



Certificate of Compliance

Certificate: 70005775

Master Contract: 236433

Project: 80009872

Date Issued: July 24, 2019

Issued to: Rotork Fluid Systems
9 Brown Lane West, Holbeck
Leeds, LS12 6BH
UNITED KINGDOM
Attention: Phillip Adams

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:

Stewart Finch IEng

PRODUCTS

CLASS 2258 02 – Process Control Equipment - For Hazardous Locations

Ex db eb* IIC T4 Gb IP 66/68**

Ex db eb* IIB T4 Gb IP 66/68**

Type 4, Type 6

-40°C* ≤ T_a ≤ +70°C*****

* “eb” marking only present on versions with increased safety terminal enclosure

** Only IP64 is endorsed by CSA, IP 66/68 testing in accordance with CAN/CSA-C22.2 No. 60529:16

*** minimum and maximum values depending on model version

Rotork SI-3.3 Electric Fail-Safe Actuators; rated - 24Vdc; 110/120Vac or 230Vac 60Hz 1Ø; 230Vac 50Hz 1Ø; 380-440Vac, 50/60Hz 3Ø; 480-575Vac, 60Hz 3Ø (See CSA report for Full Model Nomenclature Breakdown and Electrical Ratings)

CLASS 2258 82 – Process Control Equipment - For Hazardous Locations – Certified to US Standards

Class 1, Zone 1

AEx db eb* IIC T4 Gb IP 66/68**



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AEx db eb* IIB T4 Gb IP 66/68**
Type 4, Type 6
-40°C* ≤ Ta ≤ +70°C*****

- * “eb” marking only present on versions with increased safety terminal enclosure
- ** Only IP64 is endorsed by CSA, IP 66/68 testing in accordance with ANSI/IEC 60529:04 (R2011).
- *** minimum and maximum values depending on model version

Rotork SI-3.3 Electric Fail-Safe Actuators; rated - 24Vdc; 110/120Vac or 230Vac 60Hz 1Ø; 230Vac 50Hz 1Ø; 380-440Vac, 50/60Hz 3Ø; 480-575Vac, 60Hz 3Ø (See CSA report for Full Model Nomenclature Breakdown and Electrical Ratings)

Conditions of Acceptability:

- i. Connection to mains shall be made in accordance with ANSI/NFPA 70, NEC, with CSA C22.1, CEC, Part 1, or both as appropriate.
- ii. Blanking elements are provided by the manufacturer and shall be fitted by the user to all unused conduit entries to maintain the flameproof and environmental characteristics of the equipment.
- iii. The temperature of the equipment can exceed 81°C at the cable entry and the branching point. This must be considered when selecting field wiring and cable entry devices.
- iv. This equipment shall be installed such that the risk of impact to the window is low.
- v. This equipment includes some external non-metallic parts, including the outer protective coating. The user shall therefore ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.
- vi. The equipment utilises A4-80 fasteners, if these are changed they shall only be replaced by A4-80 fasteners.
- vii. Special conditions relating to flamepath dimensions as required by Clause 5.1 of ANSI/UL 60079-1:2015 and CAN/CSA-C22.2 No. 60079-1:16 are shown below:

Flamepath	Flamepath Dimension (mm)	
	Gap	Length
Indication Cover/Centre housing	0.150	26.80
Electronics Cover/Centre housing	0.150	26.20
Manifold/ Centre housing	0.150	26.80
Blanking / Motor Port	0.150	26.80
Blanking / Motor Port	0.150	26.80
Terminal Bung (IIC)/ Centre housing	0.115	25.05
Terminal Cover/ Centre housing	0.150	25.20
Indication Cover Shaft	0.150	26.40
Indication Cover Shaft Bush	0.017	26.40
Manifold Shaft	0.150	28.40
Manifold Shaft Bush	0.017	28.40
Manifold Shaft Plug	0.150	32.75
Motor Port	0.150	26.80
Blanking Cover/Cable Entry	0.150	26.80
Motor Line Bush	0.150	33.25



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DC Motor Cover/Motor Housing	0.150	25.20
AC Motor Cover/Motor Housing	0.150	25.20
DC Motor Shaft	0.167 [Note 1]	27.28
AC Motor Shaft	0.167 [Note 1]	27.28

[Note 1] This is based upon a minimum gap specification 'k' of 0.05 mm in accordance with clause 8.1.2 of ANSI/UL 60079-1:2015 and CAN/CSA-C22.2 No. 60079-1:16

- viii. Equipment is only to be installed by manufacturer trained personnel.
- ix. If at any time there is a conflict between the system safety provisions and any relevant local (national or regional) requirements, the local requirements always take precedence
- x. The scope of this approval **does not** include any safety related function, performance or reliability of the equipment.
- xi. 120Vac~(+/-10%) 50Hz Model configured at 300 Start 75% @ 70°C is not part of this evaluation.
- xii. All cover securing fasteners to be tighten to 40 Nm.

APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 61010-1-12 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
- C22.2 No. 0-10 - General Requirements – Canadian Electrical Code, Part II
- CAN/CSA-C22.2 No. 60079-0:15 - Explosive atmospheres — Part 0: Equipment — General requirements
- CAN/CSA-C22.2 No. 60079-1:16 - Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
- CAN/CSA-C22.2 No. 60079-7:16 - Explosive atmospheres — Part 7: Equipment protection by increased safety “e”
- CAN/CSA-C22.2 No. 60529:16 - Degrees of protection provided by enclosures (IP Code)
- CAN/CSA-C22.2 No. 94.1-15 - Enclosures for Electrical Equipment, Non-Environmental Considerations
- CAN/CSA-C22.2 No. 94.2-15 - Enclosures for Electrical Equipment, Environmental Considerations
- UL 61010-1 - Electrical Equipment For Measurement, Control, and Laboratory Use; Part 1: General Requirements - Third Edition
- ANSI/ISA-60079-0:2013 - Explosive atmospheres – Part 0: Equipment – General Requirements
- ANSI/UL 60079-1:2015 - Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
- ANSI/UL 60079-7:2017 - Explosive atmospheres – Part 7: Equipment protection by increased safety “e”
- ANSI/IEC 60529:04 (R2011) - Degrees of protection provided by enclosures (IP Code)
- UL50 (2015) - Enclosures for Electrical Equipment, Non-Environmental Considerations
- UL 50E (2015) - Enclosures for Electrical Equipment, Environmental Considerations

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.



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Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Marking drawings appear on a minimum 0.02" (0.5mm) thick stainless steel 304/316 plate, secured to the body with screws, in bottomed holes provided by the enclosure manufacturer.

The following marking details appear on drawings HPU-A1403 sheet 6 and HPU-A1419 sheet 2:

- CSA Monogram with c us Indicator (The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only), as shown on the Certificate of Compliance.
- Manufacturers name "Rotork Fluid Systems", or CSA Master Contract number "236433" adjacent the CSA Mark, in lieu of manufacturers name.
- Model designation, as specified in the PRODUCTS section, above.
- Complete electrical rating, as specified in the PRODUCTS section, above.
- Maximum ambient temperature rating, as specified in the PRODUCTS section, above.
- Date code / Serial number traceable to month and year of manufacture.
- Special purpose enclosure designation, "Type 4 and/or Type 6", as specified in the PRODUCTS section, above.
- Ingress Rating as applicable.
- Hazardous locations designation CAN - "Ex db* IIC T4 Gb" "Ex db* IIB T4 Gb" as specified in the PRODUCTS section, above or equivalent. * "eb" added on versions with increased safety terminal enclosure.
- Hazardous locations designation US - "AEx db* IIC T4 Gb" "AEx db* IIB T4 Gb", as specified in the PRODUCTS section, above or equivalent. * "eb" added on versions with increased safety terminal enclosure.
- Temperature code, as specified in the PRODUCTS section, above.
- The warning words: - "DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE" and "NE PAS OUVRIR EN ATMOSPHERE EXPLOSIVE" or equivalent;
- The warning words: - "SEAL REQUIRED WITHIN 50mm OF ENCLOSURE" and "SCELLEMENT REQUIS A MOINS DE 50mm" or equivalent.
- The warning words: - "DO NOT OPEN IN WHEN ENGERGISED" and "NE PAS OUVRIR SOUS TENSION" or equivalent;
- For Zone marked equipment the Certificate Number Reference "CSA 17CA70005775X" next to the CSA logo or preceded by "CSA" agency name.
- As per the NEC/CEC, equipment rated for use in a Zone 1, IIC atmosphere may be marked 'Class I, Division 2, Groups A, B, C, D' along with the appropriate temperature class; equipment rated for use in a Zone 1, IIB atmosphere may be marked 'Class I, Division 2, Groups C, D' along with the appropriate temperature class.



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Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80009872	July 24, 2019	Addition of an alternative terminal cover P/N 100561 manufactured in Aluminium alloy BS 1490 LM25TF. Removal of certain routine overpressure Factory Tests.
70005775	March 19, 2018	Original Certification of The Rotork SI-3.3 Electric Fail-Safe Actuators