



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 03ATEX2153X** Issue: **5**

4 Equipment: **MLT100 Level Transmitter**

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 50014:1997 plus amendments A1 and A2 EN 50020:2002 EN 50284:1999

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:



II 1 G
II 1 D (T90°C)
EEx ia IIC T5 (T_a = -40°C to +40°C)
EEx ia IIC T4 (T_a = -40°C to +80°C)

Project Number 1798

Signed:

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Type MLT100 Intrinsically Safe Level Transmitter is a loop-powered microprocessor-based device designed to provide a 4-20 mA output signal proportional to the level of a liquid in a vessel. The equipment consists of a transformer and an encapsulated printed circuit board housed in a metallic enclosure. There is facility for an optional second metallic enclosure, with a glass window to enable an optional display module to be viewed, connected to the main enclosure via a short coupling. There is facility for either the main enclosure or the second enclosure to be fitted with an optional programming plug. The displacer element is designed to be suspended below the main enclosure and is attached via a spring.

A programming/calibration plug consisting of two banana-type connectors is located in the main unit. This is designed for connection to a suitably-certified milliammeter, to allow measurement of the current for calibration purposes and in-situ checking of function.

The equipment has the following safety description:

| Input parameters | | | Output parameters at the programming/calibration connector | | |
|------------------|---|---------|--|---|---------------|
| U_i | = | 28 Vdc | U_o | = | 18 Vdc |
| I_i | = | 93 mA | I_o | = | 93 mA |
| P_i | = | 0.66 W | P_o | = | 0.44 W |
| C_i | = | 48 nF | C_o | = | 0.309 μ F |
| L_i | = | 0.22 mH | L_o | = | 4.2 mH |

The type code of the equipment is

LT-a-bb-TS-c-d-e-f-g-hh-ii

- where a = material
- bb = top flange size
- TS = intrinsically safe protection
- c = pressure tube
- d = display
- e = spring
- f = displacer
- g = chamber style
- hh = process connections
- ii = factory-allocated special number

Variation 1- This variation introduced the following change:

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

Variation 2 - This variation introduced the following change:

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



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Variation 3 - 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.

Variation 4 - This variation introduced the following change:

- i. Changes to the PCB, component values and alternative potting material.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

| Issue | Date | Report number | Comment |
|-------|-------------------|---------------|--|
| 0 | 23 October 2003 | R52A9228A. | The release of the prime certificate. |
| 1 | 08 March 2006 | VR51A13857A | The introduction of Variation 1. |
| 2 | 24 September 2014 | R70011346A | This Issue covers the following changes: <ul style="list-style-type: none"> • 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. • The introduction of Variation 2. |
| 3 | 03 September 2019 | R80014446A | This Issue covers the following changes: <ul style="list-style-type: none"> • 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> The introduction of Variation 3. |
| 4 | 23 September 2019 | R80010321A | The introduction of Variation 4 |
| 5 | 15 October 2019 | 1798 | <ul style="list-style-type: none"> • Transfer of certificate Sira 03ATEX2153X from Sira Certification Service to CSA Group Netherlands B.V.. |

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

- 15.1 The enclosure may be manufactured from alloys containing light metals. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when the equipment is installed in locations that specifically require group II, category 1G equipment.

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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 03ATEX2153X

Equipment: MLT100 Level Transmitter

Applicant: Delta Mobrey Limited

Issue 0

| Drawing No. | Sheet | Rev. | Date | Title |
|-------------|--------|------|-----------|---------------------|
| 71097/946 | 1 of 1 | 7 | 26 Nov 02 | LVDT/core assembly |
| 71097/949 | 1 of 1 | 7 | 08 Oct 03 | Potting details |
| 71097/1039 | 1 of 1 | 2 | 28 Jul 03 | General arrangement |
| 71097/1040 | 1 of 1 | 3 | 08 Oct 03 | Label |
| 71097/1066 | 1 of 1 | 2 | 08 Oct 03 | Schematic |
| 71097/1067 | 1 of 1 | 2 | 08 Oct 03 | Artwork |

Issue 1 No new drawings were introduced.

Issue 2

| Drawing No. | Sheets | Rev. | Date (Sira stamp) | Description |
|-------------|--------|------|-------------------|-------------------|
| 71097/1356 | 1 of 1 | 01 | 23 Sep 14 | Generic nameplate |

Issue 3

| 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.

Issue 4

| Drawing | Sheets | Rev. | Date (Sira stamp) | Description |
|------------|--------|------|-------------------|--|
| 71097/949 | 1 of 1 | AH | 30 Aug 19 | MLT100 PCB Potting Assembly IS |
| 71097/1400 | 1 of 1 | AA | 30 Aug 19 | MLT100 Circuit Diagram, alternative to 71097/1066 |
| 71097/1401 | 1 of 1 | AA | 30 Aug 19 | MLT100 PCB Assembly IS, alternative to 71097/1067 |

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