



UNITED KINGDOM CONFORMITY ASSESSMENT

1 **UK TYPE EXAMINATION CERTIFICATE**

2 Equipment Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: **CSAE 21UKEX1616X** Issue: **0**

4 Product: **Mobrey Flameproof Vertical Level Controls (series B, D & X)**

5 Manufacturer: **Delta Mobrey Limited**

6 Address: **Riverside Business Park
Dogflud Way
Farnham
Surrey, GU9 7SS
United Kingdom.**

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

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. 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 has been assured by compliance with:


EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-26:2015

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

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

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:

 II 1/2G
Ex db IIC T6...T1 Ga/Gb
Ta = -50°C to +60°C

Name: Michelle Halliwell
Title: Director of Operations



SCHEDULE

UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1616X
Issue 0**

13 DESCRIPTION OF PRODUCT

The Type Flameproof Vertical Level Controls (Series B, D & X) consist of either a stainless steel, cast iron or aluminium housing having a high or low domed threaded cover. The interface between the housing and cover forms an M160 x 2 threaded flamepath; this is further secured by an M5 x 10 socket-head set screw. The product can contain up to four, 2 pole or up to two, 4 pole switches rated at up to 440 Vac, 2000 VA maximum or 250 Vdc, 50 W maximum and associated terminals.

The enclosure contains a pressure tube, rated up to 102 bar, swaged and welded to a mounting bush which passes through the enclosure base wall by means of a cylindrical joint. The bush is secured in place by a circlip within the enclosure. Magnetically operated switches with associated terminals and optional line monitoring resistors are clamped to the pressure tube and are activated by magnet assemblies contained within the pressure tube, which rise and fall with the liquid level via rod linkages to an associated float.

Design options

- Multiple mounting flanges, these are outside the flameproof envelope and thus do not directly affect the products flameproof characteristics. All options are detailed in the product instruction manual.
- Multiple internal types of switch as detailed in the table below:

Type	AC max values			DC max values			
	VA	volts	Amps	Watts	volts	Res Amps	Ind Amps
D4, D8	2000	440	5	50	250	5	0.5
X4, X8	2000	440	10	50	250	10	0.5
P4, P8	6	250	0.25	3.6	250	0.25	0.1
H4, H8	2000	440	10	50	250	10	0.5

- Multiple float mechanisms, these are outside the flameproof envelope and thus do not directly affect the products flameproof characteristics. All options are detailed in the product instruction manual.
- The product may be fitted with up to 8 line monitoring wirewound resistors with a maximum rating of 2.5 W de-rated to 0.83 W maximum each.

The product description includes the following applicable amendments, only amendments directly applicable to UKCA certification have been included in this list.

The amendments are numbered to include a reference to the previous ATEX variation at which these were introduced.

- 1a Minor machining detail changes were endorsed.
- 1b The drawing text was modified to replace material trademark names with standard designations.
- 1c The option to make the partition wall from a metal alloy that is not corrosion resistant was removed.
- 2a The Type Identification/Part Number structure was changed, this was recognised on the associated label drawings which were reviewed and the notes on these drawings were clarified as required. The title of the certificate and the product description were amended to accommodate this change.
- 4a To permit the removal of gunmetal as a material of manufacture.

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE

**CSAE 21UKEX1616X
Issue 0**

4b The inclusion of the ratings of the external source of heating or cooling in the Special Conditions for Safe Use in the certificate.

4c To permit the introduction of an optional external coating on the enclosure.

4d Assessment of minor changes made to drawings 71097/982, 71097/1048 and 71097/1049.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	10 March 2022	R80097232A	The release of the prime certificate.

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

15.1 The floats 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 When coated with a non-standard paint the enclosure is non-conducting and may generate an ignition capable level of electrostatic charges under extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

15.3 The minimum length of the cylindrical non-threaded joint between the pressure tube union and the enclosure is greater than the relevant minimum required by Table 3 of EN 60079-1:2014; therefore, for information on the dimensions of the flameproof joints the original manufacturer shall be contacted.

15.4 The temperature class is defined by the appropriate ambient temperature and process temperature as stated in the table below:

T Class	Process Temperature
T6	-50°C to +80°C
T5	-50°C to +95°C
T4	-50°C to +130°C
T3	-50°C to +195°C
T2	-50°C to +290°C
T1	-50°C to +400°C

SCHEDULE**UK TYPE EXAMINATION CERTIFICATE****CSAE 21UKEX1616X
Issue 0****16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)**

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 PRODUCTION CONTROL

- 17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders.
- 17.2 Each enclosure partition wall (the pressure tube assembly) shall be subjected to a type overpressure test, equal to $1.5 \times P_{RATED}$ at 20°C, applied for 60 s without any visible leakage or damage to the enclosure. Where P_{RATED} is the maximum process pressure of the equipment.
- 17.3 When the user/installer has specified that the float and mounting flange surface should be made from non-metallic material, then the manufacturer shall advise them about the possibility of the build-up of electrostatic charge on such surfaces, including the precautions that are necessary in order to avoid the occurrence of dangerous electrostatic discharges e.g. Do not rub with a dry cloth.
- 17.4 The product instructions shall ensure that the float mechanism is installed in such a way to prevent any damage due to impact or ignition source due to friction.
- 17.5 The manufacturer shall ensure that the appropriate label including the warning, **WARNING ALLOW 4 MINUTES AFTER ISOLATION BEFORE REMOVING COVER**, is fitted when the product is fitted with end of line resistors. In addition, the selection of cable must be dealt with in the instructions to ensure the appropriate temperature rated cable is used by the installer.



Certificate Annexe

Certificate Number: CSAE 21UKEX1616X
Product: Mobrey Flameproof Vertical Level Controls (series B, D & X)
Manufacturer: Delta Mobrey Limited

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
71097/982	1 of 1	AE	29 Feb 16	Flameproof Liquid Level Controls Type B, D & X.
71907/1048	1 of 1	AH	02 Mar 16	Flameproof Level Control Marking
71907/1049	1 of 1	AF	02 Mar 16	Line Monitoring Resistors in Flameproof Level Controls
71097/VD/001	1 to 3	A	07 Feb 22	Vertical Level Switch Series UKCA Ex Markings



**UKUK
CANI**