



PE146/7

## EU DECLARATION OF CONFORMITY

Issuer: Pyropress Engineering  
Address: 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
	LI520	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°C ≤ Ta ≤ +78°C...+93°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

Signed..........Dated...14<sup>th</sup> September 2017.





## SCHEDULE

### 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
$-50^{\circ}\text{C} \leq T_a \leq +78^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +78^{\circ}\text{C}$	T6
	$-50^{\circ}\text{C} \leq T_p \leq +95^{\circ}\text{C}$	T5
$-50^{\circ}\text{C} \leq T_a \leq +93^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +93^{\circ}\text{C}$	T5
	$-50^{\circ}\text{C} \leq T_p \leq +130^{\circ}\text{C}$	T4
	$-50^{\circ}\text{C} \leq T_p \leq +195^{\circ}\text{C}$	T3
	$-50^{\circ}\text{C} \leq T_p \leq +260^{\circ}\text{C}$	T2

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

$U_i = 28\text{V}$                        $C_i = 0$

$I_i = 93\text{mA}$                       $L_i = 0$

$P_i = 0.65\text{W}$ .

#### 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 from 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.





# 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](http://www.iecex.com)

Certificate No.: IECEx ITS 17.0024X

Issue No: 0

Certificate history:

Issue No. 0 (2017-06-14)

Status: **Current**

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Date of Issue: **2017-06-14**

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

Equipment: **Argus Ex ia Switch**

Optional accessory:

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 behalf of the IECEx  
Certification Body:

A T Austin

Position:

Certification Officer

Signature:  
(for printed version)

Date:

2017-06-14

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 the [Official IECEx Website](http://www.iecex.com).

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 Issue No: 0  
Date of Issue: 2017-06-14 Page 2 of 3  
Manufacturer: **Pyropress Engineering**  
Bell Close  
Plympton  
Plymouth PL7 4JH  
**United Kingdom**

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

*This Certificate **does not** indicate compliance with 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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$-50^{\circ}\text{C} \leq T_a \leq +93^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +93^{\circ}\text{C}$	T5
$-50^{\circ}\text{C} \leq T_a \leq +93^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +130^{\circ}\text{C}$	T4
$-50^{\circ}\text{C} \leq T_a \leq +93^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +195^{\circ}\text{C}$	T3
$-50^{\circ}\text{C} \leq T_a \leq +93^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +260^{\circ}\text{C}$	T2

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

$U_i = 28\text{V}$   
 $I_i = 93\text{mA}$   
 $P_i = 0.65\text{W}$   
 $C_i = 0$   
 $L_i = 0$

### 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 United Kingdom
Product Description:	Argus Switch, constructed as detailed on drawing 1271/A1 rev. 2 dated 18.12.15.
Ratings & Principle Characteristics:	IP66 / IP67 in accordance with EN 60529:1992 +A2:2013 and IEC 60529:1989 + A1:1999 + 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 Name & Address:	Intertek Testing and Certification Ltd Intertek House Cleeve Road Leatherhead KT22 7SB 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.



**Signature**

**Name: L Tomczyk**

**Position: Engineer**

**Date: 12<sup>th</sup> September 2017**