



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 03ATEX1319X** Issue: **9**

4 Equipment: **Housing Type 6814L**

5 Applicant: **Rotork Midland Limited**

6 Address: Patrick Gregory Road
Wolverhampton
West Midlands WV11 3DZ
UK

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

8 Sira Certification Service, notified body number 0518 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 EN 60079-1:2014

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 2G
Ex db IIC T6 Gb (-50°C to +40°C)
Ex db IIC T4 Gb (-50°C to +70°C)
Ex db IIC T4 Gb (-50°C to +85°C)

Project Number 70110203

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C Ellaby
Deputy Certification Manager



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13 DESCRIPTION OF EQUIPMENT

The Housing Type 6814L is used with a solenoid coil assembly that is not covered by this certification. It is cylindrical in shape and consists of a cover and housing screwed together and cast from either stainless steel or aluminium, the aluminium variant is externally epoxy powder coated. The housing has a protruding boss to accommodate a suitably certified M20x1.5 cable entry device. The housing also has a protruding flange for mounting purposes and an external earth point. Internally there is a central fabricated flange tube, this passes through the housing and either has a solid or hollow top stop. The flange tube with a solid top stop operates a two way valve, which is additionally attached. The flange tube with a hollow top stop (which also passes through the housing and additionally through the cover) operates a three way valve, which is additionally attached. Both types of valves are suitable for pneumatic or hydraulic use.

The flange tubes pass through a solenoid coil assembly rated either up to 230V AC 11.5 W Maximum or up to 212 V DC 14.5 W Maximum within the product. The coil itself is encapsulated and can be fitted with VDRs or Shunt diodes via the PCB seated above it. In addition PCB operating DC coils can have Full Wave Rectifiers fitted. The PCB is fastened to a metallic shroud surrounding the solenoid visa studding. One stud additionally secures a crimp lug that provides an internal earth point.

The Housing Type 6814L and the solenoid coil assembly are fitted to a stainless steel valve assembly; however, this is not included in the certification as it does not contribute to the flameproof aspects of this equipment. A valve of various series having different port sizes and maximum working press (M.W.P) of up to 46.5 bars (675 psi) can be attached to the flange tube to form a complete functional solenoid operated valve.

Housing Type 6814L has been separately tested against the requirements of IEC 60529 and was found to meet IP67.

Design Options

- The cable entry thread may be manufactured with the following alternative thread forms:
1/2" or 3 /4" NPT to ANSI B1: 20.1:1983
- The housing and cover may be manufactured from stainless steel

Variation 1 - This variation introduced the following change:

- i. The option for the equipment to have a T4 temperature classification when used in an ambient temperature range -50°C to $+80^{\circ}\text{C}$, the marking is changed as appropriate.

Variation 2 - This variation introduced the following change:

- i. To allow the use of alternative terminals on the PCB layout

Variation 3 - This variation introduced the following change:

- i. To permit an alternative, polyester powder coating to be applied to the external surfaces of the equipment.

Variation 4 - This variation introduced the following change:

- i. To recognise the company name change from International Motion Control to ITT Flow Control.



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Variation 5 - This variation introduced the following change:

- i. To allow the option to replace the internally mounted PCB with a terminal block.

Variation 6 - This variation introduced the following change:

- i. To recognise the company name change from ITT Flow Control to XYLEM Flow Control.

Variation 7 - This variation introduced the following change:

- i. To recognise the company name change from XYLEM Flow Control to Rotork Midland Limited.

Variation 8 - This variation introduced the following change:

- i. Following the appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 50014:1977(amendments A1 & A2) and EN 50018:2000 (amendment A1) were replaced by EN 60079-0:2012/A11:2013 and EN 60079-1:2014, the marking and conditions were amended accordingly.
- ii. A Specific Condition of Use was introduced to minimize the risk of ignition due to electrostatic charges and therefore an 'X' suffix was added to the certificate number.
- iii. The marking was updated to include the following options for this equipment:
T4 (Tamb -50°C to +70°C)
T4 (Tamb -50°C to +85°C)
The warnings in respect of wiring installation were reviewed and revised accordingly
- iv. The name of the equipment was changed from 6814L-Solenoid Coil Housing to Housing Type 6814L.
- v. Drawing number 6814L was amended to recognise minor modifications that are administrative and to acknowledge that the specification of the cylindrical joints was amended.
- vi. The product description was rationalised to generate a common version that can be used with ATEX and other Certification Schemes; the important changes are:
 - BSP conduit entry thread forms are no longer a design option.
 - The M20 (M) to 1/2" (F) adaptor has been removed; this affected the design options and necessitated the removal of drawing number IP6555A.
 - The association of the Housing with other devices was clarified.
 - The Ingress Protection Rating that is appropriate to the Housing was recognised.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	03 September 2003	R51A9468A	The release of the prime certificate.
1	20 October 2004	V51V11863A	Re-issued to introduce the changes described in report number V51V11863A
2	20 January 2005	R51V12789A	The introduction of Variation 1.
3	28 November 2005	R51A14366A	The introduction of Variation 2.
4	11 October 2006	R51A15566A	The introduction of Variation 3.

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Issue	Date	Report no.	Comment
5	20 January 2009	R51A19346A	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue 5, Issues 0 to 4 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 4.
6	23 February 2009	R51A19618A	The introduction of Variation 5.
7	04 May 2012	R26985A/00	The introduction of Variation 6.
8	16 February 2015	R70014470A	The introduction of Variation 7.
9	24 October 2017	R70110203A	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>The introduction of Variation 8.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

- 15.1 The enclosure is non-conducting and may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user shall ensure that the products are not installed in a location where they may be subjected to external conditions (such as wind-blown dust) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment will only be done with a damp cloth.

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.

17 **CONDITIONS OF MANUFACTURE**

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 Each flange tube shall be subjected to a routine overpressure test of 14.15bar for at least 10s as required by clause 16 of EN 60079-1:2014. There shall be no permanent deformation of the joints or damage to the enclosure.

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Certificate Annexe



Certificate Number: Sira 03ATEX1319X
Equipment: Housing Type 6814L
Applicant: Rotork Midland Limited

Issue 0

Drawing No.	Sheet	Rev.	Date	Description
6814L*	1 of 3	A	23 Feb 03	General arrangement
6814L	2 of 3	A	20 Feb 03	Component details
6814L	3 of 3	B	15 Aug 03	Label details
IP6555A	1 of 1	B	18 Jun 03	Thread converter

* This drawing was amended by Sira on 2 September 2003

Issue 1

Drawing No.	Sheet	Rev.	Date	Description
6814L	3 of 3	C	18 May 04	Label details

Issue 2

Drawing No.	Sheet	Rev	Date	Description
6814L	1 of 3	C	13 Dec 04	General Arrangement
6814L	3 of 3	D	13 Dec 04	Label details

Issue 3

Drawing No.	Sheet	Rev	Date	Description
6814L	1 of 3	D	23 Nov 05	General Arrangement
6814L	2 of 3	C	23 Nov 05	Component details

Issue 4

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
6814L	2 of 3	D	05 Oct 06	Component details

Issue 5

Drawing No	Sheet	Rev.	Date	Description
6814L	1 of 3	E	01 Dec 08	Approval drawing for ATEX Ex d Flameproof Enclosure S4 Coils
6814L	2 of 3	E	01 Dec 08	Approval drawing for ATEX Ex d Flameproof Enclosure
6814L	3 of 3	E	01 Dec 08	Enclosure Label Details
IP6555A	1 of 1	B	01 Dec 08	Adaptor M20 (M) to 1/2" (F)

Issue 6

Drawing No.	Sheets	Rev	Date	Description
6814L	1	F	17 Feb 09	Approval Drawing for ATEX Ex d Flameproof Enclosure S4 Coils

Issue 7

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
6814L	3 of 3	F	04 May 12	Enclosure Label Details

Issue 8

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
6814L	3 of 3	G	16 Feb 15	Enclosure Label Details

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Equipment: Housing Type 6814L
Applicant: Rotork Midland Limited

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Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
6814L	1 of 3	K	17 Oct 17	Approval drawing for Ex d Flameproof Enclosure S4 Coils
6814L	2 of 3	K	17 Oct 17	Approval drawing for Ex d Flameproof Enclosure
6814L	3 of 3	K	17 Oct 17	Enclosure Label Details

The following drawing was removed

Drawing	Rev.	Title
IP6555A	B	Adaptor M20 (M) to 1/2" (F)

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