



Marine & Offshore

Certificate number: 38335/B0 BV

File number: AP4632

Product code: 3840H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ENDRESS + HAUSER SE + Co. KG**

Maulburg - GERMANY

*for the type of product*

**LEVEL SWITCH**

Liquiphant FTL31 series

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33/43BS

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 06 Nov 2025**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 06 Nov 2020,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

The **Liquiphant FTL31** series are level switches for e.g. minimum or maximum detection of liquids.

#### **1.1 - Main characteristics:**

Power supply: 24V DC or 230V AC  
 Output: 3-wire connection or  
 2-wire connection  
 Housing material: Stainless steel  
 Degree of protection: IP65, IP65 / 67 or IP66 / 68 (depending on electrical connection)

#### **1.2 - Variants:**

Type: **FTL31 aa b c d e fff** \_\_ \_\_ **LH** \_\_

##### **aa = Approval:**

AA; CA

##### **b = Power supply:**

1; 4

##### **c = Electrical connection:**

M; S; U; V; W

##### **d = Sensor design:**

2; 3

##### **e = Sensor type:**

AA; BA

##### **fff = Process Connection:**

VAJ; VBJ; VCJ; WBJ; WCJ; WDJ; WSJ; W5J; XBJ; XCJ; XDJ

### 2. DOCUMENTS AND DRAWINGS:

- TI01147F/00/EN/02.14; Ordercode for Liquiphant Transducer FTL31 dated 10.04.2014;

### 3. TEST REPORTS:

- Endress+Hauser GmbH+Co. KG: 970004180-- dated 03.02.14; 970004181-- dated 03.02.14; 970004182-- dated 03.02.14

- MeßTechnikNord GmbH: 07310.185.14 V1.0 dated 2014.09.05; 07310.186.14 V1.0 dated 2014.10.06;

- Paconsult GmbH: 14-5891a dated 07 January 2015; 14-6106 dated 20 August 2014

For C0 version:

- Endress+Hauser SE+Co. KG: 970007893\_AK\_01 dated 2020-10-12; 970007894\_AK\_01 dated 2020-10-12

### 4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - Bureau Veritas Environmental Category, **EC Code: 33/43BS**

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zone and Deck Zone.

4.5 - The above products have been tested according to Bureau Veritas Rules dated Jan 2020.

4.6 - Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

4.7 - May not be used for flammable oil tanks in passenger ships where penetration below tank top would be necessary.

### 5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Endress + Hauser SE + Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Endress + Hauser SE + Co. KG** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

**Endress + Hauser SE + Co. KG**  
**Hauptstraße 1**  
**79689 Maulburg**  
**GERMANY**

**6. MARKING OF PRODUCT:**

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number
- The title and version of each software element included in the installed software system shall be marked on the equipment.

**7. OTHERS:**

7.1 - It is the responsibility of **Endress + Hauser SE + Co. KG - GERMANY** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 38335/A1 BV issued on 06 Oct 2015 by the Society.

\*\*\* END OF CERTIFICATE \*\*\*