



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA0000149**  
Revision No:  
**1**

## This is to certify:

### That the Level Switches

with type designation(s)  
**UAD-LSA, UAD-LSB, UAD-LSG**

Issued to  
**UAD Service + Vertriebs UG**  
**Rostock, Germany**

is found to comply with  
**DNV GL rules for classification – Ships**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

### Location classes:

| Type    | Temperature | Humidity | Vibration | EMC | Enclosure |
|---------|-------------|----------|-----------|-----|-----------|
| UAD-LSA | B           | B        | A / B     | --  | C / D     |
| UAD-LSB | B           | B        | A         | --  | D         |
| UAD-LSG | B           | B        | A / B     | --  | C / D     |

Issued at **Hamburg** on **2021-03-24**

for **DNV**

This Certificate is valid until **2026-01-18**.

DNV local station: **Hamburg**

Approval Engineer: **Holger Jansen**

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**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

UAD-LSB: Level switch with/without test button and with connecting cable

|              |  |
|--------------|--|
| UAD-LSB      | with test button, cable 2m from above        |
| UAD-LSB-U    | with test button, cable 2m from bottom up    |
| UAD-LSB-oP   | without test button, cable 2m from above     |
| UAD-LSB-oP-U | without test button, cable 2m from bottom up |

|                              |   |
|------------------------------|---|
| Material housing             | 1.4571  |
| Material floating ball       | Buna N  |
| Rated pressure floating ball | 3bar  |
| Switch type                  | Günther 1915, contact form C  |
| Contact mode                 | 1 – NO<br>2 – NC<br>3 – WE  |
| Contact rating               | 1 – 250V AC/ 3.0A/ 100VA<br>2 – 250V AC/ 3.0A/ 100VA<br>3 – 250V AC/ 1.0A/ 60VA |
| Cable type                   | MPRXCX (standard length 2m, max. length 20m)                                    |

UAD-LSA, UAD-LSG: Float operated Magnetic Level Switch intended for the use in bilge and ballast tanks.

|                    |                                     |
|--------------------|-------------------------------------|
| UAD-LSA1, UAD-LSG1 | with test button, without cable*    |
| UAD-LSA2, UAD-LSG2 | with test button, with cable        |
| UAD-LSA3, UAD-LSG3 | without test button, without cable* |
| UAD-LSA4, UAD-LSG4 | without test button, with cable     |

- With or without -g version (bended linkage of max 700mm length)
  - With or without -Exd version (see EC-Type Examination Certificate LS(A,G)...-Ex d no. IBExU19ATEXKB01)
  - With or without protection bellow (SB1, SB2, SB3)
- \*Cable to be type approved

|                             |                       |
|-----------------------------|-----------------------|
| Material housing            | RG5 or RG10           |
| Material oval floating ball | 1.4571                |
| Pressure (max)              | 16 bar                |
| Voltage (max)Contact rating | 250V AC, 24V DC       |
| Current (max)               | 6A 250V AC, 2A 24V DC |

## Place of manufacture

UAD Service + Vertriebs UG  
 Alter Hafen Nord 216  
 18069 Rostock, Germany

## Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL RU SHIP Pt.4 Ch.9 Sec. 1.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Magnetic Level Switch: Types UAD-LSAx, UAD-LSGx = Location class Vibration: B  
 Types UAD-LSAx-g, UAD-LSGx-g = Location class Vibration: A

UAD-LSB: Degree of protection: IP68 (11m) - cable gland covered with heat shrinking hose with glue.  
 LSAx, LSGx: Degree of protection: IP56 / IP68 (11meter) cable version - cable gland covered with heat shrinking hose with glue.

## Type Approval documentation

### UAD-LSB

Test report W+Z no. L1279 (03.11.2003)  
Test report W+Z no. L1279A (17.11.2003)  
Test report W+Z no. L3214 (08.07.2009)  
Test report UAD IP-Protection unnumbered (19.10.2003);  
Data sheet Level Switch Type LSG, Level Switch Type LSA

### UAD-LSA

Test report W+Z no. L965 (12.06.2002)  
Test report W+Z no. L1237 (30.09.2003)  
Test report W+Z no. L1251B (30.09.2003)  
Test report W+Z no. L1251A (01.10.2003)  
Test report W+Z no. L1334 (10.02.2004)  
Test report W+Z no. L5344 (21.11.2013)  
Test report UAD IP-Protection unnumbered (25.04.2002)  
Test report UAD Damp Heat unnumbered (11.06.2002)  
Test report UAD Cold unnumbered (17.06.2002)  
Manuel Type LSA... (08/2016)  
EC-Type Examination Certificate LSA...-Exd no. IBExU13ATEX1069 X (28.11.2013)  
Acceptance notification – Conformity with type, Notification no. IBExU16ATEXKB01 (05.12.2016)  
Type Approval Assessment Report (16.03.2021)

## Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition December 2019.

## Marking of product

The products to be marked with:

- manufacturer name
- type number
- serial number.

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE