

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Submersible Pressure Transmitter**with type designation(s)
8859 ...

Issued to

Trafag AG
Bubikon, ZH, 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:**

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	D

Issued at **Hamburg** on **2020-02-12**for **DNV GL**This Certificate is valid until **2025-02-11**.DNV GL local station: **Augsburg**Approval Engineer: **Dariusz Lesniewski**

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: **262.1-024416-2**
Certificate No: **TAA000014B**
Revision No: **1**

Product description

Pressure type: gauge or absolute (vacuum)
Pressure range: 0...0.1 bar up to 0...25 bar
Power supply: 24V DC (9V DC min. ... 28V DC max.)
Output signal: 4...20mA, 2-wire connection, loop-powered
Accuracy: better than $\pm 0.25\%$ FS (at 25°C)
Total error range: better than $\pm 1.0\%$ FS
Electrical connection: fixed cable
Fixing: freely suspended cable
Material: housing, diaphragm, process connection - stainless steel or titanium
 seals - Viton
 cable PUR or FEP (Installation inside tank only)
Degree of protection: IP68
Intrinsic Safety: see certificate: SEV 12 ATEX 0164 X

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

Models with cable material PUR or FEP for installation inside tank only

Type Approval documentation

Test Reports: STS No. 6.59(60).0867.A.PB/TBxx.doc
Test Report: STS 'Trockene Wärme' 12.03.2012
Test Reports: Mettler-Toledo No. 20091134.A02.01 and No. 20081106.A02.01
Test Report: Montena EMC No. 15'694; Ex-Cert.: SEV 09 ATEX 0108
Circuit Diagrams: 4.30.0129.C & 4.30.0139
Data Sheet: H72335a
Certificate: SEV 12 ATEX 0164 X
Type approval assessment report issued at Augsburg on 2019-11-21

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

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

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- 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