

# EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS03ATEX21698X R.1**

4. **Product:** Integral FLO-TEL 2

5. **Manufacturer:** ELFAB Ltd

**Applicant:** ELFAB Ltd

6. **Address:** Alder Road, North Shields, Tyne & Wear, NE29 8SD

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

8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 03011957 issue 1 dated November 2003, 07027620 dated November 2007, 12056867 Issue 1 dated June 2013, 104737403CHE-001 dated 7<sup>th</sup> June 2022.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to at item 16 of the Schedule.

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

11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12. The marking of the product shall include the following:



II 1 G Ex ia IIC Ga  
II 1 D Ex ia IIIC Da IP66

**Certificate issue date**

26<sup>th</sup> July 2022

**Mark Newman**

Certification Officer  
Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

**Intertek Italia S.p.A.** Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy

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### 13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

The Integral Flo-Tel 2 is a non-invasive sensing device designed to detect when a bursting disc has operated. The sensor operates when a magnetic field is in close proximity to it. The Integral Flo – Tel comprises a reed switch housed inside a stainless-steel tube. An integral cable provides connection facilities to a suitably certified intrinsically safe supply. The sensor is fitted into the holder with a magnet on the rupture disc. When the rupture disc bursts; the rupture disc with its magnet arc away from the sensor, giving an open circuit signal. After rupturing, the disc is the only element that needs replacing. The disc is not covered by this report  
Temperature classes and related ambient temperatures for equipment

#### **Install 1 Integral Flo-tel 2 (2-wire leadout)**

Shall only be connected to a suitably certified intrinsically safe supply that is compatible with the values as stated below when supplied with a two-wire lead-out.

If the factory issued terminated wire is removed or damaged, then the wire must be terminated in a manner that is at least equal to the original factory installed version in accordance with the requirements of EN 60079-14.

Maximum input parameters are as follows:

$U_i = 28 \text{ Vdc}$   
 $I_i = 84\text{mA}$   
 $P_i = 0.55\text{W}$   
 $L_i = 4.1\mu\text{H}$   
 $C_i = 3.64\text{nF}$

T6 (T85°C) (Ta= -100°C to +50°C)  
T5 (T100°C) (Ta= -100°C to +90°C)  
T4 (T135°C) (Ta= -100°C to +125°C)  
T3 (T200°C) (Ta= -100°C to +190°C)

Maximum process temperature +300°C

#### **Install 2 Integral Flo-tel 2 (3-wire leadout or male or female connector)**

Shall only be connected to a suitably certified intrinsically safe supply that is compatible with these values when supplied with a three wire lead-out or male or female connector:

Maximum input parameters are as follows:

$U_i = 3.9 \text{ Vdc.}$   
 $I_i = 2\text{mA}$   
 $P_i = 7.8\text{mW}$   
 $L_i = 4.1\mu\text{H}$   
 $C_i = 3.64\text{nF}$



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T6 (T85°C) (Ta= -100°C to +75°C)

T5 (T100°C) (Ta= -100°C to +90°C)

T4 (T135°C) (Ta= -100°C to +125°C)

T3 (T200°C) (Ta= -100°C to +185°C)

Maximum process temperature +300°C

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

## 14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
*INTEGRAL FLO – TEL 2 IECEx/ATEX CERTIFICATION DRAWING – THERMISTOR VERSION (PEEK END CUP HOUSING) [Assembly]	05/01/07224	F	09/06/21
*ATEX / IECEx LABEL INTEGRAL FLO – TEL 2 [Label]	05/01/08589	F	27/05/22
*Flo-Tel 2™ Installation	00-00-09012	A	As stamped

Note: An \* is included before the title of documents that are new or revised.

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.



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### 15. SPECIFIC CONDITIONS OF USE

- Clean with a damp cloth only.
- It is the installer's responsibility to provide adequate thermal insulation between probe and the process temperature.
- The temperature at the point of installation must not be higher than maximum temperature allowed by specific temperature classes for gas or maximum surface temperature for dust.

### 16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant Essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. 104737403CHE-001 dated 7<sup>th</sup> June 2022.

### 17. ROUTINE (FACTORY) TESTS

None.

### 18. DETAIL OF CERTIFICATE CHANGES

#### **R.1 (26<sup>th</sup> July 2022):**

- Change of 'Leadouts' cable length on drawing number 05/01/07224, from "2m cable" to "Up to 10m cable".
- Amendment to drawing number 05/01/08589 to include UKEX related information.
- Update to the latest EN IEC 60079-0:2018.
- Changing "Li = 0" and "Ci = 0" to "Li = 4.1μH" and "Ci = 3.64nF" to account for additional cable length of up to 10m.