

#### PE 141/13 **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.

DPF265, DPF266, Differential Pressure Switch.

PF266, Low Pressure Switch. VF266, Vacuum Switch.

DPF296, High Static Differential Pressure Switch TF171, TE171, TF172, TE172, Temperature Switch. TF175, TF176, Capillary Temperature Switch.

FF503, Flow Switch.

LF34, Horizontal Level Switch.

LF35, Vertical Switch.

Comply with the requirements of:

EU Directive 2014/34/EU, for the use in potentially explosive atmospheres:

II1G Ex ia IIC T\* Ga T<sub>amb</sub>\* (\*Refer to Certificate schedule)

International Electrotechnical Commission IEC Certification Scheme for Explosion Atmospheres

Exia IIC T6...T2 Ga

T6...T5 Tamb -50°C to +78°C T6

T5...T4 Tamb -50°C to +93°C T5

T4...T2 Tamb -50°C to +128°C T4

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

Harmonised standards applied: EN 60079-0:2018, EN60079-11:2012

Standards applied: IEC 60079-0:2017, IEC 60079-11:2011

Other Directives applied: Pressure Equipment 2014/68/EU (Sound Engineering Practice (SEP),

Chapter 1, Article 4 (3).)

Other Standards applied: Ingress Protection, BS EN 60529:1992+A2:2013,

IEC 60529:1989+A1:1999+A2:2013; IP66 rated.

Notified Body responsible for Quality Assurance:

Intertek Italia Spa, Via Guido Miglioli, 2/A, 20063 Cernusco sul Naviglio (MI), Italy.

Notified body No 2575.

#### Notified Body responsible for EU Type Examination Certificate:

ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark.

Notified body No 2804

#### Notified Body responsible for IECEx Type Examination Certificates:

Ex Veritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, LL13 9UZ, UK.

Notified body No 2585.

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 9th December 2020.

© Pyropress Limited. 2020

All rights reserved. This document or any portion thereof may not be reproduced without the express written permission of the issuer.



### **EU - Type Examination Certificate**

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

3 Certificate Number:

ExVeritas 20ATEX0683X

Issue: 1

4 Equipment:

Titan Ex ia Switch

Manufacturer: 5

Pyropress Ltd

Address: 6

Bell Close, Plympton, Plymouth, Devon, PL7 4JH, UK.

- This equipment and any acceptable variation thereto are specified in the schedule to this certificate and 7 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.
- Compliance with the applicable Essential Health and Safety Requirements has been assured by 9 compliance with the following Standards and section 16 of this certificate:

EN 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.
- This EU-Type Examination Certificate relates only to the design, construction, examination and tests of 11 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:



II 1 G Ex ia IIC T\* Ga T<sub>amb</sub>\*

\*Refer to the certificate schedule below.



On behalf of ExVeritas S Clarke CEng MSc Certification Manage

This certificate may only be reproduced in its entirety and without any change, schedule included. The certificate is only when it carries an original signature. For help or assistance relating to this certificate, contact info@exveritas.com. ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark. ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.



#### 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 a 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°0 4 T- 4 170°0	-50°C ≤ Tp ≤ +78°C	T6
-50°C ≤ Ta ≤ +78°C	-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 ≤ Tp ≤ +128°C	T4
-50°C ≤ Ta ≤ +128°C	-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

#### 14 <u>Descriptive Documents</u>

#### 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.



#### Schedule

14.2 Compliance Drawings:

#### Issue 0

Title:	Drawing No:	Sheets	Rev. Level	Date:
Certification Drawing Titan Ex ia Switch	1281/A1	1 of 1	3	27.05.20
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.

#### 15.2 Conditions for Use

None

16 <u>Essential Health and Safety Requirements</u>
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 3	Certificate history:
Status:	Current	Issue No: 0	
Date of Issue:	2020-11-05		
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 T6T2 Ga (Tamb -50°C t	to +78°C…+128°C)	
Approved for issue o Certification Body:	n behalf of the IECEx	S D'Henin	
Position:		Certification Manager	
Signature: (for printed version)			
Date:			
<ol><li>This certificate is not</li></ol>	schedule may only be reproduced in full.  It transferable and remains the property of the is enticity of this certificate may be verified by vis	ssuing body. Iting www.jecex.com or use of this OR 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 Page 2 of 3

Date of issue: 2020-11-05 Issue No: 0

Manufacturer: Pyropress Ltd

Bell Close Plympton Plymouth Devon PL7 4JH

**United Kingdom** 

Additional 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 Report:

GB/EXV/ExTR20.0054/00

**Quality Assessment Report:** 

GB/ITS/QAR11.0004/05



### IECEx Certificate of Conformity

Certificate No.: IECEx EXV 20.0035X Page 3 of 3

Date of issue: 2020-11-05 Issue No: 0

#### **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.

#### 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 ≤ 1a ≤ +76°C	-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 ≤ Tp ≤ +128°C	T4
-50°C ≤ Ta ≤ +128°C	-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	3	27.05.20	
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.