



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

Certificate No.:	<b>IECEX SIR 15.0078X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 2	<a href="#">Issue 1 (2023-03-21)</a> <a href="#">Issue 0 (2015-08-25)</a>
Date of Issue:	2023-06-28		
Applicant:	<b>Pressure Tech Limited</b> Unit 24 Graphite Way Hadfield Glossop Derbyshire SK13 1QH <b>United Kingdom</b>		
Equipment:	<b>Heated Regulator Assembly, XHR-300, XHR-301, XHR-310 and XHR-311</b>		
Optional accessory:			
Type of Protection:	<b>Flameproof "db"</b>		
Marking:	Ex db IIC T3 Gb -40°C ≤ Ta ≤ 60°C		

Approved for issue on behalf of the IECEx  
Certification Body:

**Michelle Halliwell**

Position:

**Director Operations, UK & Industrial Europe**

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.
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Certificate issued by:

**CSA Group Testing UK Ltd**  
Unit 6, Hawarden Industrial Park  
Hawarden, Deeside CH5 3US  
**United Kingdom**





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Manufacturer: **Pressure Tech Limited**  
Unit 24 Graphite Way  
Hadfield  
Glossop  
Derbyshire SK13 1QH  
**United Kingdom**

Manufacturing locations: **Pressure Tech Limited**  
Unit 24 Graphite Way  
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Derbyshire SK13 1QH  
**United Kingdom**

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 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

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/SIR/ExTR15.0223/00](#)

[GB/SIR/ExTR23.0064/00](#)

[GB/SIR/ExTR23.0112/00](#)

Quality Assessment Report:

[GB/SIR/QAR09.0005/08](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Heated Regulator Assembly whether XHR-300, XHR-301, XHR-310 or XHR311 comprises of three main parts: a flameproof, cast aluminium enclosure, heater cartridges (probes) and a pressure regulator manufactured in stainless steel.

Refer to ANNEXE for additional description and Conditions of Manufacture.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. The user shall ensure that the equipment is appropriately connected to earth.
2. The equipment shall not be exposed to vibrations exceeding  $5\text{m/sec}^2$
3. The equipment shall be protected from mechanical impact in service by location or suitable guarding.
4. To prevent damage being caused to the regulator, which may result in an ignition risk, it is the user's responsibility to ensure the equipment is operated in accordance with the manufacturer's instructions and recommendations.
5. The equipment has flamepaths which differ from those in IEC 60079-1:2014. The manufacturer, Pressure Tech, shall be contacted for guidance when maintaining the flamepaths.



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## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

**Issue 1** – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the standard previously listed, IEC 60079-0:2011 Edition 6, was replaced by IEC 60079-0:2017 Edition 7.
2. The manufacturer's scheduled drawings were updated, including addition of references to UKCA markings.
3. Minor clarifications were made to the Product Description and Conditions of Manufacture.

**Issue 2** – this Issue introduced the following changes:

1. Update drawing PT-EHR-300-008 to correct typographical errors of the ATEX Notified Body number and the IECEx certificate number.

## **Annex:**

[IECEX SIR 15.0078X Annexe Issue 2.pdf](#)

Annexe to: IECEx SIR 15.0078X Issue 2

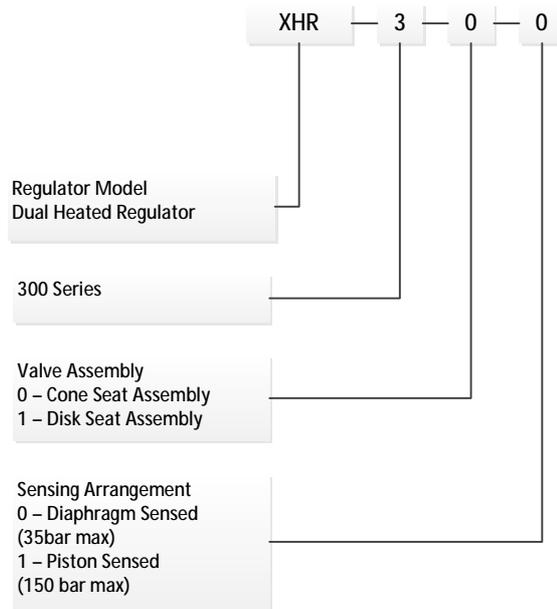
Applicant: Pressure Tech Limited

Apparatus: Heated Regulator Assembly, XHR-300, XHR-301, XHR-310 and XHR-311



The XHR-300, XHR-301, XHR-310 and XHR-311 pressure regulators are similar in construction, varying only in the arrangement of the pressure sensor and main valve assemblies. In particular, the XHR-300 and XHR-310 are diaphragm sensed pressure regulators, while the XHR-301 and XHR-311 are piston sensed pressure regulators. The XHR-300 and XHR-301 main valve assembly includes a cone seat design, while the XHR-310 and XHR-311 pressure regulators include a disc type valve assembly. The operating parameters of the Heated Regulator Assembly range are listed in Table 1.

The model number can be broken down as follows:



The flameproof enclosure is employed to house the control equipment for the heater cartridges (probes). The heater cartridges protrude from the flameproof enclosure via two 3/8" BSP threaded flamepaths, access to the heaters within is provided by a cylindrical flamepath secured by a hexagonal threaded locking nut. The heater cartridges are installed into the body of the pressure regulator. The flameproof enclosure/heater cartridge combination contains all of the electrical equipment. The pressure regulator contains no electrical equipment.

The flameproof enclosure provides up to three, M20 x 1.5, threaded entry points for the installation of suitably certified cable entry devices.

The regulator can be used to regulate any gas or liquid that is compatible with the materials of construction.

Table 1 – Heater Regulator Assemblies

Model Ref.	Electrical ratings	Regulator Pressure	
		Maximum Inlet Pressure	Maximum Outlet Pressure
XHR-300	115 Vac 3 A, 230 Vac 3A	300 bar	35 bar
XHR-301	115 Vac 3 A, 230 Vac 3A	300 bar	150 bar
XHR-310	115 Vac 3 A, 230 Vac 3A	414 bar	35 bar
XHR-311	115 Vac 3 A, 230 Vac 3A	414 Bar	150 bar

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## Conditions of Manufacture

- i. This certificate relies on the following previously certified product. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this product, and the manufacturer shall inform Sira of any modifications of the product that may impinge upon the explosion safety design of their products. In addition, the enclosure's certificate shall maintain the attributes listed in the table below.

Item	Certificate Number	Key attributes
Cortem Enclosure Type GUB	IECEx CES 14.0012U	EEx d IIC, group II Cat 2 G

- ii. The manufacturer shall provide the end-user and/or installer with an appropriate copy of the certificate for the certified flameproof enclosure.