



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 17ATEX1037X** Issue: **6**

4 Equipment: **SPI #**

5 Applicant: **Rotork UK Ltd**

6 Address: **9 Brown Lane West
Leeds
LS12 6BH
United Kingdom**

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

8 CSA Group Netherlands B.V., notified body number 2813 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 IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015 +A1:2018 EN 60079-11:2012
EN 60079-31:2014 EN/ISO 80079-36:2016 EN/ISO 80079-37:2016

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:

On versions fitted with the flameproof micro-switches.



II 2GD
Ex eb db IIC T4 Gb
Ex h IIC T4 Gb
Ex tb IIIC T135°C Db IP67
See section 13 for ambient temperature

On versions fitted with the intrinsically safe proximity sensors



II 2G
Ex ib IIC T4 Gb
Ex h IIC T4 Gb
IP67
Ta = -25°C to +100°C
Ui 16V, Li 25mA, Pi 64 mW, Ci 100 nF, Li 100 µH



Signed: M Halliwell
Title: Director of Operations

Project Number 80216634

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13 DESCRIPTION OF EQUIPMENT

Ambient temperature for versions fitted with the flameproof micro-switches.

SWITCH TYPE	VOLTAGE RATING	CURRENT RATING	AMBIENT TEMPERATURE RATING
BARTEC 07-1501	120 V AC	5A	-25°C TO +65°C
BARTEC 07-1501	30 V DC	3A	-25°C TO +65°C
BARTEC 07-1501	15 V DC	5A	-25°C TO +65°C
CROUZET 831391	90 V AC	1.5A	-25°C TO +65°C
CROUZET 831391	90 V AC	5A	-25°C TO +40°C
PEPPERL + FUCHS NCB2-V3-N0	16V	25mA	-25°C TO +100°C

The SPI consists of a housing, base and cover made from anodized aluminium. The housing comprises two compartments. The lower mechanical compartment contains a speed reducing gear drive chain. The upper electrical compartment contains electrical terminals, limit switches and striker cam arrangement. Facilities are provided that allow the input/output shafts to pass through both compartments whilst rotating. The electrical compartment is completed with an aluminium cover secured by four M6 cap head screws. The mechanical compartment is completed by the aluminium base which is secured by four M6 cap head screws. All enclosure joints and shaft entry and exit points, are provided with elastomer sealing arrangements.

The mechanical compartment contains a gear train which provides rotational reduction between the input and output shafts, the input shaft fits coaxially inside the output shaft and gear wheel. The mechanical compartment is packed with grease, and is intended to be sealed for life. An optional thrust base can be fitted to the SPI to allow it to be mounted directly to valves where the reacting thrust from operating the valve is taken by the SPI. The type designation SPI # allows a last digit to be applied 1 through 4, the latter cross referencing to a functional specification and indicating the gear ratio.

The electrical compartment includes micro switches or proximity sensors activated by cam arrangements the latter being rotated with the output shaft. The micro switches are flameproof, the proximity sensors are intrinsically safe, also included is a PCB mounted increased safety terminal facility. The electrical compartment is provided with two threaded entry point designed for the installation of suitably certified cable entry devices.

The SPI product is only for use in manual applications. The SPI is not a safety related device as defined in accordance with Directive 2014/34/EU

Variation 1 - This variation introduced the following changes:

- i. An additional base mounting option to be included.
- ii. A tolerance change to an internal bore dimension.
- iii. Removal of the optional lower CTI PCB for the Ex ib product version.
- iv. Minor drawing changes to ECL-00154-A.

Variation 2 - This variation introduced the following changes:

- i. Included two additional drive shafts (2034697 and 2035504, Item 12), the design of which has been updated to increase the clearance between this component's running diameter and the base.
- ii. Update the wiring diagrams to include a note allowing certain modification as long as minimum spacing between electrical connections is assured.
- iii. Correction of a dimension error related to sealing arrangements.
- iv. Modification to the marking with respect to the Notified Body Number.

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- v. Introduction of a design option which incorporates only one micro switch.

Variation 3 - This variation introduced the following changes:

- i. Reduce max working voltage of Ex e d variant from 120 Vac/15 Vdc to 90 Vac /15 Vdc.
- ii. Amend conditions of manufacture to state that dielectric strength test is to be carried out at 500 Vrms / 700 Vdc for 1 minute or 600 Vrms / 840 Vdc for 100 ms. Add statement to clarify that this requirement only applies to the Ex e d product versions.

Variation 4 - This variation introduced the following changes:

- i. Reintroduction of the 120 Vac/15 Vdc option as an alternative on the Bartec Switches only.
- ii. Update SPI ATEX Certificates to allow for 30Vdc 3A option.
- iii. Update company name from "Rotork Gears" to "Rotork UK Ltd"
- iv. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012+(A11: 2013), EN 60079-1:2007 and EN 60079-7:2007 were replaced by EN IEC 60079-0:2018, EN 60079-1:2014 and EN 60079-7:2015 +A1:2018, the markings were updated accordingly.
- v. Amendments to certification drawing.

Variation 5 - This variation introduced the following changes:

- i. Replace the VT-42C PCB with a suitable, alternative PCB (with identical or better technical requirements).
- ii. Amendments to the Conditions of Manufacturer.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	28 March 2017	R70088633A	The release of the prime certificate.
1	29 August 2018	R70172364A	The introduction of Variation 1.
2	11 June 2019	R80004434A	The introduction of Variation 2.
3	15 October 2019	0367	Transfer of certificate Sira 17ATEX1037X from Sira Certification Service to CSA Group Netherlands B.V.
4	14 January 2020	R80027295A	The introduction of Variation 3.
5	14 June 2023	R80141246A	The introduction of Variation 4.
6	10 September 2024	R80216633A	The introduction of Variation 5.

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

- 15.1 This equipment incorporates an anodized outer surface. To avoid the possibility of electrostatic charges, cleaning must only be carried out with a damp cloth.
- 15.2 The SPI product is only for use in manual applications.

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15.3 In cases where two intrinsically safe proximity sensors are installed the associated circuits are to be considered as separate intrinsically safe circuits. The stated input parameters being applied to each circuit separately.

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 CSA Group Netherlands B.V. 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 Ex e d version of the SPI when manufactured shall be subject to a routine dielectric strength test in accordance with clause 7.1 of EN 60079-7:2015 +A1:2018, without dielectric breakdown occurring. The following test voltages will be applied:

For ratings up to 120 Vac

1 500 V R.M.S +5% -0% for 1 min or 1 800 V R.M.S +5% -0% for 100 ms

For ratings up to 90 Vac

500 V R.M.S +5% -0% for 1 min or 600 V R.M.S +5% -0% for 100 ms

In all cases, alternative DC voltages at 140% of the R.M.S is permitted.

17.4 This certificate relies on the following previously certified products. When they are used as part of the SPI, they shall still be covered by their original certificate:

Manufacturer	Item	Certificate No	Key attributes
Phoenix Contact	PCB Spring-Cage Terminal Block, type ZFKDS 1.5 C	PTB 06ATEX 1073U	Ex II 2 G, Ex eb IIC Gb - 50°C to 110°C
BARTEC GmbH	Miniature insert switch Type 07-1501-6520-63	EPS 14ATEX1688U	Ex II 2G Ex db IIC Gb, Ex I M2 Ex db I Mb, -60°C to 100°C
Crouzet	Proximity switch 83.139.1	LCIE 02 ATEX 0034U	Ex II 2 G, Ex db IIC Gb, - 40°C to 70°C
Pepperl+Puchs SE	Cuboidal inductive proximity sensor NCB2-V3-N0	ATEX PTB 00 ATEX2032X	Ex II 2 G Ex ib IIC T6...T1 Gb, - 60°C to +100°C Ui 16 V, Ii 25 mA, Pi 64 mW, Ci 100nF, Li 100µH

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Certificate Annexe



Certificate Number: Sira 17ATEX1037X

Equipment: SPI #

Applicant: Rotork UK Ltd

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
ECL-00154-A	1 to 4	2-0	22 Mar 17	SPI General Assembly for Certification First: Smart Position Indicator
2020511	1 to 2	2-0	22 Mar 17	SPI Nameplate

Issue 1

Drawing	Sheets	Rev.	Date (Stamp)	Title
ECL-00154-A	1 to 5	3.1	24 Apr 18	SPI General Assembly for Certification First: Smart Position Indicator

Issue 2

Drawing	Sheets	Rev.	Date (Stamp)	Title
ECL-00154-A	1 to 5	4-2	22 May 19	SPI General Assembly for Certification First: Smart Position Indicator
2035283	1 to 2	0-0	22 May 19	SPI NAMEPLATE - CE Mark Update

Issue 3. No new drawings were introduced.

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
2035283	1 to 2	1-0	12 Dec 19	SPI NAMEPLATE - CE Mark Update

Issue 5

Drawing	Sheets	Rev.	Date (Stamp)	Title
2035283	1 to 2	2-0	08 Dec 22	SPI Nameplate – CE Mark Update
ECL-00154-A	1 to 6	5-1	08 Dec 22	SPI GENERAL ASSEMBLY FOR CERTIFICATION FIRST: SMART POSITION INDICATOR

Issue 6

Drawing	Sheets	Rev.	Date (Stamp)	Title
ECL-00154-A	1 to 6	6-0	03 Jul 24	SPI General Assembly for Certification

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