PE 141/15 **EU DECLARATION OF CONFORMITY**

Manufacturer: Pyropress Limited
Address: Bell Close, Plympton, Plymouth, Devon, England, PL7 4JH

The Manufacturer hereby declares that the Intrinsically Safe products: - Titan Type:

PF261, PF262	Pressure Switch		
PF263, PF264	High Pressure Switch	TF175, TF176	Capillary Temperature Switch
DPF265, DPF266	Differential Pressure Switch	FF503,	Flow Switch
PF266	Low Pressure Switch	LF34	Horizontal Level Switch
VF266	Vacuum Switch	LF35	Vertical Switch
DPF296	High Static Differential Pressure Switch	TF171, TE171, TF172, TE172	Temperature Switch

Comply with the requirements of:
Product Intended for Use in Potentially Explosive Atmospheres
EU Directive 2014/34/EU and UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.
II 1 G Ex ia IIC T* Ga T_{amb}* (*Refer to Certificate schedule)

International Electrotechnical Commission IEC Certification Scheme for Explosive Atmospheres
Ex ia IIC T6…T2 Ga (Tamb -50°C to +78°C…+128°C)

When used within the limitations and conditions of the product specifications, working instructions and:
EC Type Examination Certificate Number: ExVeritas 20ATEX0683X
IECEx Type Examination Certificate Number: IECEx EXV20.0035X
UKEX Type Examination Certificate Number: ExVeritas 21UKEX0896X

Harmonised standards applied: EN IEC 60079-0:2018, EN60079-11:2012
Other standards applied: IEC 60079-0:2017, IEC 60079-11:2011
Ingress Protection, BS EN 60529:1992+A2:2013, IEC 60529:1989+A1:1999+A2:2013; IP66 rated.
Other Directives applied:
Pressure Equipment 2014/68/EU (Sound Engineering Practice (SEP), Chapter 1, Article 4 (3).)

Notified Body responsible for EU Type Examination Certificate:
ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark. Notified body No 2804
Notified Body responsible for IECEx and UKEX Type Examination Certificates:
Ex Veritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, LL13 9UZ, UK.
Notified body No 2585.
Notified Body responsible for Quality Assurance:
Intertek Testing Services NA Ltd, 14920-135 Avenue, Edmonton, AB, T5V 1R9, Canada. Notified body No 2903.
Intertek Testing & Certification Ltd, Intertek House, Cleeve Road, Leatherhead, Surrey, England KT22 7SB.
Notified body No: 0359.

Equipment Specification: Product specifications are listed in the Technical file TCF 1002

This Declaration may only be used in its entirety & without change. Modification of this equipment / product without prior approval from Pyropress Limited will render this declaration null & void.

Stephen Burns, Managing Director, On Behalf of Pyropress Limited

Signed.....Dated.... 10th October 2022.

1 EU - Type Examination Certificate

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: ExVeritas 20ATEX0683X Issue: 2

4 Equipment: Titan Ex ia Switch

5 Manufacturer: Pyropress Ltd

6 Address: Bell Close
Plympton
Plymouth
Devon, PL7 4JH, UK.

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

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

EN IEC 60079-0: 2018 EN 60079-11: 2012

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 EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall include the following:

Ex II 1 G Ex ia IIC T* Ga T_{amb}*

*Refer to the certificate schedule below.

DANAK
PROD Reg.No. 7044
Member of EA MLA

On behalf of ExVeritas

Peter Lauritzen
Managing Director

Schedule

13 Description of Equipment or Protective System

The Titan range of switches include one or two micro switches which are mounted inside an enclosure and which are operated by means of mechanical actuators reacting to particular external phenomena. The Titan reed level switch includes one or two switches acting on the movement of the magnets indicating level of the medium. There are two alternative materials for the enclosure housing the terminals, used for external connections and micro switches. The enclosures are made from stainless steel or aluminium. The enclosures provide a degree of protection of IP66. Various switch actuation mechanism options are provided including pressure, differential pressure, level, flow or temperature switches covering different temperature ranges.

Input Parameters are: Ui: 28V, Ii: 93mA, Pi: 0.65W, Ci: 0F, Li: 0H

The relation between maximum ambient temperature, process temperature range and assigned temperature class is shown below:

Ambient Temperature Range	Permitted Process Temperature	Temperature Class
-50°C ≤ Ta ≤ +78°C	-50°C ≤ Tp ≤ +78°C	T6
	-50°C ≤ Tp ≤ +95°C	T5
-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +93°C	T5
	-50°C ≤ Tp ≤ +130°C	T4
-50°C ≤ Ta ≤ +128°C	-50°C ≤ Tp ≤ +128°C	T4
	-50°C ≤ Tp ≤ +195°C	T3
	-50°C ≤ Tp ≤ +260°C	T2

13.1 Detail of changes

Issue 1

- Transfer of certificate to Danish NB – no drawing changes

Issue 2

- Minor drawing changes and additional X condition regards use of Gunmetal & Marine Brass in Acetylene atmospheres

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2746/A/1	2020/07/16	0	Initial issue of the Prime Certificate
N/A – ExV3035	31 Oct 2020	1	Transfer of the certificate from ExVeritas UK, Notified Body number 2585 to ExVeritas Denmark, Notified Body number 2804. Certificate number remains unchanged.
R4173/A/1	10 Oct 2022	2	Issue of Variation 1

Schedule

14.2 Compliance Drawings:

Issue 2

Title:	Drawing No.:	Sheets	Rev	Date:
Certification Drawing Titan Ex ia Switch	1281/A1	1 of 1	4	22.09.22
Certification Drawing, Two/Three/Four Terminal PCB Titan Ex ia	1264/A3	1 of 1	4	27.05.20
Certification Drawing Six Terminal PCB, Titan Ex ia	1265/A3	1 of 1	3	27.05.20

15 Conditions of Certification

15.1 Special Conditions for Safe Use

- For Ga installations – The equipment may be constructed using aluminium for the housing and internal parts and may only be used when the ignition hazard assessment shows there is no risk of ignition from incendive impact or abrasion sparks.
- For IIC applications, F_5 configurations utilising plates made from alloys with high copper content (e.g. gunmetal or marine brass) may only be used in atmospheres free from acetylene due to the potential formation of acetylides on external surfaces that can be ignited by friction or impact.

15.2 Conditions for Use (Routine tests)

- None

16 Essential Health and Safety Requirements

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 the Notified Body of any modifications to the design of the product described by this schedule.

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 EXV 20.0035X**

Page 1 of 4

Certificate history:
Issue 0 (2020-11-05)

Status: **Current**

Issue No: 1

Date of Issue: 2022-10-11

Applicant: **Pyropress Ltd**
Bell Close
Plympton
Plymouth
Devon
PL7 4JH
United Kingdom

Equipment: **Titan Ex ia Switch**

Optional accessory:

Type of Protection: **Intrinsic Safety Ex 'ia'**

Marking: Ex ia IIC T6….T2 Ga (Tamb -50°C to +78°C…+128°C)

Approved for issue on behalf of the IECEx Certification Body: **Sean Clarke CEng MSc FIET**

Position: **Certification Manager**

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:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx EXV 20.0035X**

Date of issue: 2022-10-11

Manufacturer: **Pyropress Ltd**
Bell Close
Plympton
Plymouth
Devon
PL7 4JH
United Kingdom

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

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 Reports:

GB/EXV/ExTR20.0054/00 GB/EXV/ExTR22.0094/00

Quality Assessment Report:

GB/ITS/QAR11.0004/08

IECEx Certificate of Conformity

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

The Titan range of switches include one or two micro switches which are mounted inside an enclosure and which are operated by means of mechanical actuators reacting to particular external phenomena. The Titan reed level switch includes one or two switches acting on the movement of the magnets indicating level of the medium. There are two alternative materials for the enclosure housing the terminals, used for external connections and micro switches. The enclosures are made from stainless steel or aluminium. The enclosures provide a degree of protection of IP66. Various switch actuation mechanism options are provided including pressure, differential pressure, level, flow or temperature switches covering different temperature ranges.

Input Parameters are: Ui: 28V, Ii: 93mA, Pi: 0.65W, Ci: 0F, Li: 0H

The relation between maximum ambient temperature, process temperature range and assigned temperature class is shown in the attachment:

SPECIFIC CONDITIONS OF USE: YES as shown below:

- For Ga installations – The equipment may be constructed using aluminium for the housing and internal parts and may only be used when the ignition hazard assessment shows there is no risk of ignition from incendive impact or abrasion sparks.
- For IIC applications, F_5 configurations utilising plates made from alloys with high copper content (e.g. gunmetal or marine brass) may only be used in atmospheres free from acetylene due to the potential formation of acetylides on external surfaces that can be ignited by friction or impact.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

- Minor drawing changes and additional X condition regards use of Gunmetal & Marine Brass in Acetylene atmospheres

Annex:

IECEx Certificate Annex Template ExV20.0035X.pdf

Description Continued:

The relation between maximum ambient temperature, process temperature range and assigned temperature class is shown below:

Ambient Temperature Range	Permitted Process Temperature	Temperature Class
-50°C ≤ Ta ≤ +78°C	-50°C ≤ Tp ≤ +78°C	T6
	-50°C ≤ Tp ≤ +95°C	T5
-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +93°C	T5
	-50°C ≤ Tp ≤ +130°C	T4
-50°C ≤ Ta ≤ +128°C	-50°C ≤ Tp ≤ +128°C	T4
	-50°C ≤ Tp ≤ +195°C	T3
	-50°C ≤ Tp ≤ +260°C	T2

Manufacturer's documents:

Title:	Drawing No	Sheets	Rev	Date
*Certification Drawing Titan Ex ia Switch	1281/A1	1 of 1	4	22.09.22
Certification Drawing, Two/Three/Four Terminal PCB Titan Ex ia	1264/A3	1 of 1	4	27.05.20
Certification Drawing Six Terminal PCB, Titan Ex ia	1265/A3	1 of 1	3	27.05.20

*Note: An * is included before the title of documents that are new or revised.*

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

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:	ExV 21UKEX0896X	Issue: 1
4	Product:	Titan Ex ia Switch	
5	Manufacturer:	Pyropress Ltd	
6	Address:	Bell Close Plympton Plymouth Devon, PL7 4JH, UK.	

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

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:

Ex II 1G Ex ia IIC T* Ga Tamb* refer to the certificate schedule below

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

13 Description of Product

The Titan range of switches include one or two micro switches which are mounted inside an enclosure and which are operated by means of mechanical actuators reacting to particular external phenomenon. The Titan reed level switch includes one or two switches acting on the movement of the magnets indicating level of the medium. There are two alternative materials for the enclosure housing the terminals, used for external connections and micro switches. The enclosures are made from stainless steel or aluminium. The enclosures provide a degree of protection of IP66. Various switch actuation mechanism options are provided including pressure, differential pressure, level, flow or temperature switches covering different temperature ranges.

Input Parameters are: Ui: 28V, Ii: 93mA, Pi: 0.65W, Ci: 0F, Li: 0H

The relation between maximum ambient temperature, process temperature range and assigned temperature class is shown below:

Ambient Temperature Range	Permitted Process Temperature	Temperature Class
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	-50°C ≤ Tp ≤ +130°C	T4
-50°C ≤ Ta ≤ +128°C	-50°C ≤ Tp ≤ +128°C	T4
	-50°C ≤ Tp ≤ +195°C	T3
	-50°C ≤ Tp ≤ +260°C	T2

13.1 Details of changes

Issue 1

- Minor drawing changes and additional X condition regards use of Gunmetal & Marine Brass in Acetylene atmospheres
- Replacement of UKEX label drawings with generic label drawings.

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R3357/A/1	22 Jul 2021	0	Initial issue of the Prime Certificate
R4173/A/1	10 Oct 2022	1	Issue of Variation 1

14.2 Compliance Drawings:

Issue 1

Title:	Drawing No:	Sheets	Rev. Level:	Date:
Certification Drawing Titan Ex ia Switch	1281/A1	1 of 1	4	22.09.22
Certification Drawing, Two/Three/Four Terminal PCB Titan Ex ia	1264/A3	1 of 1	4	27.05.20
Certification Drawing Six Terminal PCB, Titan Ex ia	1265/A3	1 of 1	3	27.05.20

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- For Ga installations – The equipment may be constructed using aluminium for the housing and internal parts and may only be used when the ignition hazard assessment shows there is no risk of ignition from incendive impact or abrasion sparks.
- For IIC applications, F_5 configurations utilising plates made from alloys with high copper content (e.g. gunmetal or marine brass) may only be used in atmospheres free from acetylene due to the potential formation of acetylides on external surfaces that can be ignited by friction or impact.

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.