1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 19ATEX1145X** Issue: **0**

4 Equipment: **MLT Series Magnetostrictive Level Transmitter**

5 Applicant: **Dandong Top Electronics Instrument (Group) Co., Ltd**

6 Address: No.10 Huanghai Street
Zhenxing District
Dandong City
Liaoning Province, 118000
China

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 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 IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012

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 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 1G
Ex ia IIC T5/T4 Ga
Ta = -40°C to 70°C

II 2G
Ex db IIC T3...T6 Gb
Ta = -40°C to 60°C/70°C/80°C

Project Number 70193549

Signed: N Jones

Title: Certification Manager

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Unit 6 Hawarden Industrial Park
Hawarden, CH5 3US, United Kingdom

SCHEDULE

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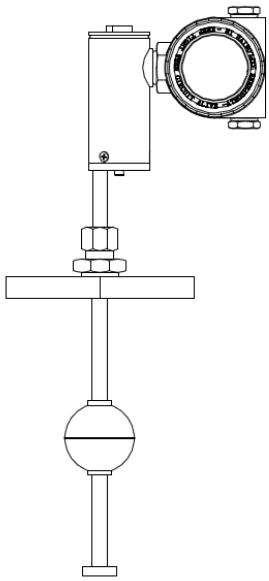
13 **DESCRIPTION OF EQUIPMENT**

The MLT series Magnetostrictive Level Transmitter is assembled with 0.2 to 3.5m probe rod and a transmitter with 10mm thick glass window for cemented joints. It is designed for two types of protection: Flameproof and Intrinsic safety.

There are two independent flame proof chambers separated by a cemented construction and a thread joint between transmitter and probe rod, there are two cable entries with Spec. M20x1.5 in the transmitter. It should be installed an M20x1.5 certified cable gland, stopping plug or conduit fitting with suitable IP code.



There are eight printed circuit boards in the product: power terminal board, main board, measure module board, power module board, LCD board, fixed board, measure board and sensor board which are designed as intrinsically safe.

The entity parameters for the product are:

Input Parameters	
Terminals: +, -	
Ui	30Vdc
Ii	93mA
Pi	0.66W
Ci	0µF
Li	0µH

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	26 May 2020	R70193549A	The release of the prime certificate.

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

15.1 Install only as per installation control drawing MLTN.ISCD.

15.2 Temperature code depends on process temperature as follows:

For Ex ia:

T-code	Ambient Temperature	Process Temperature
T4	-40 to 70°C	-40 to 125°C
T5	-40 to 70°C	-40 to 90°C

For Ex db:

T-code	Ambient Temperature	Process Temperature
T6	-40 to 60°C	-40 to 75°C
T5	-40 to 70°C	-40 to 90°C
T4	-40 to 80°C	-40 to 125°C
T3	-40 to 80°C	-40 to 185°C

15.3 The transmitter enclosure is manufactured from ADC12 aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.

15.4 The equipment has flameproof joints, which differ from those in EN 60079-1, when maintaining the flameproof joints, manufacturer shall be contacted for guidance.

15.5 The end user should choose suitable cable in the final installation when ambient temperature is larger than 70°C and process temperature is larger than 90°C, detailed information refers to equipment instructions.

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.

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Certificate Annexe

Certificate Number: **Sira 19ATEX1145X**

Equipment: **MLT Series Magnetostrictive Level Transmitter**

Applicant: **Dandong Top Electronics Instrument (Group) Co., Ltd**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
MLTN.1(All)	1 of 1	V1.0	10 Mar 20	Magnetostrictive Level Transmitter
MLTN.1	1 of 1	V1.0	10 Mar 20	Magnetostrictive Level Transmitter
MLTN.1.1	1 of 1	V1.0	10 Mar 20	Probe rod component
MLTN.1.1-1	1 of 1	V1.0	10 Mar 20	Instrument shell base
MLTN.1.3	1 of 1	V1.0	10 Mar 20	Instrument shell
MLTN.1.3-2	1 of 1	V1.0	10 Mar 20	Connecting piece
MLTN.1.4	1 of 1	V1.0	10 Mar 20	Instrument Cover Component
MLTN.1.4-1	1 of 1	V1.0	10 Mar 20	Instrument cover
MLTN.1.5	1 of 1	V1.0	10 Mar 20	Connection chamber component
MLTN.1.5-1	1 of 1	V1.0	10 Mar 20	Over wire connector
MLTN.1.6	1 of 1	V1.0	10 Mar 20	LCD instrument header component
MLTN.1-2	1 of 1	V1.0	10 Mar 20	Nameplate
MLTN.1-3	1 of 1	V1.0	10 Mar 20	Nut
MLTN.1A.4.2-Frame	1 of 1	1.0	09 Mar 20	MLT Frame Diagram
MLTN.1.6.1	1 of 1	V1.0	09 Mar 20	Main board
MLTN.1.2	1 of 1	V1.0	09 Mar 20	Measure board component
MLTN.ISCD	1 of 1	1.0	09 Mar 20	Intrinsic Safety Control Drawing For Magnetostrictive Level Transmitter
UHC-Bb.Z.3.3	1 of 1	V1.0	24 Oct 19	LCD
UHC-Bb.Z.3.3-2	1 of 1	V1.0	24 Oct 19	LCD wiring harness
MLTN.1.2.2	1 of 1	V1.0	09 Mar 20	Coil block
UHC-Bb.Z.3.1.1-SCH	1 of 1	1.0	09 Mar 20	Power terminal board schematic
UHC-Bb.Z.3.1.1	1 of 1	V1.0	09 Mar 20	Bill of Materials-Power terminal board
UHC-Bb.Z.3.1.1-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
UHC-Bb.Z.3.1.1TO	2 of 4	V1.0	09 Mar 20	Top layer component
UHC-Bb.Z.3.1.1-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
UHC-Bb.Z.3.1.1BO	4 of 4	V1.0	09 Mar 20	Bottom layer component
MLTN.1.6.1.1-SCH	1 of 1	1.0	09 Mar 20	Main board schematic
MLTN.1.6.1.1	1 of 1	V1.0	09 Mar 20	Main board BOM
MLTN.1.6.1.1-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
MLTN.1.6.1.1TO	2 of 4	V1.0	09 Mar 20	Top layer component
MLTN.1.6.1.1-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
MLTN.1.6.1.1BO	4 of 4	V1.0	09 Mar 20	Bottom layer component
UHC-Bb.Z.3.2.1-SCH	1 of 1	V1.0	24 Oct 19	Power module –M302
UHC-Bb.Z.3.2.1	1 of 1	V1.0	24 Oct 19	Power Module Bill of Materials
UHC-Bb.Z.3.2.1-1TL	1 of 4	V1.0	24 Oct 19	Top layer copper
UHC-Bb.Z.3.2.1TO	2 of 4	V1.0	24 Oct 19	Top layer component
UHC-Bb.Z.3.2.1-1BL	3 of 4	V1.0	24 Oct 19	Bottom layer copper
UHC-Bb.Z.3.2.1BO	4 of 4	V1.0	24 Oct 19	Bottom layer component
UHC-Bb.Z.3.2.2-SCH	1 of 1	V1.0	24 Oct 19	Measure module –M301
UHC-Bb.Z.3.2.2	1 of 1	V1.0	24 Oct 19	Bill of Materials-Measure module
UHC-Bb.Z.3.2.2-1TL	1 of 6	V1.0	24 Oct 19	Top layer copper
UHC-Bb.Z.3.2.2TS	2 of 6	V1.0	24 Oct 19	Top layer component
UHC-Bb.Z.3.2.2-1BL	3 of 6	V1.0	24 Oct 19	Bottom layer copper

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Certificate Annexe

Certificate Number: **Sira 19ATEX1145X**

Equipment: **MLT Series Magnetostrictive Level Transmitter**

Applicant: **Dandong Top Electronics Instrument (Group) Co., Ltd**

Drawing	Sheets	Rev.	Date (Stamp)	Title
UHC-Bb.Z.3.2.2BS	4 of 6	V1.0	24 Oct 19	Bottom layer component
UHC-Bb.Z.3.2.2-1AL	5 of 6	V1.0	24 Oct 19	Analog layer layout
UHC-Bb.Z.3.2.2-1DL	6 of 6	V1.0	24 Oct 19	Digital layer layout
UHC-Bb.Z.3.3.1-SCH	1 of 1	V1.0	24 Oct 19	LCD board schematic
UHC-Bb.Z.3.3.1	1 of 1	v1.0	24 Oct 19	Bill of Materials-LCD board
UHC-Bb.Z.3.3.1-1TL	1 of 4	V1.0	24 Oct 19	Top layer copper
UHC-Bb.Z.3.3.1TS	2 of 4	V1.0	24 Oct 19	Top layer component
UHC-Bb.Z.3.3.1-1BL	3 of 4	V1.0	24 Oct 19	Bottom layer copper
UHC-Bb.Z.3.3.1BS	4 of 4	V1.0	24 Oct 19	Bottom layer component
MLTN.1.2.4-SCH	1 of 1	1.0	09 Mar 20	Fixed board schematic
MLTN.1.2.4	1 of 1	V1.0	09 Mar 20	Bill of Materials-Fixed board
MLTN.1.2.4-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
MLTN.1.2.4TO	2 of 4	V1.0	09 Mar 20	Top layer component
MLTN.1.2.4-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
MLTN.1.2.4BO	4 of 4	V1.0	09 Mar 20	Bottom layer component
MLTN.1.2.1-SCH	1 of 1	1.0	18 Mar 20	Measure board schematic
MLTN.1.2.1	1 of 1	V1.0	18 Mar 20	Bill of Materials-Measure board
MLTN.1.2.1-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
MLTN.1.2.1TO	2 of 4	V1.0	09 Mar 20	Top layer component
MLTN.1.2.1-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
MLTN.1.2.1BO	4 of 4	V1.0	09 Mar 20	Bottom layer component
MLTN.1.2.3-SCH	1 of 1	1.0	09 Mar 20	Sensor board schematic
MLTN.1.2.3	1 of 1	V1.0	09 Mar 20	Sensor board BOM
MLTN.1.2.3-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
MLTN.1.2.3TO	2 of 4	V1.0	09 Mar 20	Top layer component
MLTN.1.2.3-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
MLTN.1.2.3BO	4 of 4	V1.0	09 Mar 20	Bottom layer component

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