IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx JSH 24.0009X** Page 1 of 3 Certificate history:

Status: **Current** Issue No: 0

Date of Issue: 2024-10-31

Applicant: **APLISENS S. A.**
ul. Morelowa 7
03-192 Warszawa
Poland

Equipment: **Smart pressure transmitters type APC-2000ALM, smart diferential pressure transmitters type APR-2000ALM, APR-2000ALM/G, smart level probe type APR-2000YALM.**

Optional accessory:

Type of Protection: **Equipment protection by flameproof enclosure “d”, intrisic safety "ia". Dust ignition protection by enclosure "t"**

Marking: **Ex db ia I Mb ***

Ex ia/db IIC T5 Ga/Gb

Ex db ia IIC T5 Gb (for APR-2000ALM/G)

Ex ia tb IIIC T100°C Db

*** - only stainless steel version of enclosure**

Approved for issue on behalf of the IECEx Certification Body: **Damian Wróbel**

Position: **Head of ExCB**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

J.S. Hamilton Poland Sp. z o.o
Wyzwolenia 14
Siemianowice Śląskie 41-103
Poland

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Manufacturer: **APLISENS**
ul. Morelowa 7, 03-192 Warszawa
Poland

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-26:2014 Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

PL/JSH/ExTR24.0009/00

Quality Assessment Report:

PL/KDB/QAR12.0001/07

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

APC–2000ALM pressure transmitters are designed to measure overpressure, underpressure and absolute pressure of gases, vapours and liquids (also with corrosive properties). APR–2000ALM differential pressure transmitters are used to measure levels in closed tanks and to measure pressure differences across accumulating elements such as filters, orifices, etc. APR–2000YALM level probes are used to measure liquid levels in closed tanks. APR–2000ALM/G transmitters are used to measure the pressure of non-aggressive gases. APC–2000ALM, APR–2000ALM transmitters can be additionally equipped with a number of types of separator process connections, which allows them to be used in various conditions such as: dense, aggressive, high and low temperature media, etc.

The basic unit of the transmitter and the probe is a measuring head with a silicon diaphragm sensor, working in the intrinsically safe circuit (Ex ia), mounted in transmitter enclosures. Measuring heads can be equipment with differentia pressure connections. Inside the head there is the "pressure chamber" filled with manometer liquid. It os limited by a diaphragm welded tightly to the head`s body, on the side of measured medium.

Differential pressure transmitters have two separated diaphragms for the inputs: "+" and "-". Inside the head there is a bushing in witch a measuring silicon diaphragm with piezoresistors is installed. The parts of the diaphragm seals can be coated with teflon.

Enclosures of transmitters are made of die-cast aluminium alloy or stainless steel. Enclosure consists of a body and two screwed covers (display cover and electrical connetion cover). The cable is enters into the enclosure by cable gland with thread M20x1,5 or 1/2NPT depending on the version of the enclosure body. In the non-used opening there is mounted plug.

The device version including the flameproof enclosure requires use of flameproof cable gland and plug. The device in the Ex d and Ex t version includes plug produced by Aplisens S.A.

The measuring head working in the intrinsically safe circuit (Ex ia), in the version of the device including the flameproof enclosure, is separated from the rest of the equipment by the bushing.

The transmitter enclosure also includes a terminal strip for connecting the power supply and Modbus RTU transmission.

Technical characteristics:

Ambient temperature	- 40°C ÷ +75°C (pressure transmitter)
	- 25°C ÷ +75°C (differential pressure)
Special version:	from -50°C
Ingress protection	IP66 / IP67
Output signals	MODBUS RTU
Power supply voltage	12 ÷ 30 V DC

SPECIFIC CONDITIONS OF USE: YES as shown below:
- In dust explosion hazardous areas, transmitters in varnished aluminum enclosures, as well as transmitters equipped with plastic rating plates and with parts of diaphragm separators covered with a PTFE layer, should be installed in a way that prevents electrostatic charging, in accordance with the operating instructions
- The diaphragm separator containing titanium elements must be protected against mechanical impacts.
- The diaphragm in contact with the medium must not be exposed to an environment that could damage it.
- The transmitter power supply should comply with overvoltage category II (or better) according to EN 60664-1.
- Flameproof joints are not intended for repair.