DNV·GL

Certificate No:
TAA00002KF

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Transmitter

with type designation(s)
VEGABAR 28, 29, 38, 39

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

Issued at **Hamburg** on **2020-01-20**
This Certificate is valid until **2025-01-19**.
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.

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Product description

VEGABAR 28(*), 29(*), 38(*), 39(*)
Pressure transmitter with ceramic measuring cell VEGABAR 28(*)/38(*)
Pressure transmitter with metallic measuring cell VEGABAR 29(*)/39(*)
Models with valve-plug, M12-plug or cable outlet (BAR 28/29)
Models with operating/indication unit (BAR 38/39)
Pressure ranges (gauge): 0…60 bar (VEGABAR 28/38)
0…1000 bar (VEGABAR 29/39)
Product varians/main features:

1. Process fitting / Material (selectable)
   Thread M20x1,5; EN837; manometer connection / 316L
   Thread M24x1,5; DIN13; front flush / 316L; EPDM
   Thread ½NPT, inside ¼NPT, ASME B1.20.1 / 316L
   Thread ½NPT, ASME B1.20.1 / 316L
   Thread G½, ISO228-1; front flush with O-Ring / 316L; FKM
   Thread G½, ISO228-1; front flush with O-Ring / 316L; EPDM
   Thread G¼, ISO228-1 / 316L
   Thread ¼NPT, ASME B1.20.1 / 316L
   Thread G¾, DIN3852-E; front flush / 316L
   Thread G1, ISO228-1; front flush / 316L (Ra<0,76µm), EPDM;
   for hygienic adapter sealing with O-ring
   Thread G1, ISO228-1; front flush / 316L; FKM
   Thread G1, ISO228-1; front flush / 316L; EPDM
   Thread 1½NPT, ASME B1.20.1; front flush / 316L
   Thread G1½, DIN3852-A; front flush / 316L
   Thread G½, EN837; manometer connection / 316L
   Thread G1, ISO228-1; cone 40°, front flush / 316L (Ra<0,76µm);
   for hygienic adapter metallic sealing
   Thread G½, inside G¼, ISO228-1 / 316L
   Clamp ¾" PN40 (ø40 mm) DIN32676, ISO2852; front flush / 316L (Ra<0,76µm)
   Clamp 1" PN40 (ø50,5mm) DIN32676, ISO2852; front flush / 316L (Ra<0,76µm)
   Clamp 1½" PN40 (ø50,5mm) DIN32676, ISO2852; front flush / 316L (Ra<0,76µm)
   Clamp 2" PN40 (ø64mm) DIN32676, ISO2852; front flush / 316L (Ra<0,76µm)
   Collar connector DN25 PN40, DIN11851; front flush / 316L (Ra<0,76µm)
   Collar connector DN40 PN40, DIN11851; front flush / 316L (Ra<0,76µm)
   Collar connector DN40 PN40 Form A, DIN11864-1; front flush / 316L (Ra<0,8µm)
   DN25 PN40 Form A, DIN11864-1; front flush / 316L (Ra<0,76µm)
   SMS DN25 PN6; front flush / 316/316L (Ra<0,8µm)
   SMS DN38 PN6 / 316L (Ra<0,76µm)
   SMS DN51 PN6 / 316L (Ra<0,76µm)
   Ingold connection PN10 / 316L; EPDM (Ra<0,76µm)
   Varivent N50-40 PN25; front flush / 316L (Ra<0,76µm)
   Varivent F25 PN25; front flush / 316L (Ra<0,76µm)
   Thread M24x1.5; DIN 13; front flush / 316L; EPDM
   Other equivalent process connections on request

2. Housing with Electronics (selectable)
   Two-wire 4 ... 20 mA
   Three wire 1x transistor or 4 ... 20 mA
   Three wire with IO-Link (2x Transistor or 4 ... 20 mA plus 1x transistor)

3. LED illuminated ring

4. Ventilation/pressure compensation
   Only standard length available

5. Electrical connection / Protection (selectable)

4-pole plug connection ISO4400 M16 / IP65
4-pole plug connection with hinged lid ISO4400 M20 / IP65
4-pole plug connection ISO4400 with QuickOn connection / IP67
M12x1 / IP66/67/69
M12x1 / Stainless Steel IP66/67/69
With direct cable outlet / IP66/IP68 (0.5 bar) / IP 69 & Cable of PUR (5m / 10m/ 25m)
Sensor setting with smartphone an VEGA Tools app (optional)
(*) = Optional, one- or two-digit variable for production control

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

Technical description VEGAZW-6-59354 (Revision 01, dated 2019-11-27)
Test reports: VEGAZW-659354, Ch. 7.3 - Test Reports & References
Test report: VEGA 1-05_POINT23_F1_1_Vibration-Sinus 1g_Schiff_clamp_2019-12-11
Test report: VEGA 1-05_BAR38-2LEB_N_1_Vibration-Sinus 1g_Schiff_Varivent_2019-12-19
Test report: VEGA 1-05_BAR38-2LEB_N_2_Vibration-Sinus 1g_Schiff_clamp_2020-01-09
Test protocol: VEGA QA_BAR2x_3x_POINT23_Vibrationtest-ship_Clamp_Varivent.docx
Drawings: VEGAZW-659354, Ch. 8 – drawings, schematics & further documents
VEAGA document: Product description for Application DNV GL – Approval, 2020-01-09

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