Certificate of Compliance

Certificate: 1828889 **Master Contract:** 236433

Project: 70199951 **Date Issued:** January 21, 2019

Issued to: **Rotork Fluid Systems**
(A Division of Exeeco Ltd)
9 Brown Lane West,
Holbeck
Leeds,
LS12 6BH
ENGLAND

Attention: **Phillip Adams**

The products listed below are eligible to bear the CSA Mark shown

Issued by: Stewart Finch IEng

PRODUCTS

CLASS 2258-02 PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Ex db mb eb* IIB T4 Gb -35°C ≤ Ta ≤ 65°C
Ex db mb eb* IIC T4 Gb -20°C ≤ Ta ≤ 65°C
(* "eb" added on versions with increased safety terminal enclosure option, for single Ø and DC versions only)

Electro-Hydraulic Power Unit; Series SI-1; rated 24 Vdc/190 W/VA or 115/230Vac, 400 VA, 50/60 Hz, single phase or 380 – 480 Vac, 205 VA, 50/60 Hz, 3 phase; Encl. type 4 and/or 6, power unit can supply a maximum hydraulic pressure of 200 foot pound per square inch.

Notes:

1. Evaluation only covers the Electro-Hydraulic Power Unit.

Specific Conditions of Use (CAN/CSA-C22.2 No. 60079-0:15, clause 29.3 e)

1. The maximum constructional gap (I_c) is less than that required by Tables 2 and 3 of CAN/CSA C22.2 No 60079-1:2016 as detailed below:

SI-1 Electro- Hydraulic Power Unit Gas Group IIC

Flamepath	Maximum Gap (mm)	Minimum L (mm)
Electrical Enclosure / Electrical Cover	0.15	26.2
Terminal Enclosure/ Terminal Cover (Short)	0.15	26.7
Terminal Enclosure/ Terminal Cover (Long)	0.15	26.7
Main Body / Terminal Bung	0.115	25.95

SI-1 Electro- Hydraulic Power Unit Gas Group IIB

Flamepath	Maximum Gap (mm)	Minimum L (mm)
Electrical Enclosure / Electrical Cover	0.15	26.2
Terminal Enclosure/ Terminal Cover (Short)	0.2	26.7
Terminal Enclosure/ Terminal Cover (Long)	0.2	26.7
Terminal Enclosure/ Terminal Cover (Short) (SI-1 only)	0.2	26.7
Terminal Enclosure/ Terminal Cover (Long) (SI-1 only)	0.2	26.7
Main Body / Terminal Bung	0.115	25.95

2. Electro-Hydraulic Power Units that are manufactured using the enclosure window material (Makrolon 6717) are only suitable for installation in areas where the risk of impact upon the viewing window is low.

3. This equipment included some external non-metallic parts, including the outer protective coating. Cleaning must only be carried out with a damp cloth.

4. Increased safety “eb” is optional and only be applied to single phase and DC versions only.

5. All cover securing screws shall be stainless steel (A4-80) to ISO 4762.

6. Any installation must ensure that any external sources of heating or cooling, when combined with the local ambient temperature does not cause the maximum or minimum operating temperature of the equipment to be exceeded. The hydraulic system connected to the Electro-Hydraulic Power Units could provide an external heat source.

7. The final installation and/or use of the Series SI-1 power unit is subject to acceptance and/or inspection by CSA Group or the local inspection authority having jurisdiction.

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APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-M91 (R2015)	General Requirements - Canadian Electrical Code, Part II
CAN/CSA C22.2 No 60079-0:2015	Explosive atmospheres — Part 0: Equipment — General Requirements (IEC 60079-0:2011, MOD)
CAN/CSA C22.2 No 60079-1:2016	Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d” (IEC 60079-1:2014, MOD)
CAN/CSA C22.2 No 60079-7:2016	Explosive atmospheres — Part 7: Equipment protection by increased safety “e” (IEC 60079-7:2015, MOD)
CAN/CSA C22.2 No 60079-18:2016	Explosive atmospheres — Part 18: Equipment protection by encapsulation “m”(IEC 60079-18:2014, MOD)
CAN/CSA-C22.2 No. 61010-1-04	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
CAN/CSA-C22.2 No. 94.2-15	Enclosures for electrical equipment environmental considerations.

MARKINGS

Markings as indicated below and as shown in submittor’s drawings 2032178, 2032179 and 2032180 appear on a metal nameplate mechanically fasten to each power unit.

- Submittor’s Name/Tradename/Tradename
- Hazardous Location Protection Method (eg. Ex dme)
- Temperature Code
- Operating Ambient
- Model Number
- Electrical Rating
- Serial Number
- Enclosure Type
- CSA Monogram
- Warning in regards to not open the enclosure if the area is hazardous or if unit is energized.
- Reference to year of certification and certificate number, followed by “X” to indicate special condition of use

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
70199951	January 21, 2019	Update to the latest standards. Introduction of an alternative Short Terminal Cover 46754 and 46754CH CASTING,TERMINAL COVER (Gravity Die Cast) Aluminium BS EN 1706-AC-42000-K-T6 (LM25TF) DC and single phase versions. Introduction of an alternative Thermal Fuse – Type SF-129R-1, Schott Japan Corporation. HPU-800. Drawing amendments to address changes covered by this variation along with minor editorial changes and corrections, e.g. correct supplier/manufacturer details, remove "SMP" from drawing references, update material references to a common format.
70093776	October 19, 2016	Update of report 1828889 to cover: Increase of the operating ambient temperature to 65ºC, amendments to the 'Factory Tests' section, document changes to address minor alterations and corrections.
70008574	August 12, 2014	Change in Manufacturers address
2477390	December 6, 2011	Update of report 1828889 to cover: alternative ambient, window material, window over-mould, terminal cover, terminal bung material; Control Board and related drawing changes; evaluation for use IIC hazardous areas.
2194016	September 9, 2009	Update report 1828889 to include alternate Fuses for Model SI-1.
1939563	August 30, 2007	Report correction to cover proper rating listing of thermal fuse
1828889	January 11, 2007	CSA Certification of SI-1 Electro Hydraulic Power Unit