

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pressure Transmitter**with type designation(s)
P121, P131

Issued to

**Nöding Messtechnik GmbH
Hamburg, Germany**is found to comply with
DNV GL rules for classification – Ships**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	B/D (*)

(*) see product description on page 2This Certificate is valid until **2021-05-31**.Issued at **Hamburg** on **2016-06-01**DNV GL local station: **Hamburg**Approval Engineer: **Dariusz Lesniewski**for **DNV GL**

**Duy Nam Le
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.

Product description

Sensing element:	Ceramic sensor
Measuring range:	0..40 mbar to 0..250 bar (P 121) 0..40 mbar to 0..60 bar (P 131)
Power supply:	24V DC (9...32V DC), Ex-protected (12...30V DC)
Output signal:	0...10V 3-wire or 4...20mA 2-wire
Materials:	Housing: 1.4404 Sensor: Ceramic Al2O3 O-Ring: FPM, NBR, EPDM, Kalrez (other on request)
Process connection:	G 1/4 A, G 1/2 A, 1/2-14 NPT (P 121) G 1 A, G 1 1/2 A (P 131)
Electrical connection:	Connector DIN 43650 / M12x1 or cable 2m/5m
Degree of protection: (enclosure*)	IP 65 - connector IP 68 (1mWC) - cable
Ex-proof protection:	as Ex-Proof Certificate

Application/Limitation

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

Test Reports: MAZ: 96/756-1-1, 96/756-1-2, 96/756-2-1; RMS: 3-02/96
Test Reports: HanseControl: 06-L-00237-01, 06-L-00238-01;
Test Report: Nöding: Conducted Low Frequency Interferences, 01.03.96
Data sheets: 'Pressure transmitter P 121 / P 131' (03.06)
Ex-Proof Certificate: BVS 03 ATEX E 222
Type Approval Assessment Report issued at Hamburg on 2016-05-26

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2015.

Marking of product

Components are 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
- 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 once in the period of validity and at renewal of this certificate.

END of CERTIFICATE