DNV·GL

Certificate No:
TAA00002T7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Transmitter

with type designation(s)
VEGACAP 62, 63, 64, 65, 66

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.

Location classes:

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

Issued at **Hamburg** on **2020-06-08**
This Certificate is valid until **2025-06-07**.
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.

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.

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Job Id: **262.1-033375-1**
Certificate No: **TAA00002T7**

Product description

Capacitive Sensor for Level Detection, series VEGACAP 62, 63, 64, 65, 66.
Applicable for level detection in conductive or non-conductive liquids (62,63,64,66) or solids (62,65,66).
Main characteristics:

Sensing element	rod or rope - fully or partly insulated
Rod length	up to 6m with fixing after each one meter (1m)
Rope length	up to 33m
Process fitting	thread or flange
Process pressure	max. 64bar
Housing	plastic, stainless steel or aluminium
Electronics	relay output, transistor output, contactless electrical switch, two-wire
Power supply	230V AC
Degree of protection	IP66, IP 67, 68
Ex-proof protection	according to the manufacturer's specification

Type code for VEGACAP-series:
CP62. **aM b c d e f**
CP63. **aM b c d e f**
CP64. **aM b c d e f**
CP65. **aM b c d e f**
CP66. **aM b c d e f**

a = Approval		
	X	without Ex approval
	A...Z	with Ex approval (Ex-proof certificates to be provided by the manufacturer) (*only in connection with electronics Z)
b = Version / Temperature range		
	for CP62/63/64	
	A	Standard / -50…150 °C
	B	Standard / -50…200 °C
	C	with screening tube 316L / -50…150 °C
	K	Standard / -50..+150°C, PEEK
	D	with screening tube 316L / -50…200 °C
	E	PE-Insulation / -40…80 °C (CAP63 only)
	F	PTFE-Insulation / -50…150 °C
	G	PTFE-Insulation / -50…200 °C
	for CP65	
	K	cable Ø 6 mm / 316L with gravity weight / -50…150 °C
	L	cable Ø 6 mm / 316L with gravity weight / -50…200 °C
	M	PA insulated steel cable Ø 12 mm / with gravity weight / -50…80 °C
	for CP66	
	N	PTFE-Insulated steel cable Ø 8 mm / with gravity weight / -50…150 °C
	3	PTFE-Insulated steel cable Ø 8 mm / with gravity weight and screening pipe / -50…150 °C
c = Process connection / Material thread, others		
d = Electronics		
	C	Contactless electronic switch 20…253VAC/DC
	R	Relay (DPDT) 20…72VDC / 20…253VAC (5A)
	T	Transistor (NPN / PNP) 10…55VDC
	Z	Two-wire for connection to VEGATOR
e = Housing / Protection		
	K	Plastic / IP66 / IP67
	A	Aluminium / IP66 / IP67
	V	Stainless steel 316L / IP66/ IP67
	3	Aluminium / IP66 / IP68 (0,2 bar)
	5	Stainless steel 316L / IP66/ IP68 (0,2 bar)
f = Cable entry / Cable gland / Plug connection		

	M	M20x1.5 / with / without
	N	1/2 NPT / without / without
	J	1/2 NPT / without / without

Application/Limitation

EMC in the range 2 GHz to 6 GHz according to DNVGL-CG-0339, December 2019 has not been verified. EMC up to 6 GHz must additionally be documented for installation on ships contracted for construction on or after 2022-01-01.

Type Approval documentation

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
- 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