1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

3 Type Examination Certificate Number: **ExVeritas 24UKEX1805X** Issue: **0**

4 Product: Pressure transmitter PC-28, PCE-28, PC-28Ex Safety, PCE-28Ex Safety, Differential pressure transmitter PR-28, PRE-28, PR-28Ex Safety, PRE-28Ex Safety, Hydrostatic level probe PC-28P, PCE-28P, SG(E)-25, SG(E)-25S, SG(E)-25C

5 Manufacturer: Aplisens S.A.

6 Address: ul. Morelowa 7, 03-192 Warszawa, Poland

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 ExVeritas Limited Approved Body number 2585, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 **EN 60079-11:2012** **EN 50303:2000**

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

10 If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the equipment shall include the following: (see product description for full marking)

*see description for full marking

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

Schedule

13 Description of Product

Transmitters Px-28

M1 Ex ia I Ma	products with connection PD, PK, PKM, PZ, SG, SGM
II 1/2 G Ex ia IIC T6/T5/T4 Ga/Gb	products with connection PD, PK, PKM, PZ, SG, SGM, PM12, PKD
II 1/2 G Ex ia IIC T4 Ga/Gb	products with ALW, ALM with connection PD or PM12
II 1 D Ex ia IIIC T135°C Da	products with connection PD, PK, PKM, PZ, SG, SGM and ALW, ALM with connection PD

Probes SG(E)-25x

I M1Ex ia I Ma	all SG... types
II 1 G Ex ia IIC T6/T5/T4 Ga	products without plastic tip and plastic cover
II 1 G Ex ia IIB T6/T5/T4 Ga	products with cable with protection ETFE or with additional protection by PTFE with metal wire
II 2 G Ex ia IIC T6/T5/T4 Gb	products with cable with additional protection by PTFE without metal wire

The device is used as a pressure transmitter (PC*-28*), or differential pressure transmitter (PR*-28*), or hydrostatic level probes (PC*-28P, SG(E)-25*). The device converts non electrical process variable, which is pressure, into electrical 4…20 mA output signal. It consists of measurement head including pressure sensor (various types), fully encapsulated main PCB (additional small auxiliary PCBs might exists depending on version), steel cylindrical enclosure, cable connector (various types: with cable gland or fixed external cable). The hydrostatic level probes are installed in places where the liquid level is measured in wells, tanks, boreholes, etc. The probe is immersed in the measured medium.

Intrinsically safe parameters

Transmitters Px-28

Ambient temperature: -40°C < Ta < T_{amax} (special version for Group II only Tamin = -50 °C)

Power supply	Pi [W]	Tamax [°C]	Temperature class, Group	Surface temperature
Linear output characteristic: Ui=28VDC, Ii=0,1A	0,7	+45 °C	T6	85 °C
		+70 °C	T5	110 °C
		+80 °C	T4, Group. I, Group.III	120 °C
Rectangular or Trapezoidal output characteristic: Ui=24VDC, Ii=0,1A	1,2	+55 °C	T5	110 °C
		+80 °C	T4, Group. I, Group.III	135 °C

Input parameters:

Ver A: Ci=25 nF + cable capacitance*, Li=0,4 mH + cable inductivity*

Ver B: Ci=2.5 nF + cable capacitance*, Li=0 mH + cable inductivity*

* - concerns versions with PK(M), PKD and SG(M) connectors; cable parameters C=200pF/m, L=1µH/m

Schedule

Probes SG(E)-25x

Ambient temperature: -25°C < Ta <T_{amax}

Power supply	Pi [W]	Tamax [°C]	Temperature class, Group
Linear output characteristic: Ui=28VDC, Ii=0,1A	0,7	+45 °C	T6
		+70 °C	T5
		+80 °C	T4, Group. I
Rectangular or Trapezoidal output characteristic: Ui=24VDC, Ii=0,1A	1,2	+55 °C	T5
		+80 °C	T4, Group. I

Input parameters:

* Ci=2.5 nF + cable capacitance*, Li=0 mH + cable inductivity*
* - cable parameters C=200pF/m, L=1μH/m

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R4920/A/1	6th March 2025	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Rev. Level:	Drawing No.:	Date:
Technical documentation DT.PC.PR-28.Ex.08 List of construction drawings	1C, 2B	PC28-A150-00 (UKEX)	2024-07
PC-28 and PC-28 Safety series transmitters. Technical description.	1B, 2B, 3B, 4B, 5B	PC28-A150-01	2022-05
Hydrostatic depth probes: SG-25, SGE-25, SG-25S, SGE-25S, SG-25C, SGE-25C. Technical description	1B, 2B	SG25-A000-04	2022-04
Rating plate	1, 2, 3	PC28-C141-TA	2024-07
Rating plate	1, 2, 3	PC28-C142-TA	2024-07
Rating plate	1, 2	SG25-C006-TA	2024-07
Warning plate	1	PC28-C157-TA	2022-04
PC-28Ex SAFETY series transmitter Electrical diagram of the PC30Ex-rev1 board assembly (SIL_Ex)	1	PC28-S151-TA	2012-08
PC-28 series transmitter. Electrical diagram of the PC30Ex-rev2 board assembly (Ex version)	1A	PC28-S152-TA	2015-04
PC-28Ex SAFETY series transmitter. Electrical diagram of the PC30Ex-rev2 board assembly (SIL_Ex)	1	PC28-S153-TA	2012-08

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Electrical diagram of the PC30-rev7 board assembly	1	PC28-S126-TA	2022-04
AM1-rev2 display board assembly diagram	1, 2, 3, 4	(CER.Ex) PC28-S154-02	2015-12
PC30Ex-rev1 board assembly. Specification.	1, 2, 3, 4, 5	PC28-B151-TA	2012-08
PC30Ex-rev2 board assembly.	1B	PC28-B152-TA	2022-07
	2,		2012-08
	3, 4		2012-06
	5A		2015-03
	6A		2015-04
PC30-rev7 board assembly.	1, 2, 3, 4	PC28-B126-TA	2022-04
Display board assembly AM1-rev2 Specification	1, 2, 3, 4, 5, 6, 7	(CER.Ex)PC28-B154-02	2015-12
PZ-11 terminal board assembly	1, 2	APC2000-B122-01	2012-01
Electrical connection PCB PZ-11_rev2	1	PC28S-B015-TA	2024-01
Pressure transmitter PC-28, PCE-28, PC-28Ex SAFETY, PCE-28Ex SAFETY	1B, 2B, 3B, 4B, 5C, 6C	PC28-A151-TA	2022-04
Differential pressure transmitter PR-28, PRE-28, PR-28Ex SAFETY, PRE-28Ex SAFETY	1B, 2B, 3A, 4B, 5B	PR28-A152-TA	2022-04
PC-28P, PCE-28P hydrostatic level probe	1B, 2B, 3A, 4B, 5B	PC28P-A153-TA	2022-04
PC-28 series transmitters with PM12, PKD, ALW, ALM electrical connections	1B, 2B, 3B, 4A, 5	(CER.Exi) PC28-A156-TA	2022-04
PC-28, PCE-28 pressure transmitters with separators	1C	PC28-A154-TA	2022-04
	2		2012-07
Differential pressure transmitters PR-28, PRE-28 with separators	1C	PR28-A155-TA	2022-04
	2		2012-07
Depth probes SG-25, SG-25S, SG-25C, SGE-25, SGE-25S, SGE-25C	1A, 2A	SG25-A051-TA	2022-04
Complete display assembly	1	(CER.Exi) PC28-B155-02	2015-11
PG2_rev3 board assembly	1	PC29-B012-02	2010-12
PG3_rev1 board assembly	1	PC29-B013-01	2009-10
PG2_rev1 board assembly	1	PC29-B014-01	2009-10
PG_rev0 board assembly	1	PC28-B017-01	2012-08
PGN_rev0 board assembly	1	PC28-B018-01	2012-08
PGG_rev0 board assembly	1	PC28-B019-01	2012-08
Cable assembly	1C	ZA-002-TA	2022-04
	2		2022-04
Cable connection SG (Cable seals in the gland)	1A 1C	(CER.Ex)SG25-A061-TA	2017-07 2022-04
Header ∅15	1A	ZG-002-TA	2007-06
Culvert	1A	ZG-006-TA	2004-10
Head, low, medium and absolute pressure.	1D, 2D, 3D	GC3-001-TA	2019-01
Head with front diaphragm	1B, 2B	GC3-003-TA	2019-01
Medium, high, absolute pressure head.	1D, 2D, 3D	GC4-001-TA	2019-01
High pressure head	1D, 2D, 3D	GC4-005-TA	2017-07
Low pressure head with vacuum	1, 2, 3	GC4-019-TA	2012-02
Differential pressure head in welded version	1E, 2E, 3E, 4E	GR40-108-TA	2019-01
Differential pressure head	1B, 2B, 3B, 4B	GR40-109-TA	2019-02
Differential pressure head with covers	1F, 2F	GR40-003-TA	2016-10
Differential pressure head	1B, 2B	GR50-001-TA	2010-07

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Differential pressure head without mech. overload	1, 2	GR50-102-TA	2021-09
Level probe head	1, 2	GSP-002-TA	2008-10
Probe head SG25, SG25S, SG25C	1D, 2D	GC3-006-TA	2022-07
Depth probe head	1A, 2A	GC3-018-TA	2022-08
Probe head SG25, SG25S, SG25C	1, 2	GC4-006-TA	2011-08

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- Ambient temperature range – see Instruction manual and marking label.
- Process temperature (medium) at the diaphragm of the transmitter or probe must be in range of ambient temperature.
- In case of use the transmitter in dust atmosphere, supplying voltage could occur on transmitter enclosure. It should be taken into consideration during transmitter installation.
- In case of use titan parts in diaphragm seal, during installation and operation of the device the diaphragm seal should be protected against mechanical impact.
- Version of the transmitter or probe with surge arrester, marked on the plate “Version SA”, does not meet the requirements of Section 6.3.13 of IEC 60079-11:2011 (test of isolation 500 VAC). This must be taken into account during the installation of transmitters.
- Transmitters with display (with electrical connections ALW, ALM) and with diaphragm seals covered by PTFE, for Group III, should be installed in a place and in a way that prevents electrostatic charging.
- In hazardous areas, transmitters with diaphragm seals covered with a PTFE layer should be installed in places and in a manner preventing electrostatic charging.

15.2 Routine tests

None

16 Essential Health and Safety Requirements (Regulations Schedule 1)

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform ExVeritas of any modifications to the design of the product described by this schedule.