



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA000019J
Revision No:
1

This is to certify:

That the Pressure Transmitter

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

Issued to

APLISENS S.A.
Warszawa, Poland

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.

Location classes:

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	C

Issued at **Høvik** on **2022-06-17**

for **DNV**

This Certificate is valid until **2027-06-30**.

DNV local station: **Gdansk CMC**

Approval Engineer: **Martin Skårerverket**

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Marta Alonso Pontes
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.



Form code: TA 251

Revision: 2021-03

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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-28.Smart (PC-28.Smart)
 Smart differential pressure transmitter APR-2000ALW
 Smart differential pressure transmitter PRE-28.Smart (PR-28.Smart)

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.

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 respect 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

Test Reports:

	Number:	Rev. / Date:
Test report EMC - PC-28	DPL/003/232/21	- / 2022-02
Test report Environmental - PC-28	DPL/003/233/21	- / 2022-02
Test report HV/Insulation resistance - PC-28	DPL/003/234/21	- / 2022-02
Test Report Power Supply Variations - PC-28	DPL/003/058/22	- / 2022-06
Test report EMC/Environmental - PC-28.Smart	DPL/003/231/21	- / 2022-02
Test report Environmental - APC-2000ALW	DPL/003/229/21	- / 2022-02
Test report EMC - APC-2000ALW	DPL/003/206/21	- / 2022-02
Test report Vibration - APC-2000ALW	DPL/003/228/21	- / 2022-02
Test report HV/Insulation resistance - APC-2000ALW	DPL/003/230/21	- / 2022-02
Test Report Power Supply Variations - APC2000ALW	DPL/003/057/22	- / 2022-06

Technical Manuals:

APC-2000ALW, APR-2000ALW, APR-2000ALW/G,	EN.IO.APC.APR.ALW	02.A.007 / 2021-06
APR-2000ALW with diaphragm seals - User manual	EN.IO.PCE.PRE.28	01.A.001 / 2021-08
PCE-28/P, PRE-28 - User manual	EN.IO.PCE.PRE.28.SMART	01.A.001 / 2021-10
PCE-28.SMART, PRE-28.SMART - User manual	EN.IX.APC.APR.ALW	01.A.005 / 2020-08
Explosion proof device manual	-	-
PCE-28 datasheet	-	-
PCE-28P datasheet	-	-
PCE-28.Smart datasheet	-	-
PCE-28/EXD datasheet	-	-
PCE-28.Smart/EXD datasheet	-	-
PRE-28 datasheet	-	-
PRE-28.Smart datasheet	-	-
APC-2000ALW datasheet	-	-
APR-2000ALW datasheet	-	-

Drawings:

APC2000-A614-TA (2022-01), APC2000-S602-02 (2014-10), APC2000-S611-01 (2014-02), APC2000-S657-TA (2018-02), PR28-A122-TA (2021-11), PC28-A121-TA (2021-11), PC28P-A001-TA (2013-01), PC28-S032-02 (2010-03), PC28-S121-00 (2012-06), PC28-S125-TA (2021-12), PC29-S030-TA (2020-02), PC28S-A002-TA (2011-07), PR28S-A002-TA (2011-06), PC28S-S001-01 (2011-07)

Type approval renewal assessment report for TAA000019J, DNV Gdansk 2022-06-13

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
- 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