

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Gas Detection System**with type designation(s)  
**FlexADOS 914 MED**

Issued to

**Ados GmbH  
Aachen, Germany**is found to comply with  
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

<b>Temperature</b>	<b>C</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>B</b>

Issued at **Hamburg** on **2020-06-15**This Certificate is valid until **2025-06-14**.DNV GL local station: **Essen**Approval Engineer: **Dariusz Lesniewski**for **DNV GL**Digitally Signed By:  
Papanuskas, Joannis**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.



## Product description

Gas warning unit for marine applications type FlexADOS 914 MED

Ratings:	110 – 240VAC, 50/60Hz, 60VA
Inputs:	12x analogue 4...20mA for connection of gas transmitters 3x digital
Outputs:	17x relay, potential free, 250VAC / 4A 2x analogue 4...20mA
Display:	graphical LC-display, background red/green/yellow, LED Power / Fault / MainFailure /Inhibit
Alarm indication:	3x LEDs per gas transmitter
Operating keys	
Software version:	V1.01
Degree of protection:	IP 54

## Approval conditions

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

## Type Approval documentation

Test Report: TÜVRheinland No. 968/FSP 1092.03/16, dated 2016-02-05  
Test Report: TÜVRheinland No. 557 / Ex 7801.01 / 15, dated 2017-03-17  
ADOS Conformity Assessment FlexADOS 914, EN60079-29-1:2016, dated 2019-07-16  
Test Report: DEKRA No. 2229259.0501-EMC, dated 2018-10-05  
Test Report: DEKRA No. 22233104.50, dated 2019-05-20  
Ex-Certificate: TÜV 15 ATEX 7801 X  
Operating Instruction: FlexADOS 914 (1.13)  
Drawings: Circuit diagram, PCB Lay-outs  
Validation results of functional tests FlexADOS 914 MED and GTR 210 EX MED, dated 2020-01-16

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019.

## Marking of product

The products to be marked with:


- manufacturer name
- model name
- serial number
- power supply ratings

## 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



Job Id: **262.1-025039-1**  
Certificate No: **TAA00002JH**

- 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

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

## This is to certify:

**That the Fixed oxygen analysis and gas detection equipment**

with type designation(s)  
**FlexADOS 914 MED**

Issued to  
**Ados GmbH**  
**Aachen, Germany**

is found to comply with the requirements in the following Regulations/Standards:  
Regulation **(EU) 2019/1397**,  
**item No. MED/3.54. SOLAS 74 as amended, Regulation II-2/4 & VI/3 and FSS Code 15**

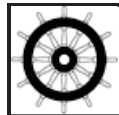
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-06-14**.

Issued at **Hamburg** on **2020-06-15**

DNV GL local station:  
**Essen**

Approval Engineer:  
**Dariusz Lesniewski**



Notified Body  
No.: **0098**



for **DNV GL SE**  
Digitally Signed By: Mydlak-Röder, Christine

Location: DNV GL Hamburg, Germany  
on behalf of

**Gerhard Aulbert**  
**Head of Notified Body**

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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

Gas warning unit for marine applications type FlexADOS 914 MED

Ratings:	110 – 240VAC, 50/60Hz, 60VA
Inputs:	12x analogue 4...20mA for connection of gas transmitters 3x digital
Outputs:	17x relay, potential free, 250VAC / 4A 2x analogue 4...20mA
Display:	graphical LC-display, background red/green/yellow, LED Power / Fault / MainFailure /Inhibit
Alarm indication:	3x LEDs per gas transmitter
Operating keys	
Software version:	V1.01
Degree of protection:	IP 54

## Type Examination documentation

Test Report: TÜVRheinland No. 968/FSP 1092.03/16, dated 2016-02-05  
Test Report: TÜVRheinland No. 557 / Ex 7801.01 / 15, dated 2017-03-17  
ADOS Conformity Assessment FlexADOS 914, EN60079-29-1:2016, dated 2019-07-16  
Test Report: DEKRA No. 2229259.0501-EMC, dated 2018-10-05  
Test Report: DEKRA No. 22233104.50, dated 2019-05-20  
Ex-Certificate: TÜV 15 ATEX 7801 X  
Operating Instruction: FlexADOS 914 (1.13)  
Drawings: Circuit diagram, PCB Lay-outs  
Validation results of functional tests FlexADOS 914 MED and GTR 210 EX MED, dated 2020-01-16

## Tests carried out

IEC 60092-504:2016  
IEC 60533:2015  
EN 50104:2010  
EN 60079-0:2012 incl. A11:2013  
EN 60079-29-1:2016  
\*IMO MSC.1/Circ.1370 (not applicable)

## Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

# QS - CERTIFICATE OF ASSESSMENT - EC (MODULE E)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

## This is to certify:

**That the Quality System for the products**

with type designation(s) as specified in the Appendix to this Certificate

Issued to

**Ados GmbH**  
**Aachen, Germany**

is found to comply with the applicable requirements.

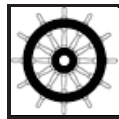
The quality system has been assessed with respect to the procedure of conformity assessment described in Annex II, Module E in the directive 2014/90/EU and regulation (EU) 2019/1397.

This Certificate is valid until **2025-06-14**.

Issued at **Hamburg** on **2020-06-15**

DNV GL local station:  
**Essen**

Approval Engineer:  
**Dariusz Lesniewski**

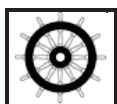


Notified Body  
No.: **0098**



for **DNV GL SE**  
Digitally Signed By: Mydlak-Röder, Christine  
Location: DNV GL Hamburg, Germany  
on behalf of

**Gerhard Aulbert**  
**Head of Notified Body**



0098/yyyy

0098: Notified Body number undertaking quality surveillance  
yyyy: The year in which the mark is affixed

The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate authorizes the manufacturer in conjunction with the valid EC Type Examination (Module B) Certificate(s) of the equipment listed before to affix the Mark of Conformity (wheelmark) to the product described herein. This certificate loses its validity if the manufacturer makes any changes to the approved quality system, which have not been notified to, and agreed with the notified body named on this certificate. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. The Manufacturer has to apply for periodical audits to verify the maintenance and application of the quality system every 12 months.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **344.1-010322-1**  
Certificate No: **MEDE0000022**

## APPENDIX

### Item no. MED/3.54 Fixed oxygen analysis and gas detection equipment

Type designation	EC Type-Examination Certificate No.	Expiry date	Notified Body No.	USCG approval number
FlexADOS 914 MED <sup>1</sup>	MEDB00006DG	2025-06-14	0098	N/A
GTR 210 EX MED <sup>1</sup>	MEDB00006EV	2025-06-14	0098	N/A

### Places of production

1. Ados GmbH, Trierer Str. 23-25, Aachen, Germany