



# 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 CSA 07.0002X

Issue No: 4

Certificate history:

Status: **Current**

Issue No. 4 (2017-10-23)

Issue No. 3 (2015-03-12)

Date of Issue: **2017-10-23**

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Issue No. 2 (2012-07-25)

Issue No. 1 (2009-03-19)

Issue No. 0 (2007-02-27)

Applicant: **Rotork Midland Limited.**  
Patrick Gregory Road  
Wolverhampton, West Midlands  
W V11 3DZ  
**United Kingdom**

Equipment: **Housing Type 6814L**

*Optional accessory:*

Type of Protection: **Ex d**

Marking:

Ex db IIC T\* Gb

Where T\* is:

Tamb = -50°C to +40°C (T6)

Tamb = -50°C to +70°C (T4)

Tamb = -50°C to +85°C (T4)

*Approved for issue on behalf of the IECEx  
Certification Body:*

Dorin Stochitoiu

*Position:*

Technical Advisor

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

Certificate issued by:

**CSA International**  
178 Rexdale Boulevard  
Toronto, Ontario M9W 1R3  
Canada





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Manufacturer: **Rotork Midland Limited**  
Patrick Gregory Road  
Wolverhampton, West Midlands  
W V11 3DZ  
**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 60079-1 : 2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

*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:

[CA/CSA/ExTR06.0015/00](#)

[CA/CSA/ExTR06.0015/01](#)

[CA/CSA/ExTR06.0015/02](#)

[CA/CSA/ExTR06.0015/03](#)

[GB/SIR/ExTR15.0083/00](#)

### Quality Assessment Report:

[GB/SIR/QAR07.0001/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

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

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

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.



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

**Issue 1** - this issue introduced the following change:

1. Company Name Change to ITT Flow Control Ltd. (Formerly International Motion Controls Ltd.)

**Issue 2** - this issue introduced the following change:

1. Company Name Change to Xylem Flow Control Ltd. (Formerly ITT Flow Control Ltd.)

**Issue 3** - this issue introduced the following change:

1. Company Name Change to Rotork Midland Limited. (Formerly Xylem Flow Control Ltd.)

**Issue 4** - this issue introduced the following change:

1. The name of the equipment was changed from Solenoid operated valve, Model "Solenoid for use in Haz Loc" to Housing Type 6814L.
2. Standards IEC 60079 and IEC 60079-1 were updated to the most current editions and markings and conditions were amended accordingly.
3. The marking was updated to include the following options for this equipment: T6 (Tamb -50°C to +40°C) & T4 (Tamb -50°C to +85°C). The warnings in respect of wiring installation were reviewed and revised accordingly.
4. 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.
5. A Condition of Manufacture was introduced, to reflect the routine overpressure test for constructions with welded joints.
6. The product description was rationalised to generate a common version that can be used with IECEx and other Certification Schemes.
7. Minor administrative modifications were covered and specification of the cylindrical joints was amended.
8. Drawing package was revised to generate a common list that can be used with IECEx and other Certification Schemes.