DNV·GL

Certificate No:
TAA00001T6

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Switches

with type designation(s)
VEGASWING 66 Series, type SG66(*)

Issued to
VEGA Grieshaber KG
Schiltach, 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.

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C, D**

Issued at **Hamburg** on **2018-05-28**
This Certificate is valid until **2023-05-27**.
DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

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.

Job Id: **262.1-028047-1**
Certificate No: **TAA00001T6**

Product description

Sensor for point level detection in liquids with tuning fork

VEGASWING 66
SG66(*)**.a b c de f g h i j k**

a	Scope (approval directive)
	A, I, F, C, R, U, G, B, N, M, K
b	Approval
	M, **O** and other 1-Digit alphanumeric code for combination with several Ex-Approvals (1)
c	Version / Material
	K compact version / Inconel 718 **R** with tube extension / 316L und Inconel 718 **H** with tube extension / Hastelloy C22 und Inconel 718 The extension tube has to be guided at the end and at every further 500 mm
de	Process Connection / Material
	2-digit alphanumeric code for different flange- or thread variants
f	Second line of defense /process temperature
	A with/ -196…450°C **X** without / -196…450°C
g	Electronics
	R Relay (2x SPDT) 20...72VDC/20...253VAC (5A) **T** Transistor (NPN/PNP) 9,6...55VDC **Z** Two wire 8/16 mA 9,6...35VDC **S** Relay (2x SPDT) 20...72VDC/20...253VAC (5A) SIL **I** Transistor (NPN/PNP) 9,6...55VDC SIL **L** Two wire 8/16 mA 9,6...35VDC SIL
h	Housing / Protection
	K Plastic / IP66/IP67 **A** Aluminium / IP66/IP67 resp. IP66/IP68 (0,2bar) **V** Stainless Steel 316L / IP66/IP67 resp. IP66/IP68(0,2bar) **H** Special colour aluminium single chamber / IP66/IP67 resp. IP66/IP68
i	Cable entry / connection
	M, S, T, K, U, V, L, O, 2, D, 1, 6, N, Q, J, P, 8, C, R, B, I, F, G, H, W, Z
j	Switching Status Indication
	X no
k	Certificate
	M yes (e.g. FDA, EN 10204-3.1, NACE etc.) **X** no

(1) Ex-Approvals to be requested separately (see manufacturer's web-configurator)
(*) 1- or 2-digit(s) alphanumeric code for customer specific labelling

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.

Application/Limitation

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

Type Approval documentation

Test Report: Hermes Hansecontrol No. 13-L-00895-01
Test Report: Hermes Hansecontrol No. 13-L-00896-01
Test Report: Hermes Hansecontrol No. 13-L-00897-01
Test Report: Paconsult No. 13-5074
Test Report: Paconsult No. 08-2268
VEGA – Inhouse Test Reports
Drawings, Circuit Diagrams and Layouts acc. to GL File: 13122013
VEGASWING66_R/S_Z/I_T/L
Ref. documents: Update No. 1 of DNV GL-Type Approval VEGASWING66_R/S_Z/I_T/L, dated 20.04.2018
Type approval assessment report issued at Augsburg on 2018-02-08.

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
- 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