



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 19ATEX1169X** Issue: **0**

4 Equipment: **FT7000 Level Monitor**

5 Applicant: **Dixon Bayco USA Division of DVCC Inc.**

6 Address: 4690 Interstate Dr.
Ste F
Cincinnati
Ohio 45246
United States of America

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 2(1) G
Ex db ib [ia Ga] IIB T4 Gb
Ta = -20°C to +60°C

Project Number 70216923


N Jones
Certification Manager

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 19ATEX1169X
Issue 0**

13 DESCRIPTION OF EQUIPMENT

The FT7000 is an electronic device for the specific purpose of continuous monitoring of liquid levels and the prevention of electrical grounding while filling of transportable liquid tanks. It consists of a single compartment flameproof enclosure with an external intrinsically safe lighted display board.

Entity Parameters:

Pm= 13 W Um = 250 V
Uo= 12.6 V Io= 0.187 A Po= 0.589 W Co= 7.4 µF Lo= 9.1 mH

The FT7000 has an internal PCB mounted power supply rated for 110-240 VAC, 50-60 Hz and a maximum power draw of 13 watts. The FT7000 is rated for ambient temperatures from -20°C to +60°C.

The FT7000 enclosure is rectangular, single-compartment, cast metal housing comprised of low copper aluminium alloy (ASTM A356-T6) (which does not contain more than 7.5% magnesium, titanium and zirconium by mass). A portion of the exterior is coated with an epoxy-polyester powder-coating paint.

The overall dimensions of the enclosure are approximately 12.443 inches by 13.130 inches by 4.046 inches (316.04mm by 333.50mm by 102.78mm).

Four 1/2-14 NPT entries are provided for installation to threaded conduit or use with cable glands supplied with each unit.

The following accessories are shipped with the following equipment and are intended for use in the final installation as applicable.

Cable Glands - EXN04ALC2 (KPX-EX), Nickel Plated Brass, manufactured by ABB Installation Products. Ex d IIC Gb; Ex e IIC Gb; Ex tb IIC Db, for use only with unarmoured TC-ER-HL cable and Ex e IIC, for use only with unarmoured TC, TC-ER and TC-ER-HL cable. IP66/IP68. Operating temperature -20°C to 100°C.

Stopping plugs EXN/050/SP 1/2-14 NPT Nickel Plated Brass. By ABB Installation Products. Ex d I Mb Ex d IIC Gb. Operating temperature -20°C to 200°C.

Mounting Hardware:

- (4) M10 x 70mm S.S. threaded bolt.
- (4) M10 S.S. split spring washer.
- (4) M10 S.S hex nut.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

| Issue | Date | Report number | Comment |
|-------|--------------|---------------|---------------------------------------|
| 0 | 24 June 2019 | R70216923A | The release of the prime certificate. |

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SCHEDULE

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Sira 19ATEX1169X
Issue 0

- 15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)
- 15.1 The enclosure is manufactured from low copper aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur.
- 15.2 Cover bolts:
- Property class: C-50
 - Yield Strength: 70,000 psi (482MPa)
 - Type: M10 x 1.5 30 mm long SHCS
Fasteners shall only be replaced with identical M10 x 1.5 DIN 912 fasteners
- 15.3 Instructions are provided with each shipment, identifying proper torque values of 35 lb-ft. (47.5 Nm) for cover bolts.
- 15.4 Instructions are provided with each shipment, identifying proper torque values of 25 lb-ft. (32 Nm) for conduit stopping plugs / blanking elements and conduit adapter.
- 15.5 Cross-sectional area of PE conductors must be equal to or greater than the cross-sectional area of phase conductors.
- 15.6 For installations using cable glands provided with this equipment:
- When insert tap is removed in order to install the proper cable, the integrity of sealing rings have to be checked, in order to guarantee the correct tightness.
 - If necessary, sealing rings have to be replaced with new ones (original spare parts only).
 - Only EPDM rubber or Silicone sealing rings are permitted for installations with this equipment.
 - Polyamide dome plug is not permitted for installation with this equipment.
- 15.7 The supply connection to the FT7000 must be made with rigid metal conduit or armoured cable or other means which provides adequate equipotential bonding of the equipment.
- 15.8 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
- 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 The manufacturer shall inform CSA Group / Sira of any modifications to the device that may impinge upon the explosion safety or intrinsically safe design of the Model FT7000.

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Certificate Annexe



Certificate Number: Sira 19ATEX1169X

Equipment: FT7000 Level Monitor

Applicant: Dixon Bayco USA Division of DVCC Inc.

Issue 0

| Drawing | Sheets | Rev. | Date(Sira stamp) | Title |
|----------------|---------|------|------------------|---|
| 10903-ATEX | 1 of 1 | B | 06 Jun 19 | FT7000 Power Supply Board PCB |
| 10904-ATEX | 1 of 1 | B | 06 Jun 19 | FT7000 Power Supply Board Assembly (Sheets 1 to 4) |
| 10904-BOM-ATEX | 1 to 3 | B | 06 Jun 19 | FT7000 Power Supply Board Assembly BOM |
| 10905-ATEX | 1 of 1 | B | 06 Jun 19 | FT7000 Rack Monitor Power Board Schematic |
| 10906-ATEX | 1 of 1 | A | 06 Jun 19 | FT7000 Logic Board Blank PCB |
| 10906-BOM-ATEX | 1 to 2 | A | 06 Jun 19 | FT7000 Logic Board Bill of Material |
| 10907-ATEX | 1 to 4 | A | 06 Jun 19 | FT7000 Logic Board Assembly (Sheets 1 to 4) |
| 10908-ATEX | 1 of 1 | A | 06 Jun 19 | FT700 Rack Monitor Logic Board |
| 10909-ATEX | 1 of 1 | B | 06 Jun 19 | FT7000 Display Board PCB |
| 10910-ATEX | 1 of 1 | A | 06 Jun 19 | FT7000 Display Board Assembly (Sheets 1 to 3) |
| 10910-BOM-ATEX | 1 to 2 | B | 06 Jun 19 | FT7000 Display Board Assembly BOM |
| 10911-ATEX | 1 of 1 | D | 06 Jun 19 | FT7000 Rack Monitor Display Board (Schematic) |
| 10968SS-ATEX | 1 of 1 | A | 06 Jun 19 | Cover Bolt |
| 10980-ATEX | 1 of 1 | B | 18 Jun 19 | FT7000 Label |
| 10982-ATEX | 1 of 1 | B | 06 Jun 19 | Potted Display Cable Assembly |
| 11032AL-ATEX | 1 of 1 | C | 06 Jun 19 | Cable Gland (Machine drawing) |
| 11033AP-ATEX | 1 to 37 | C | 20 Jun 19 | Maintenance & Operating Instructions for Dixon Bayco FT7000 |
| 11039-ATEX | 1 to 2 | B | 06 Jun 19 | FT7000 Control Drawing |
| 11041-ATEX | 1 of 1 | A | 06 Jun 19 | Lid O-ring |
| 11172-ATEX | 1 of 1 | A | 06 Jun 19 | Potted Display Board Assembly |
| 40472AL-ATEX | 1 of 1 | B | 06 Jun 19 | Rack Monitor Box (Machining drawing) |
| 40473AL-ATEX | 1 of 1 | B | 06 Jun 19 | Rack Monitor Lid (Machining drawing) |
| 40474PL-ATEX | 1 of 1 | A | 06 Jun 19 | Rack Monitor, Face Plate |
| FT7000 | 1 of 1 | A | 06 Jun 19 | Rack Monitor (Main assembly drawing) |
| AP1308 | 1 to 4 | A | 06 Jun 19 | Work Instruction for FT7000 |

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