

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Flow Transmitter**

with type designation(s)

**CONTOIL® control VZF, VZFA, VZF II, VZFA II**

Issued to

**Aquametro Oil & Marine AG**  
**Therwil BL, Switzerland**

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

Issued at **Hamburg** on **2018-04-17**for **DNV GL**This Certificate is valid until **2020-11-08**.DNV GL local station: **Augsburg**Approval Engineer: **Dariusz Lesniewski**

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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.



## Product description

Fuel Oil Meter with multifunctional LC Display

Nominal diameter:	DN 15 to DN 50
Nominal pressure:	PN 16, 25
Temperature ranges:	130°C and 180°C
Flow rate:	10...30.000 l/h
Max. permissible error:	±1% of actual value VZF, VZF II ±0.5% of actual value VZFA, VZFA II
Repeatability:	±0,2%
Output signals:	Volume pulses, mass pulses (VZF/A II) Signals for flow rate (4...20mA, 0...100 Hz) VZF/A Signals for flow rate (4...20mA, 0...200 Hz) VZF/A II Limiting value switch for flow rate
Display ambient temp.:	-25°C...+70°C
Display storage temp.:	-25°C...+85°C
Display power supply:	24VDC (6VDC...30VDC)
Display protection class:	IP66 / IP 68 (VZF/A II) / IP 69 (VZF/A II)
Software versions:	V3.00.xx (VZF/A) V4.01.xx (VZF/A II)

## 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 Reports: Quinel U789-05-5 a, U789-51-5; SEV 05-IK-0332  
Test Reports: SWISSTS 5'017'739/1-/4; SZMF D470/2005  
Test Reports: Quinel E2099-05-15, E2099-21-15, E2099-23-15, E2099-24-15  
Test Reports: electrosuisse 15-IK-0196.E01, 15-IK-0094.U01  
Test Report: Quinel U1961-21-14  
Software Development Documentation  
Mounting and Operating Instructions: VD 4-419 02.2006, VD 4-356 09/2015

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## 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

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Certificate No: **TAA00001TM**

- 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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE