DNV·GL

Certificate No:
TAA000019J

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Transmitter

with type designation(s)
**PCE-28 (PC-28), PCE-28P (PC-28P), PRE-28 (PR-28),
APC-2000ALW, PCE-28Smart (PC-28Smart),
APR-2000ALW, PRE-28Smart (PR-28Smart)**

Issued to
APLISENS S.A.
Warszawa, Poland

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	**B**
EMC	**B**
Enclosure	**C**

Issued at **Høvik** on **2017-07-03**

This Certificate is valid until **2022-06-30**.
DNV GL local station: **Gdansk**

Approval Engineer: **Nils Jarem**

for **DNV GL**
Digitally Signed By: Aleks Karlsen
Location: DNV GL Høvik, Norway
Signing Date: 2017-07-04, on behalf of

Odd Magne Nesvåg
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: **262.1-006045-4**
Certificate No: **TAA000019J**

Product description

The following type designations are included in the certificate:

Pressure transmitter PCE-28 (PC-28)
Pressure transmitter PCE-28P (PC-28P)
Differential pressure transmitter PRE-28 (PR-28)
Smart pressure transmitter APC-2000ALW
Smart pressure transmitter PCE-28Smart (PC-28Smart)
Smart differential pressure transmitter APR-2000ALW
Smart differential pressure transmitter PRE-28Smart (PR-28Smart)

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

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

The cable installation has to be carried out according to the rules for classification of ships with repect to routing, fixing, protection, penetration of decks / bulkheads and the use of cable pipes. Fixing of cables above sensor shall be provided

Type Approval documentation

User's Manual	DTR.APC.APR.ALW.03 DTR.PCE.PRE-28.02 DTR.PCE.PRE-28.Smart.01
APLISENS Technical specification	Dated 27.08.08, supplemented 15.02.13
Drawings	PC28-A114-TA or PC28-A121-TA; PR28-A114-TA or PR28-A122-TA; PC28P-A001-TA APC2000-A614-TA; APR2000-A615-TA PR28S-A002-TA; PC28S-A002-TA PC28-S032-02 or PC28-S121-00; PC18-S001-01 APC2000-S611-02; PC28S-S001-01
APLISENS Product Catalogue	Edition 2013/14

IEL (The Electrotechnical Institute) Gdansk Test Report	No. 050/LMC-967/2009, dated 24.03.2009 No. 017/LBS-967/2009, dated 30.03.2009 No. 046/LMC-967/2009, dated 24.03.2009 No. 019/LBS-967/2009, dated 30.03.2009 No. 048/LMC-967/2009, dated 23.03.2009 No. 026/LBS-967/2009, dated 30.03.2009 No. 049/LMC-967/2009, dated 24.03.2009 No. 024/LBS-967/2009, dated 30.03.2009 No. 047/LMC-967/2009, dated 23.03.2009 No. 020/LBS-967/2009, dated 30.03.2009 No. 028/LMC-968/2009, dated 17.03.2009 No. 016/LBS-968/2009, dated 16.03.2009 No. 027/LMC-968/2009, dated 17.03.2009 No. 015/LBS-968/2009, dated 16.03.2009 No. 045/LMC-822/2013 dated 14.05.2013 No. 044/LMC-822/2013 dated 14.05.2013 No. 046/LMC-822/2013 dated 14.05.2013 No. 051/LBS-822/2013 dated 29.05.2013 No. 049/LBS-822/2013 dated 29.05.2013 No. 050/LBS-822/2013 dated 29.05.2013

Type approval renewal assessment report for A-13385, DNV GL Gdansk 2017-05-31.

Tests carried out

Applicable tests according to DNV Standard for Certification No. 2.4, April 2006.

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