



PE149/18

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: -

Perseus Type:	PF6, PR6.	Pressure Switch
	VF6, VR6.	Vacuum Switch
	DPF6, DPR6.	Differential Pressure Switch
	TF6, TR6.	Temperature Switch
	LF6, RF6, LR6.	Level Switch
	FF6, FR6.	Flow Switch

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

(Perseus & Perseus/GD): - II 1G Ex ia IIC T6...T2 Ga (Tamb -50°C to +78°C...+93°C)

(Perseus/R): - II 1G Ex ia IIC T5...T2 Ga (Tamb -50°C to +72°C...+122°C)

(Perseus/GD): - II 1D Ex ia IIIC T135°C Da (Tamb -50°C to +70°C)

When used within the limitations & conditions of the product specifications, certificates & User guide.

EU Type Examination Certificate Number: ExVeritas 18ATEX0318X

IECEX Type Examination Certificate Number: IECEX EXV 18.0001X

Harmonised standards applied: EN60079-0:2018, EN, EN60079-11:2012 and EN60079-26:2015.

Standards applied: IEC 60079-0:2017, IEC 60079-11:2011 and IEC60079-26:2014-10,

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/IP67 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 1040

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: 30th October 2020.

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1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 18ATEX0318X Issue: 2

4 Equipment: Perseus 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 60079-0: 2018 EN 60079-11: 2012 EN 60079-26: 2015

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:

 II 1 G Ex ia IIC T6....T2 Ga (Tamb -50°C to +78°C...+93°C)

II 1 G Ex ia IIC T5....T2 Ga (Tamb -50°C to +72°C...+122°C)

II 1 D Ex ia IIIC T135°C Da (Tamb -50°C to +70°C)



On behalf of ExVeritas



This certificate may only be reproduced in its entirety and without any change, schedule included.

The certificate is only valid when it carries an original signature.

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ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark.

ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.

Schedule

13 Description of Equipment or Protective System

The Perseus 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 phenomenon. The Perseus 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/IP67. 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

Coding is:

Ex ia IIC T6...T2 Ga (Perseus & Perseus/GD)

Ex ia IIC T5...T2 Ga (Perseus/R)

Ex ia IIIC T135°C Da (Perseus/GD)

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

Perseus & Perseus/GD - Without Resistors - Gas Applications

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

Perseus/R – With Resistors – Gas Applications

Ambient Temperature Range	Permitted Process temperature	Temperature Class
$-50^{\circ}\text{C} \leq T_a \leq +72^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +72^{\circ}\text{C}$	T5
	$-50^{\circ}\text{C} \leq T_p \leq +130^{\circ}\text{C}$	T4
	$-50^{\circ}\text{C} \leq T_p \leq +150^{\circ}\text{C}$	T3
$-50^{\circ}\text{C} \leq T_a \leq +122^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +122^{\circ}\text{C}$	T4 & T3
	$-50^{\circ}\text{C} \leq T_p \leq +260^{\circ}\text{C}$	T2

Perseus/GD - Without Resistors - Dust Applications

Ambient Temperature Range	Permitted Process temperature	Temperature Class
$-50^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +70^{\circ}\text{C}$	T135°C

Certificate: ExVeritas 18 ATEX0318X Issue 2

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Schedule

13.1 Detail of changes

Issue 1

- Minor variation to re-introduce an optional microswitch
- Update to latest general Requirements EN 60079-0

Issue 2

- Transfer of certificate to Danish NB – no drawing changes

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R1331/A/1	10 Apr 2018	0	Initial issue of the Prime Certificate
R1727/A/1	19 Mar 2020	1	Issue of Variation 1
N/A – ExV3035	31 Oct 2020	2	Transfer of the certificate from ExVeritas UK, Notified Body number 2585 to ExVeritas Denmark, Notified Body number 2804. Certificate number remains unchanged.

14.2 Compliance Drawings:

Issue 0

Title:	Drawing No:	Sheets	Rev. Level	Date:
*Certification Drawing, Labels Perseus Ex ia Switch	1262/A3	1 of 1	5	28.01.20
*Certification Drawing, Resistors, Perseus Ex ia	1263/A1	1 of 1	4	28.01.20
*Certification Drawing, Perseus Ex ib Switch	1266/A1	1 of 1	5	28.01.20
Certification Drawing, Six Terminal PCB, Perseus Ex ia	1338/A3	1 of 1	4	25.01.18
Certification Drawing, Two/Three/Four Terminal PCB, Perseus Ex ia	1653/A3	1 of 1	2	25.01.18
Certification Drawing, Three/Six Terminal PCB, Perseus Ex ia	1954/A3	1 of 1	1	29.01.18

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 incandive impact or abrasion sparks.

15.2 Conditions for Use 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.

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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 18.0001X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2018-04-20)

Status: **Current** Issue No: 1

Date of Issue: 2020-05-13

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

Equipment: **Perseus 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...+93°C)
Ex ia IIC T5...T2 Ga (Tamb -50°C to +72°C...+122°C)
Ex ia IIIC T135°C Da (Tamb -50°C to +70°C)

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc FIET

Position:

Certification Manager

Signature:
(for printed version)

Date:

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 18.0001X**

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Date of issue: 2020-05-13

Issue No: 1

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

IEC 60079-26:2014-10 Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

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/ExTR18.0001/00](#)

[GB/EXV/ExTR20.0010/00](#)

Quality Assessment Report:

[GB/ITS/QAR11.0004/06](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx EXV 18.0001X**

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Date of issue: 2020-05-13

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Perseus 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 phenomenon. The Perseus 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/IP67. 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

Coding is:

Ex ia IIC T6...T2 Ga (Perseus & Perseus/GD)

Ex ia IIC T5...T2 Ga (Perseus/R)

Ex ia IIIC T135°C Da (Perseus/GD)

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

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 incandive impact or abrasion sparks.



IECEx Certificate of Conformity

Certificate No.: **IECEx EXV 18.0001X**

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Date of issue: 2020-05-13

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Update to latest IEC 60079-0
- Minor drawing changes including re-introduction of the FK4 terminal switch

Annex:

[IECEx Certificate Annex Template ExV18.0001X_1.pdf](#)

Description Continued:

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

Perseus & Perseus/GD - Without Resistors - Gas Applications

Ambient Temperature Range	Permitted Process Temperature	Temperature Class
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$-50^{\circ}\text{C} \leq T_a \leq +122^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +122^{\circ}\text{C}$	T4 & T3
	$-50^{\circ}\text{C} \leq T_p \leq +260^{\circ}\text{C}$	T2

Perseus/GD - Without Resistors - Dust Applications

Ambient Temperature Range	Permitted Process temperature	Temperature Class
$-50^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	$-50^{\circ}\text{C} \leq T_p \leq +70^{\circ}\text{C}$	T135°C

Manufacturer's documents:

Title:	Drawing No.:	Sheets	Rev	Date:
*Certification Drawing, Labels Perseus Ex ia Switch	1262/A3	1 of 1	5	28.01.20
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*Note: An * is included before the title of documents that are new or revised.*