



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 02ATEX1049X** Issue: **6**

4 Equipment: **Heated Regulator Assembly XHR-300, XHR-301, XHR-310 & XHR -311**

5 Applicant: **Pressure Tech Limited**

6 Address: Pressure Tech Limited
Unit 24 Graphite Way
Hadfield
Glossop
Derbyshire SK13 1QH
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/ A11:2013 IEC 60079-1:2014 Ed 7 EN 13463-1:2009

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G T3
Ex db IIC T3
Ta = -40°C to +60°C

Project Number 1555

Signed: 

Title: Director of Operations

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6812 AR, Arnhem,
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SCHEDULE

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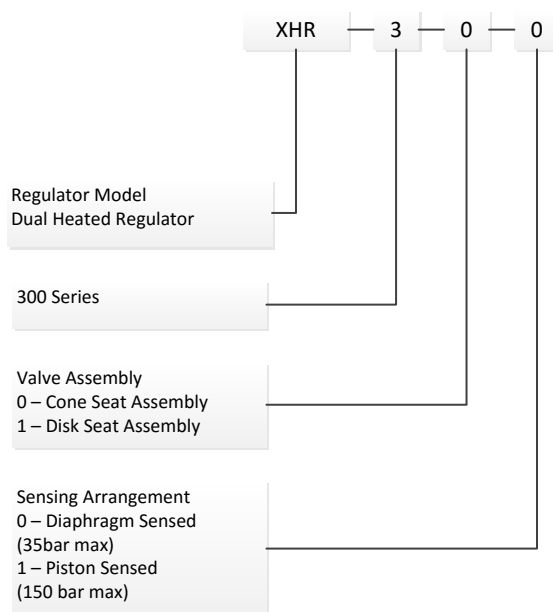
Sira 02ATEX1049X
Issue 6

13 DESCRIPTION OF EQUIPMENT

The Heated Regulator Assembly whether XHR-300, XHR-301, XHR-310 or XHR311 comprises of three main parts: a flameproof, cast aluminium enclosure manufactured by Cor.Tem and certified II, 2, G, EEx d IIC, certificate number CESI 01ATEX 034U, heater cartridges (probes) and a pressure regulator manufactured in stainless steel.

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 XHR311 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

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 02ATEX1049X
Issue 6

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

Variation 1 - This variation introduced the following change:

- i. The introduction of the Heated Regulator Assembly XHR-301, its ratings have been added to the table in the description above.

Variation 2 - This variation introduced the following changes:

- i. The applicant's name and address was changed in from Pressure Tech 2000 Ltd, Unit 2, Blue Chip Business Park, Atlantic Street, Altr ham, Cheshire, WA14 5DD to Pressure Tech Limited, Rossington Place, Graphite Way, Hadfield, Derbyshire SK13 1QG, UK.
- ii. The maximum outlet pressure of the Type XHR-300 was reased from 20 bar to 35 bar, the description being amended accordingly.
- iii. The introduction of minor drawing amendments that clarify the existing data and change components that are not critical to explosion safety.

Variation 3 - This variation introduced the following change:

- i. The Change of company address from Unit 3 Rossington Place, Graphite Way, Hadfield, Derbyshire SK13 1QG to that currently shown was recognised.

Variation 4 - This variation introduced the following change:

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the documents previously listed, EN 50014:1997 (including amendments A1 and A2), EN 50018:2000 and EN 13463-1:2001, were replaced by EN 60079-0:2012/A11:2013, IEC 60079-1:2014 Ed. 7, and EN 13463-1:2009, as a result; the markings were updated, Special Conditions For Safe Use were introduced and therefore an 'X' suffix was added to the certificate number, Conditions of Certification were modified.
- ii. Models XHR 310 and XHR 311 were introduced. For clarity the product description was amended to reflect the current model references.
- iii. To permit the replacement of the existing PCB unit with a similar PCB unit which is smaller in terms of its cross sectional area.
- iv. The Ambient Temperature Range was changed from "-40°C to +50°C" to "-40°C to +60°C" the marking being amended accordingly.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 02ATEX1049X
Issue 6

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	12 April 2002	R51A7658A	The release of the prime certificate.
1	8 February 2005	R51V12811A	The introduction of Variation 1.
2	30 January 2009	R51A19560A	This Issue covers the following changes: <ul style="list-style-type: none"> All previously issued certification was rationalised into a single certificate, Issue 2, Issues 0 to 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. The introduction of Variation 2.
3	27 March 2012	R27537A/00	The introduction of Variation 3.
4	25 August 2015	R70021534A	The introduction of Variation 4.
5	10 31st October 2019	R70219453A	This Issue covers the following changes: <ul style="list-style-type: none"> EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>
6	31st October 2019	1555	<ul style="list-style-type: none"> Transfer of certificate Sira 02ATEX1049X from Sira Certification Service to CSA Group Netherlands B.V.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 The user shall ensure that the equipment is appropriately connected to earth.
- 15.2 The equipment shall not be exposed to vibrations exceeding 5m/sec²
- 15.3 The equipment shall be protected from mechanical impact in service by location or suitable guarding.
- 15.4 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.
- 15.5 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.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

Certificate Annexe



Certificate Number: Sira 02ATEX1049X

Equipment: Heated Regulator Assembly XHR-300, XHR-301, XHR-310 & XHR -311

Applicant: Pressure Tech Limited

Issue 0

Drawing No.	Sheet	Rev.	Date	Description
A2-PT-XHR-300	1 of 1	C	19 Mar 02	Electrical Heated Regulator XHR300
REGULATOR XHR 300	1 of 1	-	27 Mar 02	Regulator XHR 300Parts List
A3-EHR-300-006	1 of 1	C	19 Mar 02	Enclosure Tappings
A4-PT-EHR-300-007	1 of 1	C	19 Mar 02	Connection Fitting
A4-PT-EHR-300-008	1 of 1	B	19 Mar 02	Heated Regulator Label
A2-PT-XHR-300-100	1 of 1	B	01 Mar 02	Electrical Heated Regulator XHR300 Electrical Portion

Issue 1

Drawing No.	Sheet	Rev	Date	Description
A2-PT-EHR-301-HP	1 of 1	A	25 Nov 04	Electrical Heated Regulator EHR301
Form OS-005-A	6	-	27 Jan 05*	XHR-301 Bill of Materials
A4-PT-EHR-301-008	1 of 1	A	28 Jan 05	Heated Regulator Label

* This is the date that the drawing was stamped by Sira.

Issue 2

Drawing No.	Sheets	Rev.	Date	Description
REGULATOR XHR 300	1 of 1	-	03 Jan 07	XHR 300 Parts List
REGULATOR XHR 301	1 of 1	-	07 Dec 06	XHR 301 Parts List
A4-PT-EHR-300-008	1 of 1	E	16 Dec 08	XHR 300 Heated Regulator Label
A4-PT-EHR-301-008	1 of 1	C	05 Jul 06	XHR 301 Heated Regulator Label

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
PT-EHR-300-008	1 of 1	F	27 Mar 12	Heated Regulator Label
PT-EHR-301-008	1 of 1	D	27 Mar 12	Heated Regulator Label

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
PT-XHR-300	1 of 1	D	16 Jul 15	Dual Heated Regulator – XHR300
PT-XHR-301	1 of 1	B	16 Jul 15	Dual Heated Regulator – XHR301
PT-XHR-300-100	1 of 1	C	16 Jul 15	Dual Heated Regulator – Electrical Portion
PT-EHR-300-006	1 of 1	F	16 Jul 15	Enclosure Tappings
PT-XHR-310	1 of 1	A	16 Jul 15	Dual Heated Regulator – XHR310
PT-XHR-311	1 of 1	A	16 Jul 15	Dual Heated Regulator – XHR311
PT-EHR-300-007	1 of 1	D	16 Jul 15	Connector Fitting
PT-EHR-300-008	1 of 1	G	03 Aug 15	Dual Heated Regulator Label XHR300/310
PT-EHR-301-008	1 of 1	F	03 Aug 15	Dual Heated Regulator Label XHR301/311

Issue 5 – No new drawings were introduced

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