



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 02ATEX3410U** Issue: **7**

4 Component: **RSV Motor Anti-Condensation Heaters**

5 Applicant: **Flexelec S.A.**

6 Address: **10 Rue des Frères Lumière
Z.A. du Bois Rond
69720 Saint Bonnet de Mure
France**

7 This component 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 component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component 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+Corr1:2020 EN IEC 60079-7:2015+A1:2018

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any limitations of use are listed in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 2G
Ex eb IIC Gb

Project Number 80074537

Signed: J A May

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
The Netherlands



SCHEDULE

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13 DESCRIPTION OF COMPONENT

The RSV Motor Anti-Condensation Heaters are rated at 110/115 V or 230/240 V ac, with rated outputs of 25 W to 100 W depending on length.

The heaters are designed to be installed on the end windings of electric motors prior to the application of varnish insulation to the wound stator. Each heater comprises a spiral resistance wire wound on a former. Cold tails are connected to the resistance wire and the assembly is covered with insulation and an outer fibreglass braid.

The following information may be used for reference when determining the temperature classification of a machine in which the heaters are installed. The heaters have been tested to determine maximum surface temperature under anticipated operating conditions and are suitable for use in motors with a T3 temperature class in an ambient temperature of -40°C to +60°C when installed in accordance with Table 1. Two types were tested, which cover the operating characteristics of the range.

During testing the stator windings were de-energised before the heaters were energised.

Table 1

Item	0.3 m, 25 W heater >58.82 W/m to 83.3 W/m	All other heaters ≤58.82 W/m
Local ambient around heater	109.1°C	108°C
Winding surface temperature (at end of heat run)	144.1°C	130°C
Maximum heater surface temperature	173°C	154.3°C

Variation 1 - This variation introduced the following change:

- i. It was recorded that the RSV Motor Anti-Condensation Heaters comply with the requirements of EN 60079-0:2004 and EN 60079-7:2003

Variation 2 - This variation introduced the following change:

- i. Following appropriate re-assessment, reference to any previous standards, EN 50014:1997 (+A1 and A2) to EN 50019:2000, EN 60079-0:2004 and EN 60079-7:2003, were replaced by those currently listed; the markings in section 12 were updated accordingly and the conditions were modified to recognise the requirements of the latest standards.

Variation 3 - This variation introduced the following change:

- i. To include 18 AWG and 20 AWG copper cold tail options with either silicon or fluoropolymer insulation.

Variation 4 - This variation introduced the following change:

- i. The products were clarified such that the original product will now be identified as the RSV and the 18 AWG and 20 AWG versions, introduced at Variation 3, will be identified as RSV UL.

Variation 5 - This variation introduced the following changes:

- i. To allow changes to the ambient temperature range from -20°C/+40°C to -40°C/+60°C.
- ii. After appropriate assessment, the standards were upgraded to the latest versions EN 60079-0:2012 and EN 60079-7:2007 were upgraded to EN IEC 60079-0:2018+Corr1:2020 and EN IEC 60079-7:2015+A1:2018 the marking was amended accordingly.
- iii. To recognise drawing CEX21.001/00/24.3.2021 for the RSVUL variant.



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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	31 January 2003	R53A9193A	The release of the prime certificate.
1	16 April 2003	R53A9193A	Re-issued under project No 51V10149 to permit the re-adjustment of the list of descriptive documents to correct a remark noted during audit number AX4562.
2	22 June 2006	R51A15276A	The introduction of Variation 1
3	4 July 2013	R29551A/00	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue 3, Issues 0 to 2 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.The introduction of Variation 2.
4	25 March 2014	R32632A/00	This Issue covers the following changes: <ul style="list-style-type: none">The reference to CE 0518 on the label was amended.The introduction of Variation 3.
5	20 November 2014	R70016057A	The introduction of Variation 4.
6	15 October 2019	1758	<ul style="list-style-type: none">Transfer of certificate Sira 02ATEX3410U from Sira Certification Service to CSA Group Netherlands B.V.EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>
7	17 August 2021	R80074537A	The introduction of Variation 5.

15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1. An electric strength test in accordance with EN 60079-7, clause 7.1 shall be carried out on each heater after being incorporated into an electric machine. The test shall be carried out at a minimum value of 1500 V r.m.s.
- 15.2. The cold tails shall be terminated in an enclosure that has been certified by a notified body and is suitable for the application.
- 15.3. The heater shall only be installed on the end windings of an electric motor prior to the application of varnish insulation to the wound stator.



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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 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 An Electric Strength Test in accordance with EN 60079-7 clause 7.1 shall be carried out on each heater device. The test shall be carried out at a minimum value of 1500V r.m.s.

Certificate Annexe



Certificate Number: Sira 02ATEX3410U

Component: RSV Motor Anti-Condensation Heaters

Applicant: Flexelec S.A.

Issue 0

Drawing No.	Sheets	Rev.	Date	Title
CEX03.001	1 to 4	00	06 Jan 03	Anti-Condensation Heaters RSV

Issue 1 – no new drawings were introduced.

Issue 2 – no new drawings were introduced.

Issue 3

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
CEX03.001	1 to 4	04	26 Jun 13	Anti-Condensation Heaters RSV

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CEX03.001	1 to 4	05	24 Mar 14	Anti-Condensation Heaters RSV

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CEX03.001	1 to 4	06	20 Nov 14	Anti-Condensation Heaters RSV

Issue 6. No new drawings were introduced

Issue 7

Drawing	Sheets	Rev.	Date (Stamp)	Title
CEX03.001/07/04.08.2020	1 to 4	07	30 Jun 21	Anti-Condensation Heaters RSV
CEX21.001/00/24.3.2021	1 to 4	00	09 Aug 21	ANTI-CONDENSATION HEATERS RSVUL

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