



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 19ATEX1146X** Issue: **0**

4 Equipment: **Magnetic Level Gauge, model UHC series**

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

6 Address: **No.10 Huanghai Street
Zhenxing District, Dandong city
Liaoning 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:

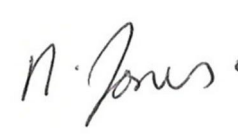


II 1G
Ex ia IIC T5/T6 Ga
Ta = -40°C to 60°C



II 2G
Ex db IIC T4...T6 Gb
Ta = -40°C to 50°C/60°C/70°C

Project Number 70193550


N Jones
Certification Manager

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 19ATEX1146X
Issue 0

13 DESCRIPTION OF EQUIPMENT

The UHC series Magnetic Level Gauge is assembled with a 0.2m to 3.5m probe rod and a transmitter with 8mm 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 thread joints between transmitter and probe, there is only one cable entry with Spec. M20x1.5 in the transmitter. It should be installed with a M20x1.5 certified cable gland, stopping plug or conduit fitting with suitable IP code.

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

The entity parameters for the product are:

U_i = 30Vdc I_i = 93mA Terminals: +, -
P_i = 0.66W C_i = 0µF L_i = 0µH

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	R70193550A	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 instruction.

15.2 Temperature code depends on process temperature as follows:

For Ex ia:

T-code	Ambient Temperature	Process Temperature
T4	-40 to 60°C	-40 to 120°C
T5	-40 to 60°C	-40 to 90°C

For Ex db:

T-code	Ambient Temperature	Process Temperature
T6	-40 to 50°C	-40 to 75°C
T5	-40 to 60°C	-40 to 90°C
T4	-40 to 70°C	-40 to 120°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.

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- 15.5 The end user shall choose suitable cable in the final installation; 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.
- 17 **CONDITIONS OF MANUFACTURE**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 All manufactured probe of UHC shall be subjected to overpressure routine test with water/gas pressure of more than 1.1MPa. The testing duration is 12s. The enclosure shall not have any permanent deformation or damage invalidating the type of protection or leakage through the walls of the enclosure.

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Certificate Annexe



Certificate Number: Sira 19ATEX1146X
 Equipment: Magnetic Level Gauge, model UHC series
 Applicant: Dandong Top Electronics Instrument (Group) Co., Ltd

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
Mechanical drawings				
UHC.Bb.Z.0	1 of 2	V1.0	16 Mar 20	UHC series Magnetic Level Gauge
UHC.Bb.Z.1	1 of 1	V1.0	16 Mar 20	Measuring tube components
UHC.Bb.Z.2-1	1 of 1	V1.0	16 Mar 20	Elbow connector I
UHC.Bb.Z.2-2	1 of 1	V1.0	16 Mar 20	Elbow
UHC.Bb.Z.2-3	1 of 1	V1.0	16 Mar 20	Elbow connector II
UHC.Bb.Z.2	1 of 1	V1.0	16 Mar 20	Elbow component
UHC.Bb.Z.4-1	1 of 1	V1.0	16 Mar 20	Splitter connector
UHC.Bb.Z.4	1 of 1	V1.0	16 Mar 20	Splitter connector component
UHC.Bb.Z.5	1 of 1	V1.0	16 Mar 20	Insulating component
UHC.Bb.Z.1	1 of 1	V1.0	16 Mar 20	Gasket
UHC.Bb.Z.3.4-1	1 of 1	V1.0	16 Mar 20	Cover
UHC.Bb.Z.3.4-2	1 of 1	V1.0	16 Mar 20	Window glass
UHC.Bb.Z.3.4-3	1 of 1	V1.0	16 Mar 20	Flat gasket
UHC.Bb.Z.3.4-4	1 of 1	V1.0	16 Mar 20	Compression nut
UHC.Bb.Z.3.4-5	1 of 1	V1.0	16 Mar 20	Gasket
UHC.Bb.Z.3.4	1 of 1	V1.0	16 Mar 20	LCD cover component
UHC.Bb.Z.3-1	1 of 1	V1.0	16 Mar 20	Bottom cover
UHC.Bb.Z.3-2	1 of 1	V1.0	16 Mar 20	Centre shaft
UHC.Bb.Z.3-7	1 of 1	1.0	16 Mar 20	Locking screw
UHC.Bb.Z.3	1 of 1	1.0	16 Mar 20	Header component
UHC-Bb.Z.3-6	1 of 1	V1.0	16 Mar 20	Nameplate
UHC-Bb.Z.3.2-Frame	1 of 1	1.0	09 Mar 20	UHC Frame Diagram
UHC.ISCD	1 of 1	1.0	09 Mar 20	INTRINSIC SAFETY CONTROL DRAWING FOR MAGNETIC LEVEL GAUGE
UHC-Bb.Z.3.1	1 of 1	V1.0	09 Mar 20	Power terminal board component
UHC-Bb.Z.3.2	1 of 1	V1.0	09 Mar 20	Main board
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
Power terminal board				
UHC-Bb.Z.3.1.1-SCH	1 of 1	1.0	09 Mar 20	Power terminal board
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
Main board				
UHC-Bb.Z.3.2.3-SCH	1 of 1	1.0	09 Mar 20	Main board
UHC-Bb.Z.3.2.3	1 of 1	V1.0	09 Mar 20	Bill of Materials-Main board
UHC-Bb.Z.3.2.3-1TL	1 of 4	V1.0	09 Mar 20	Top layer copper
UHC-Bb.Z.3.2.3TO	2 of 4	V1.0	09 Mar 20	Top layer component
UHC-Bb.Z.3.2.3-1BL	3 of 4	V1.0	09 Mar 20	Bottom layer copper
UHC-Bb.Z.3.2.3BO	4 of 4	V1.0	09 Mar 20	Bottom layer component
Power module-M302				
UHC-Bb.Z.3.2.1-SCH	1 of 1	V1.0	24 Oct 19	Power module -M302

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Sira Certification Service

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Certificate Annexe



Certificate Number: Sira 19ATEX1146X
 Equipment: Magnetic Level Gauge, model UHC series
 Applicant: Dandong Top Electronics Instrument (Group) Co., Ltd

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
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
Measure module –M301				
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
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
LCD board				
UHC-Bb.Z.3.3.1-SCH	1 of 1	V1.0	24 Oct 19	LCD board
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
Sensor board				
UHC-BB.Z.2	1 of 1	1.0	09 Mar 20	Sensor board
UHC-BB.Z.3	1 of 1	V1.0	09 Mar 20	Bill of Materials-Sensor board
UHC-BB.Z.3-1TL	1 of 4	v1.0	09 Mar 20	Top layer copper
UHC-BB.Z.3TS	2 of 4	v1.0	09 Mar 20	Top layer component
UHC-BB.Z.3-1BL	3 of 4	v1.0	09 Mar 20	Bottom layer copper
UHC-BB.Z.3BS	4 of 4	v1.0	09 Mar 20	Bottom layer component

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