



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx KIWA 19.0010X**

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Certificate history:

Status: **Current**

Issue No: 2

[Issue 1 \(2021-02-03\)](#)

[Issue 0 \(2019-06-24\)](#)

Date of Issue: 2023-04-04

Applicant: **Endress+Hauser SE+Co. KG**
Hauptstrasse 1
79689 Maulburg
Germany

Equipment: **Liquid Level Switches Liquiphant, types FTL41, FTL51B, FTL62, FTL63 and FTL64**

Optional accessory:

Type of Protection: **Ex d,e,i,t,n**

Marking:
Ex db IIC T6...T1 Ga/Gb or Gb
Ex db eb IIC T6...T1 Ga/Gb or Gb
Ex ta/tb IIIC Tx °C Da/Db
Ex tb IIIC Tx °C Db
Ex tc IIIC Tx °C Dc
Ex ia IIC T6...T1 Ga, Ga/Gb or Gb
Ex db ia IIC T6...T1 Ga/Gb or Gb
Ex ia IIIC Tx °C Da/Db or Db
Ex ec IIC T6...T1 Gc
Ex ec nC IIC T6...T1 Gc

Approved for issue on behalf of the IECEx
Certification Body:

Dave Magee

Position:

Senior Director of Operations, Toronto

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group
178 Rexdale Blvd
Toronto Ontario M9W 1R3
Canada





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Manufacturer: **Endress+Hauser SE+Co. KG**
Hauptstrasse 1
79689 Maulburg
Germany

Manufacturing locations: **refer to Annex 4 for additional manufacturing locations**

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

[IEC 60079-26:2021-02](#) Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
Edition:4.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

[IEC 60079-7:2015](#) Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[NL/KIWA/ExTR19.0011/00](#)

[NL/KIWA/ExTR19.0011/01](#)

[NL/KIWA/ExTR19.0011/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0003/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 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.
- The flameproof joints are not intended to be repaired.
- To avoid electrostatic discharge the Liquid Level Switches Liquiphant shall be cleaned only with a damp cloth.
- 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.
- For Liquid Level Switches Liquiphant, when used as EPL Gc equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.
- 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.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1 – this Issue introduced the following changes:

1. 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 upto 6 meter in type of protection Ex-d) (and OEM versions OFTL62 and OFTL64);
2. Addition of a -50 °C version with an alternative potting material;
3. Addition of new O-ring Material (FPM) at position Probe to Enclosure and 2nd-Source Suppliers for Blind Plug/Cable Gland Position;
4. Addition of an alternative BT module version VU121 (VA13-01 extended with modelcode VA13-02) with a closed battery lid to allow a T6 classification (T4 classification was based on cell temperature);
5. Change of electronic module FEL61 (not relevant for the type of protection (only used for Ex-d and Ex t));
6. Correction of typos in descriptive documents.

Issue 2 – this Issue introduced the following changes:

1. Addition of a types FTL63 sensor versions for hygienic applications (and OEM versions OFTL63);
2. Addition enamel or other coating for types FTL64 (already available for FTL62 sensor versions);
3. Separation of Temperature tables for Ex i electronic inserts and probe types;
4. Electronic inserts with Variants for Foam-Detection and Foam-Blanking (not relevant for the type of protection);
5. Ex i Devices with glass window without BT-Module or LED-Module;
6. New version of M12 Connecting plug stainless steel for Ex ia IIC;
7. Update of IEC 60079-26 from 2014, 3rd Edition to 2021, 4th Edition;
8. Addition of an alternative Ex-d Bushing for enclosure type HA46;
9. Correction of typos in order code(s)

Annexes:

[Annex 1 to IECEx KIWA 19.0010X Issue 2_\(03-2023\).pdf](#)

[Annex 2 to IECEx KIWA 19.0010X Issue 2_\(03-2023\).pdf](#)

[Annex 3 to IECEx KIWA 19.0010X Issue 2_\(03-2023\).pdf](#)

[Annex 4 to IECEx KIWA 19.0010X Issue 2_\(03-2023\).pdf](#)