

PE146/7

EU DECLARATION OF CONFORMITY

Issuer:Pyropress EngineeringAddress:Bell Close, Plympton, Plymouth, Devon, England, PL7 4JH

The Manufacturer hereby declares that the Intrinsically Safe products types:

Argus Type: -	PI510, PI520	Pressure Switch
	PI530, PI540	High Pressure Switch
	PI560	Low Pressure Switch
	VI560	Vacuum Switch
	DI560	Differential Pressure Switch
	TI510, TI520	Temperature Switch
	TI570	Capillary Temperature Switch
	LI510	Horizontal Level Switch Mechanical
	L1520	Vertical Level Switch Mechanical and Reed
	FI510	Flow Switch

As being in compliance with the requirements of EU Directive 2014/34/EU, for the use in potentially explosive atmospheres:

II 1G Ex ia IIC T6...T2 Ga ($-50^{\circ}C \le Ta \le +78^{\circ}C...+93^{\circ}C$)

When used within the limitations & conditions of the product specifications, working instructions & EC Type Examination Certificate Number: ITS17ATEX201923X IECEX Type Examination Certificate Number: IECEX ITS 17.0024X

Harmonised standards applied:

EN 60079-0:2012 + A11:2013, EN 60079-11:2012

Other Directives applied:

Pressure Equipment 2014/68/EU as Sound Engineering Practice (SEP), Chapter1, Article 4 (3)

Other standards applied:

IEC 60079-0:2011, IEC 60079-11:2011, Ingress Protection, EN60529:1992 +A2:2013 & IEC 60529:1989 + A1:1999 + A2:2013, IP66/IP67 rated.

Notified Body responsible for EC & IECEx Type Examination Certificates:

Intertek Testing & Certification Ltd, Intertek House, Cleeve Road, Leatherhead, Surrey, England KT22 7SB. Notified body No: 0359

Notified Body responsible for Quality Assurance:

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 1020

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

Stephen Burns, General Manager, On Behalf of Pyropress Engineering

.......Dated...14th September 2017. Signed

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EU-Type Examination Certificate





1. **EU-TYPE EXAMINATION CERTIFICATE**

- 2. Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- EU-Type Examination Certificate Number: ITS17ATEX201923X Issue 0 3.
- Product: 4. Argus Ex ia Switch
- 5. Manufacturer: **Pyropress Engineering**
- Address: 6.

Bell Close Plympton Plymouth PL7 4JH United Kingdom

- 7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the 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 Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report 102266811 LHD-001 Issue 0 dated June 2017.

- 9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012 + A11:2013 and EN 60079-11:2012 except in respect of those requirements referred to at item 16 of the Schedule.
- 10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
- This EU-Type Examination Certificate relates only to the design and construction of the specified 11. product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following: 12.

II 1G Ex ia IIC T6...T2 Ga -50°C ≤ Ta ≤ +78°C ... +93°C

A T Austin **Certification Officer** 14th June 2017

Intertek Testing & Certification Limited Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977 www.intertek.com Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

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EU-Type Examination Certificate



Intertek

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EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS17ATEX201923X Issue 0

13. Description of Equipment or Protective System

The Argus range of switches include one or two micro switches which are mounted inside an enclosure and which are operated by means of mechanical actuator reacting to a particular external phenomenon. The Argus level switch includes one or two reed switches acting on the movement of the magnets indicating level of medium.

There are two alternative materials for enclosure housing the terminals, used for external connections and micro switches. The enclosures are made from Stainless Steel or Polyphenylene Sulphide (PPS). The enclosures provide degree of protection of IP66/IP67.

Various switch actuation mechanism options are provided including pressure, differential pressure, level, flow or temperature switches covering different temperature ranges.

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	Т6
	-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 ≤ +195°C	Т3
	-50°C ≤ Tp ≤ +260°C	T2

The equipment shall be supplied from intrinsically safe barriers or galvanic isolators. The maximum input parameters are listed below:

14. Report Number

Intertek Report Ref: 102266811 LHD-001 Issue 0 dated June 2017.

15. Special Conditions of Certification

- (a). Specific Conditions of Safe Use
 - During live maintenance, adjustments or servicing of the equipment the aluminium parts may be exposed. Care shall be taken to avoid the risk of ignition form incendive, impact or abrasion sparks.
 - The DIN plug cover is made of non-conductive material. Care shall be taken to avoid electrostatic discharge during maintenance, adjustments or servicing. Clean only with a damp cloth.
- (b). Conditions of Manufacture Routine Tests
 - None.

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EU-Type Examination Certificate





SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS17ATEX201923X Issue 0

16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref: 102266811 LHD-001 Issue 0 dated June 2017.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawing Argus Ex ia Switch	1271/A1	2	18.12.15
Certification Drawing Ex ia label – Argus Gas Coding	1353/A4	2	14.10.15
Certification Drawing PCB for Microswitch, Argus Ex ia	1001/A3	2	14.10.15
Certification Drawing PCB for Reed Switch, Argus Ex ia	1832/A3	1	11.01.16
Certification Drawing Reed Switch Assembly, Argus Ex ia	1833/A3	1	11.01.16
Certification Drawing Microswitch Assembly, Argus Ex ia	A4/M/9991	2	13.10.15

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IECEx Certificate

of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No .:	IECEX ITS 17.0024X	Issue No: 0	Certificate history: Issue No. 0 (2017-06-14)
Status:	Current	Page 1 of 3	1550e H0. 0 (2017-00-14)
Date of Issue:	2017-06-14	Tage For 5	
Applicant:	Pyropress Engineering Bell Close Plympton Plymouth PL7 4JH United Kingdom	-	
Equipment:	Argus Ex ia Switch		
Optional accessory:		J	
Type of Protection:	Intrinsic Safety 'i'		
Marking:	IECEx ITS 17.0024X Pyropress Ex ia IIC T6 T2 Ga -50°C ≤ Ta ≤ +78°C+93°C		
Approved for issue on Certification Body:	behalf of the IECEx	A T Austin	
Position:		Certification Officer	
Signature: (for printed version)		Agg	6.
Date:		2017-06-14	
 This certificate and schedule may only be reproduced in full. This certificate is not transferable and remains the property of the issuing body. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website. 			
Certificate issued by:			

Intertek Testing & Certification Limited ITS House, Cleeve Road, Leatherhead, Surrey, KT22 7SB United Kingdom





IECEx Certificate of Conformity

Certificate No:	IECEx ITS 17.0024X
Date of Issue:	2017-06-14
Manufacturer:	Pyropress Engineering
	Bell Close
	Plympton
	Plymouth PL7 4JH
	United Kingdom

Issue No: 0

Page 2 of 3

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

This Certificate does not indicate compliance with electrical 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/ITS/ExTR17.0020/00

Quality Assessment Report:

GB/ITS/QAR11.0004/04



IECEx Certificate of Conformity

Certificate No:

IECEx ITS 17.0024X

Issue No: 0

Date of Issue:

2017-06-14

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Argus range of switches include one or two micro switches which are mounted inside an enclosure and which are operated by means of mechanical actuator reacting to a particular external phenomenon. The Argus reed level switch includes one or two reed switches acting on the movement of the magnets indicating level of medium.

There are two alternative materials for enclosure housing the terminals, used for external connections and micro switches. The enclosures are made from stainless steel or Polyphenylene Sulphide (PPS). The enclosures provide degree of protection of IP66/IP67.

Various switch actuation mechanism options are provided including pressure, differential pressure, level, flow or temperature switches covering different temperature ranges. The relation between maximum ambient temperature, process temperature range and assigned temperature class is shown below:

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-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +93°C	T5
-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +130°C	Τ4
-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +195°C	тз
-50°C ≤ Ta ≤ +93°C	-50°C ≤ Tp ≤ +260°C	T2

The equipment shall be supplied from intrinsically safe barriers or galvanic isolators. The maximum input parameters are listed below: $U_1 = 28V$ $I_1 = 93mA$

 $I_1 = 93mA$ $P_1 = 0.65W$ $C_1 = 0$

= 0

SPECIFIC CONDITIONS OF USE: YES as shown below:

• During live maintenance, adjustments or servicing of the equipment the aluminum parts may be exposed. Care shall be taken to avoid the risk of ignition from incendive, impact or abrasion sparks.

• The DIN plug cover is made of non-conductive plastic material. Care shall be taken to avoid electrostatic discharge during maintenance, adjustments or servicing. Clean only with a damp cloth.



Test Verification of Conformity

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced standards at the time the tests were carried out. This verification is part of the full test report(s) and should be read in conjunction with them.

Applicant Name & Address:	Pyropress Engineering
	Bell Close
	Plympton
	Plymouth PL7 4JH
and the second	United Kingdom
Des dust Descriptions	Annual California and a standard data it all an almost in 1271/A1 and 2 data d
Product Description:	Argus Switch, constructed as detailed on drawing 1271/A1 rev. 2 dated
and a second	18.12.15.
Ratings & Principle	IP66 / IP67 in accordance with EN 60529:1992 +A2:2013 and
Characteristics:	IEC 60529:1989 + A1:1999 + A2:2013
characteristics.	IEC 00323.1363 + A1.1333 + A2.2013
Models:	Argus, types P_51, P_52, P_53, P_54, P_56, V_56, D_56, T_51, T_52,
	T_57, L_51, L_52, F_51
Relevant Standards:	EN 60529:1992 +A2:2013
	IEC 60529:1989 + A1:1999 + A2:2013
Verification Issuing Office	Intertek Testing and Certification Ltd
Name & Address:	Intertek House
	Cleeve Road
	Leatherhead KT22 7SB
and the second se	Surrey
	United Kingdom
Date of Tests:	02/05/2017 – 09/05/2017
Test Report Number(s):	GB/ITS/ExTR17.0020/00 under Intertek Project Ref. No. G102266811.
rest heport number(s).	
	All and a second se

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Signature Name: L Tomczyk Position: Engineer Date: 12th September 2017

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