



Certificate No:
TAA0000325

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Online UV Analyzer

with type designation(s)
AccUView LED Ex Online

Issued to

HF Scientific, Inc. A Watts Water Technologies Company
Fort Myers, FL, USA

is found to comply with

DNV rules for classification – Ships
Resolution MEPC.300(72) – Annex Part 3
USCG Federal Register 46 CFR part 162, subpart 162.060-30

Application :

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

Location classes:

Temperature C
Humidity B
Vibration A
EMC A
Enclosure B / IP55

Issued at **Høvik** on **2022-05-20**

This Certificate is valid until **2027-05-19**.

DNV local station: **Houston Offshore Services**

for **DNV**

Approval Engineer: **Siri Tag**

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Jan Tore Grimsrud
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.



Form code: TA 251

Revision: 2021-03

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Product description

The AccUView LED Ex is a UV Analyzer for use in hazardous environments allow for the reading of UV transmittance (T) or absorbance of process water online (ABS) while in a hazardous environment, Zone 1.

It is designed to measure both % transmittance and absorbance of a water sample. The measurement range is 0 to 100.0% T and 0 to 2.0 ABS with a resolution of 0.1% T and 0.0001 ABS.

Approval conditions

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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Measures to be provided for operation below 0°C to avoid freezing of water.

The product has been tested for nominal voltage from 100 – 240 VAC.

Ex installations 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.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV.

Information on Ex-Certification received from manufacturer – Not verified by DNV		
Equipment	Certified	Certificate No.
AccUView LED Ex (28044)	II 2 G Ex pxb IIC T4 Gb 0°C ≤ Ta ≤ 55°C	ExNB 20 ATEX 0016 X IEC EX LC19.0013X
Purge Controller, Air Sentinel III (110046)	II 2 G Ex mb [pxb] IIC T4 Gb 0°C ≤ Ta ≤ 55°C	ExNB 20 ATEX 0017 IEC EX LC19.0014

Type Approval documentation

Tests carried out

Applicable tests according to:
Class guideline, DNV-CG-0339 August 2021
USCG Federal Register 46 CFR part 162, subpart 162.060-30.
IACS UR E10, Rev. 8 Jan. 2022

Marking of product

Name of maker: "HF scientific"
Unit type: AccUView LED Ex ON-LINE (28044)
Serial number
Supply voltage: 100-240 VAC
Supply frequency: 47-63 Hz
Supply power: 80 VA

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