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 SIR 16.0095X**

Certificate history:
Issue 1 (2021-08-12)
Issue 0 (2017-12-18)

Status: **Current**

Issue No: 2

Date of Issue: 2022-01-25

Applicant: **Rotork Fluid Systems**
9 Brown Lane West
Holbeck
Leeds LS12 6BH
United Kingdom

Equipment: **Electronic Line Break (ELB)**

Optional accessory:

Type of Protection: **Flameproof**

Marking: Ex db II [1] T4 Gb
[1] *Can be either IIC or IIB as required*
Ta = (- [2]°C to + [3]°C)
[2] *down to -50°C,* [3] *up to 60°C*

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

Position: **Certification Manager**

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.
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:

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

IECEx Certificate of Conformity

Certificate No.: **IECEx SIR 16.0095X**

Date of issue: 2022-01-25

Issue No: 2

Manufacturer: **Rotork Fluid Systems**
9 Brown Lane West
Holbeck
Leeds LS12 6BH
United Kingdom

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 60079-0:2011 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 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/CSAE/ExTR22.0001/00 GB/SIR/ExTR17.0264/00

Quality Assessment Report:

GB/SIR/QAR07.0033/08

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Electronic Line Break (ELB) is a self-contained electronic pipeline monitoring system to continuously monitor pipeline dynamics and provide early detection of pipeline breaks and initiate automatic actuator movement to an emergency position based on user defined parameters.
The ELB comprises an electrical control and terminal enclosures attached via a common back housing casting.
The electrical enclosure is formed by a cover which connects to the back housing casting by means of a spigoted flamepath joint and is secured by four M8 cap screws. The electrical enclosure contains three monitoring and control PCBs and an optional networking system PCB. The electrical enclosure cover is provided with a toughened glass window potted into the end which permits viewing of an internal LCD device, and also has non-penetrative local controls mounted below the window.
The terminal enclosure is formed by a cover which connects to the back housing casting by means of a spigoted flamepath joint and is secured by three M5 cap screws. The terminal enclosure provides electrical field wiring terminals.
The back housing casting is manufactured in aluminium alloy and provides the back housing for the two enclosures, all of which are designed to satisfy the requirements for flameproof equipment. The back casting provides five threaded M25 entry facilities, one into the terminal enclosure and four into the electrical enclosure. The volumes of the terminal enclosure and the electrical enclosure are separated by a potted, cable feed-through bushing.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. This equipment shall be positioned such that risk of impact to the window is low.
2. This equipment includes external, non-metallic parts, including the outer protective coating; therefore, cleaning shall only be carried out with a damp cloth.
3. Refer to the Annexe for additional conditions

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This Issue, Issue 2, recognises the following changes; refer to the certificate Annexe to view a comprehensive history:

1. An alternative potting compound was recognised on drawing HPU-A1505.

Annex:

IECEx SIR 16.0095X Annexe Issue 2.pdf

Annexe to: **IECEx SIR 16.0095X Issue 2**

Applicant: **Rotork Fluid Systems**

Apparatus: **Electronic Line Break (ELB)**

Additional Specific Conditions of Use

3. The fastener grades securing the cover are indicated in the table below, if these fasteners are replaced in service the correct fastener grade must be used.

Location	Fastener grade
Electrical cover/ back housing	Stainless steel A4-80
Terminal cover/ back housing	High tensile carbon steel 12.9

4. In accordance with clause 5.1 of IEC 60079-1, the critical dimensions of the flamepaths are:

Flamepath	Flamepath Dimension (mm)	
	Gap	Length
Electrical cover/ back housing	0.15	26.0
Terminal cover/ back housing	0.15	12.5
Cable feed through bush/back housing	0.15	25.0

Conditions of Manufacture

i. Each enclosure shall be subjected to a routine overpressure test in accordance with the tables below for the design option and ambient temperature range stated. In all cases the pressure shall be maintained for at least 10 s as required by clause 16 of IEC 60079-1. There shall be no permanent deformation or damage to the enclosure.

IIB Applications (below -20°C to -50°C) to +70°C

Equipment	Test Pressure	
	bar	lbf/in^2
Cable feedthrough bushing, Robnor Resins Ltd PX700/BK	19.49	282.68

This test may be conducted on a 'batch testing' basis in accordance with clause 16.6 of IEC 60079-1 if required.

IIC Applications (below -20°C to -50°C) to +70°C

Equipment	Test Pressure	
	bar	lbf/in^2
Back housing, electrical enclosure Aluminium Alloy to BS1490. Grade: LM25TF, heat treated (or equivalent)	26.67	216.98
Electrical Cover Window Borosilicate or Soda lime toughened to BS EN 12150 Loctite ® 5615	26.67	216.98
Cable feedthrough bushing, Robnor Resins Ltd PX700/BK	26.67	216.98

Full certificate change history

Issue 1 – this Issue introduced the following change:

1. Removal of the manufacturing site in Rochester New York United States of America and associated QAR.

Issue 2 – this Issue introduced the following change:

1. An alternative potting compound was recognised on drawing HPU-A1505.

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