



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA0000149
Revision No:
3

This is to certify:
that the Level Switches

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

issued to

Grosshandel uad Marine- & Industrieautomation Hans-Joachim Schulz
Rostock, Germany

is found to comply with
DNV rules for classification – Ships

Application:

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

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 **2025-02-28**

This Certificate is valid until **2027-01-26**.

DNV local unit: **Hamburg**

Approval Engineer: **Holger Jansen**



for **DNV**

Digitally signed by: **Dariusz Lesniewski**
Location: **DNV SE, Germany**

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 USD 300 000.

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 2 – NC 3 – WE
Contact rating	1 – 250V AC/ 3.0A/ 100VA 2 – 250V AC/ 3.0A/ 100VA 3 – 250V AC/ 1.0A/ 60VA
Cable type	MPRXCX (standard length 2m, max. length 20m)

UAD-LSA, UAD-LSG: Float operated Magnetic Level Switch.

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 protection bellow (SB1, SB2, SB3)

*Cable to be type approved

Material housing	RG5 or RG10 or AISi7Mg0,6
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

GROSSHANDEL uad Marine- & Industrieautomation Hans-Joachim Schulz
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, 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 RU SHIP Pt.4 Ch.9 Sec. 1.

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);

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)

Data sheet Level Switch Type LSG, Level Switch Type LSA, Level Switch Type LSB

Test report DEKRA no. K17069 (27.03.2024)

Type Approval Assessment Report (16.03.2021)

Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, Edition August 2021.

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