
- iv. The existing scheduled drawings were reviewed and rationalised, replacing all previous scheduled drawings documented.



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- v. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-1:2007 and IEC 60079-26:2014 was replaced by EN 60079-1:2014 and EN 60079-26:2015, the markings were updated accordingly. In addition a Specific Condition of Use was introduced

**Variation 6** - This variation introduced the following change:

- i. The Applicant's name and address were changed from Rosemount Measurement Limited, 158 Edinburgh Avenue, Slough, Berkshire SL1 4UE, United Kingdom to Delta Mobrey Limited, Riverside Business Park, Dogflud Way, Farnham, Surrey, GU9 7SS, United Kingdom.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	03 August 2006	R51A14409A	The release of the prime certificate.
1	12 September 2006	R51A14409B	Re-issued to allow Report R51A14409B to replace R51A14409A
2	26 July 2011	R24918A/00	This Issue covers the following changes: <ul style="list-style-type: none"><li>All previously issued certification was rationalised into a single certificate, Issue 2, Issues 0 to 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li><li>The introduction of Variation 1.</li></ul>
3	3 June 2013	R30307A/00	The introduction of Variation 2.
4	26 September 2014	R70011346A	The introduction of Variation 3.
5	14 April 2016	R70055264A	The introduction of Variation 4.
6	28 September 2017	R70136446A	This Issue covers the following changes: <ul style="list-style-type: none"><li>EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li><li>The introduction of Variation 5.</li></ul>
7	03 September 2019	R80014446A	The introduction of Variation 6
8	15 <sup>th</sup> October 2019	0748	<ul style="list-style-type: none"><li>Transfer of certificate <b>Sira 06ATEX1115X</b> from Sira Certification Service to CSA Group Netherlands B.V..</li></ul>

## 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

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- 15.1 The float and mounting flange surface can be made from non-metallic materials as required by the user; therefore the user shall ensure that the material used is suitable for the application and is not ignition capable (i.e. due to static electricity).
- 15.2 The user/installer shall ensure that the float mechanism is installed in such a way as to prevent any damage due to impact or ignition source due to friction.
- 15.3 The temperature class is defined by the appropriate ambient temperature and process temperature as stated in the table below:

T Class	Outside tank mounted application		Submerged in vented tank application
	Ambient temperature	Process Temperature	Ambient temperature
T6	-20°C to +60°C	-30°C to +80°C	-20°C to +60°C
T5	-20°C to +60°C	-30°C to +95°C	
T4	-20°C to +60°C	-30°C to +130°C	
T3	-20°C to +60°C	-30°C to +195°C	
T2	-20°C to +60°C	-30°C to +210°C	

- 15.4 The materials used in the construction of the equipment contains levels of aluminium that are greater than that allowed for EPL Ga by clause 8.3 of EN 60079-0, therefore in rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when this equipment is being used/installed in a hazardous area.
- 15.5 No maintenance or repair of the flameproof enclosure is permitted.
- 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

# Certificate Annexe



**Certificate Number:** Sira 06ATEX1115X

**Equipment:** Mobrey S18\*\* Range of Flameproof Switches

**Applicant:** Delta Mobrey Limited

**Issue 0** The drawings listed with these Issues were rationalised and have been superseded by those detailed in Issue1

## Issue 1

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
71097/1171	1 of 1	2	18 Jul 06	Level Switch Head (Submersible Ex d ATEX)
71097/1172	1 of 1	3	05 Jun 06	Flameproof Switch Head Markings

## Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
71097/1171	1 of 1	3	26 Jul 11	Level Switch Head
71097/1172	1 of 1	4	26 Jul 11	Flameproof Switch Head Markings

## Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
71097/1172	1 of 1	5	07 May 13	Flameproof Switch Head Markings

## Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
71097/1356	1 of 1	01	23 Sep 14	Generic nameplate

## Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
71097/1171	1 of 1	AE	01 Mar 16	Level Switch Head
71097/1172	1 of 1	AG	01 Mar 16	Flameproof Switch Head Markings

## Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
71097/1171	1 of 1	AG	08 Sep 17	Level Switch Head
71097/1172	1 of 1	AH	06 Sep 17	Flameproof Switch Head Markings

Note – the drawings documented in Issue 6 replace all previous scheduled drawings.

## Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
71097/1406*	1 of 1	AA	22 Aug 19	Generic nameplate

\*This drawing replaces the existing generic nameplate drawing 71097/1356, which is now obsolete.

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