

UNITED KINGDOM CONFORMITY ASSESSMENT

1 **UK TYPE EXAMINATION CERTIFICATE**

2 Component intended for use in a Product or Protective System for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: **CSAE 21UKEX3503U** Issue: **0**

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

5 Manufacturer: **Flexelec S.A.**

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

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

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. 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 has been assured by compliance with:


EN IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

10 The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as the basis for certification of an equipment or protective system. Any limitations are listed in Section 15.

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:

 **II 2 G**
Ex eb IIC Gb



Name: J A May
Title: Director of Operations

SCHEDULE

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13 DESCRIPTION OF PRODUCT

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

Incorporating the following changes:

- i. To include 18 AWG and 20 AWG copper cold tail options with either silicon or fluoropolymer insulation;
- ii. The products were clarified such that the original product will now be identified as the RSV and the 18 AWG and 20 AWG versions;
- iii. To allow changes to the ambient temperature range from -20°C/+40°C to -40°C/+60°C.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	04 October 2021	R80098713A	The release of the prime certificate.



SCHEDULE

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15 SCHEDULE OF LIMITATIONS

- 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.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 PRODUCTION CONTROL

- 17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders
- 17.2 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.



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Certificate Annexe

Certificate Number: CSAE 21UKEX3503U
Product: RSV Motor Anti-Condensation Heaters
Manufacturer: Flexelec S.A.

Issue 0

Drawing	Sheets	Rev.	Date	Title
CEX03.001/08/04.08.2020	1 to 4	08	15 Sep 2021	Anti-Condensation Heaters RSV
CEX21.001/01/24.03.2021	1 to 4	01	15 Sep 2021	ANTI-CONDENSATION HEATERS RSVUL



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