



EU-TYPE EXAMINATION CERTIFICATE

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

Certificate Number: **KIWA 19ATEX0017X** Issue: **3**

Equipment: **Level Switch Liquiphant, model FTL41, FTL51B, FTL62, FTL63 and FTL64 (and OEM versions OFTL41, OFTL51B, OFTL62, OFTL63 and OFTL64)**

Applicant: **Endress+Hauser SE+Co. KG**

Address: **Hauptstrasse 1, 79689 Maulburg, Germany**

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

CSA Group Netherlands B.V., notified body number 2813 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.

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 60079-7: 2015 + A1: 2018

EN 60079-11: 2012

EN 60079-26: 2021

EN 60079-31: 2014

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.

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.

The marking of the equipment shall include the following:



II 1/2G or 2G Ex db IIC T6...T1 Ga/Gb or Gb
II 1/2G or 2G Ex db eb IIC T6...T1 Ga/Gb or Gb
II 1/2D Ex ta/tb IIIC Tx °C Da/Db
II 2D Ex tb IIIC Tx °C Db
II 1G, 1/2G or 2G Ex ia IIC T6...T1 Ga, Ga/Gb or Gb
1/2G or 2G Ex db ia IIC T6...T1 Ga/Gb or Gb
II 1/2D or II 2D Ex ia IIIC Tx °C Da/Db or Db

Signed: M Halliwell

Title: Director of Operations



Project Number 80121208

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

KIWA 19ATEX0017X

Issue 3

13 DESCRIPTION OF EQUIPMENT

Liquid Level Switches Liquiphant, types FTL41, FTL51B, FTL62, FTL63 and FTL64 (and OEM versions OFTL41, OFTL51B, OFTL62, OFTL63 and OFTL64) for use in explosive atmospheres caused by the presence of combustible gases, fluids, vapours or dusts, directly detect a liquid level by means of a symmetrical vibrating fork. The different electronic inserts in the transmitter enclosure, convert the fork frequency into an electrical signal.

The Liquid Level Switches Liquiphant are used for the measurement of the density or concentration of a process fluid, if provided with the electronics insert type FEL60D and connected to the Endress+Hauser Interface type FML621.

The enclosure is either a single electronics compartment version made of plastic, aluminium or stainless steel or a dual compartment version made of aluminium providing a separate electronics and a terminal compartment. The stainless-steel sensor is directly fitted to the enclosure.

Optionally the electronics compartment can be equipped with either a Bluetooth or an LED module in combination with a windowed cover.

For the type designation code, electrical or thermal data refer to Annex 1 to 3 of NL/KIWA/ExTR19.0011/02.

Variation 1 - This variation introduced the following changes:

- i. Addition of a types FTL62 (coated (ECTFE, PFA non-conductive and conductive, Enamel) sensor version) and FTL64 (high temperature (HT) sensor version with sensor lengths up to 6 meter in type of protection Ex-d) (and OEM versions OFTL62 and OFTL64);
- ii. Addition of a -50 °C version with an alternative potting material
- iii. Addition of new O-ring Material (FPM) at position Probe to Enclosure and 2nd-Source Suppliers for Blind Plug/Cable Gland Position;
- iv. Addition of an alternative BT module version VU121 (VA13-01 extended with model code VA13-02) with a closed battery lid to allow a T6 classification (T4 classification was based on cell temperature);
- v. Change of electronic module FEL61 (not relevant for the type of protection (only used for Ex-d and Ex t));
- vi. Correction of typos in descriptive documents.
- vii. The report is also to facilitate the transfer of certificates KIWA 19ATEX0017X from Kiwa Nederland B.V., Unit Kiwa ExVision, Wilmersdorf 50, 7327 AC Apeldoorn, The Netherlands to CSA Group.

Variation 2 - This variation introduced the following changes:

- i. Addition of a types FTL63 sensor versions for hygienic applications (and OEM versions OFTL63);
- ii. Addition enamel or other coating for types FTL64 (already available for FTL62 sensor versions);
- iii. Separation of Temperature tables for Ex i electronic inserts and probe types;
- iv. Electronic inserts with Variants for Foam-Detection and Foam-Blanking (not relevant for the type of protection);
- v. Ex i Devices with cover with glass window without BT-Module or LED-Module;
- vi. New version of M12 Connecting plug stainless steel for Ex ia IIC;
- vii. Update of EN 60079-26 : 2015 to EN 60079-26 : 2021;
- viii. Addition of an alternative Ex-d Bushing for enclosure type HA46;
- ix. Correction of typos in order code(s).

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
1	24 June 2019	161000594	The release of the prime certificate.
2	03 February 2021	R80070890A	This Issue covers the following changes: <ul style="list-style-type: none">• Transfer of certificate KIWA 19ATEX0017X from KIWA Nederland B.V. to CSA Group Netherlands B.V.• The introduction of Variation 1.
3	04 April 2023	R80121208A	The introduction of Variation 2.

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

- 15.1 The equipment shall be install in a manner that will result in a sufficiently tight joint (IP66 or IP67 according to IEC 60529) or a flameproof joint according to IEC 60079-1 (joints specified for a volume $\leq 100 \text{ cm}^3$) between one hazardous area to the other.
- 15.2 The flameproof joints are not intended to be repaired.
- 15.3 To avoid electrostatic discharge the Liquid Level Switches Liquiphant shall be cleaned only with a damp cloth.
- 15.4 For Liquid Level Switches Liquiphant with an aluminium enclosure, when used as EPL Ga equipment, shall be installed in such a way that, even in the event of rare incidents, ignition sources due to impact are excluded.
- 15.5 The FTL63 with a sensor that is mechanical polishing and installed in the boundary of EPL Ga/Gb or EPL Da/Db shall not be exposed to environmental conditions that could affect the partition.

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 CSA Group Netherlands B.V. 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 Each welded sensor and each cemented windowed cover shall be routine tested with at least 3.6 MPa (1.5 times reference pressure).
- 17.4 For type of protection Ex ia a dielectric test has to be performed in accordance with IEC 60079-11 clause 10.3 at a test voltage of 500 Vac for at least 60 seconds between both supply circuit and the enclosure.

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Certificate Annexe



Certificate Number: KIWA 19ATEX0017X

Equipment: Level Switch Liquiphant, model FTL41, FTL51B, FTL62 and FTL64 (and OEM versions OFTL41, OFTL51B, OFTL62 and OFTL64)

Applicant: Endress+Hauser SE+Co. KG

Issue 1 - The drawings associated with this issue have been superseded by those at Issue 2.

Issue 2

Drawing	Sheets	Rev.	Date (Stamp)	Title
961003139-B	1 to 45	02.00	28 Jan 21	Technical description Device and all documents listed in the controlled documents list
961003137-B	1 to 31	02.00	28 Jan 21	Technical Description Enclosures and all documents listed in the controlled documents list
961003138-B	1 to 40	02.00	28 Jan 21	Technical Description Probes and all documents listed in the controlled documents list
961003132-B	1 to 27	02.00	28 Jan 21	Technical Description FEL42/62/62LT and all documents listed in the controlled documents list
961003133-B	1 to 34	02.00	28 Jan 21	Technical Description FEL44/64/64E/64LT and all documents listed in the controlled documents list
961003128-B	1 to 54	02.00	28 Jan 21	Technical Description FEL48/68 and all documents listed in the controlled documents list
961003129-B	1 to 57	02.00	28 Jan 21	Technical Description FEL60D and all documents listed in the controlled documents list
961003131-B	1 to 21	02.00	28 Jan 21	Technical Description FEL61/61LT and all documents listed in the controlled documents list
961003134-B	1 to 33	02.00	28 Jan 21	Technical Description FEL64DC/64DC_E/64DC_LT and all documents listed in the controlled documents list
961003130-B	1 to 56	02.00	28 Jan 21	Technical Description FEL67 PFM and all documents listed in the controlled documents list
961003135-B	1 to 37	02.00	28 Jan 21	Technical Description BT-Module and all documents listed in the controlled documents list
961003136-B	1 to 27	02.00	28 Jan 21	Technical Description LED-Module VU120 and all documents listed in the controlled documents list

Issue 3

The modifications assessed in this report are detailed in the new or revised documents as shown below indicated with a "*" before the title.

Drawing	Rev.	Sheets	Date (Stamp)	Title
961003762-C	03.00	1 of 92	15 Apr 22	Annex 1 to technical description 961003139: Temperature derating tables of liquiphant
961003139-C	03.00	1 of 42	15 Apr 22	* Technical description Device and all documents listed in the controlled documents list
961003137-C	03.00	1 of 31	15 Apr 22	* Technical Description Enclosures and all documents listed in the controlled documents list
961003138-D	04.00	1 to 41	15 Apr 22	* Technical Description Probes and all documents listed in the controlled documents list
961003132-C	03.00	1 of 27	15 Apr 22	* Technical Description FEL42/62/62LT and all documents listed in the controlled documents list
961003133-C	03.00	1 of 35	15 Apr 22	* Technical Description FEL44/64/64E/64LT and all documents listed in the controlled documents list
961003128-C	03.00	1 of 55	15 Apr 22	* Technical Description FEL48/68 and all documents listed in the controlled documents list

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Certificate Annexe



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FTL51B, FTL62 and FTL64 (and OEM versions
OFTL41, OFTL51B, OFTL62 and OFTL64)

Applicant: Endress+Hauser SE+Co. KG

Drawing	Rev.	Sheets	Date (Stamp)	Title
961003131-C	03.00	1 of 21	15 Apr 22	* Technical Description FEL61/61LT and all documents listed in the controlled documents list
961003134-C	03.00	1 of 33	15 Apr 22	* Technical Description FEL64DC/64DC_E/64DC_LT and all documents listed in the controlled documents list
961003130-C	03.00	1 of 56	15 Apr 22	* Technical Description FEL67 PFM and all documents listed in the controlled documents list
961003135-C	03.00	1 of 37	15 Apr 22	* Technical Description BT-Module and all documents listed in the controlled documents list

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