

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Transmitter

with type designation(s)
VEGAPULS 6X

Issued to

VEGA Grieshaber KG
Schiltach, Germany

is found to comply with

DNV 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.

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

Issued at **Hamburg** on **2022-06-27**

This Certificate is valid until **2027-06-26**.

for **DNV**

DNV 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.

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.



Product description

Radar sensor VEGAPULS 6X for non-contact level measurement of liquids and bulk solids.

Type designation: **PS6X(Z)(*) .2**...

(Z) = Not used or SI

(*) = For internal use, not relevant for approvals

.2 = Second sensor generation

Measuring range	up to 120 m
Supply voltage	12...35 DC (external type approved power supply required)
Signal output	4...20mA / HART
Frequency (frequency range)	80 GHz (76-84 GHz). Switchable frequency range by operating modes 1 to 5, applicable for country specific setting
Antenna	Thread with integrated horn antenna Flange with encapsulated antenna system
Process fitting	Thread G $\frac{3}{4}$ ", Thread G1", Thread G1 $\frac{1}{2}$ " or $\frac{3}{4}$ "NPT, 1"NPT or 1 $\frac{1}{2}$ "NPT Flanges with different sizes in various thicknesses with material at least 316/316L
Materials (antenna/seal)	Material composition of antenna lens and O-ring (if one is needed) Lens material: PEEK, PTFE or PFA O-ring: FKM, FFKM or EPDM
Housing	Single or double chamber housing of plastic, aluminum or stainless steel Protection class IP66/IP67 or IP66/IP68 (0.2bar)
Cable entry / connection	Cable gland (M20x1.5 or NPT) or Plug connector (M20x1.5)
Display and operation	With or without display/adjustment module PLICSCOM
Electronics	two-wire 4...20 mA/HART two-wire 4...20 mA/HART with overvoltage protection

HW Version: 1.0.x

SW Version: 1.0.x

External type approved power supply required.

Manufactured by

VEGA Grieshaber KG

Am Hohenstein 113

77761 Schiltach

Germany

VEGA Americas, Inc.

4241 Allendorf Drive

Cincinnati, OH45209

United States of America

VEGA India Level and Pressure Measurement Pvt. Ltd.

Plot No. 1, Gat No. 181

Village - Phulgaon, Tal. Haveli

412216 Pune

India

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.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

Marking of product

The products to be marked with:

- manufacturer name VEGA Grieshaber KG



Job Id: 262.1-036880-1
Certificate No: TAA0000367

- model name	VEGAPULS 6X
- serial number	s/n xxxxxxxx
- power supply ratings	12...35V DC, 4...20mA HART
- IP code	IP66/68

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