IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx SIR 10.0151U**

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Certificate history:

Status: **Current**

Issue No: 5

Issue 4 (2021-08-17)
Issue 3 (2014-11-27)
Issue 2 (2014-03-25)
Issue 1 (2013-07-04)
Issue 0 (2011-02-10)

Date of Issue: 2021-09-09

Applicant: **Flexelec S A**
10, Rue des Frères Lumière
ZA du Bois Rond
69720 Saint Bonnet de Mure
France

Ex Component: RSV Motor Anti-Condensation Heaters

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased Safety**

Marking: Ex eb IIC Gb

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**

Position: **Certification Manager**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

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Manufacturer: **Flexelec S A**
10, Rue des Frères Lumière
ZA du Bois Rond
69720 Saint Bonnet de Mure
France

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CSAE/ExTR21.0031/00
GB/SIR/ExTR11.0024/00
GB/SIR/ExTR13.0190/00
GB/SIR/ExTR14.0062/00
GB/SIR/ExTR14.0288/00

Quality Assessment Report:

GB/SIR/QAR11.0002/07

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Ex Component(s) covered by this certificate is described below:

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 (Refer to the Annexe). 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.

SCHEDULE OF LIMITATIONS:

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.
2. The cold tails shall be terminated in an enclosure that has been certified by a notified body and is suitable for the application.
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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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This issue, Issue 5, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Issued to correct the missing standard IEC 60079-0:2017 Ed.7.

Annex:

IECEx SIR 10.0151U Annexe Issue 5.pdf

Annexe to: **IECEx SIR 10.0151U Issue 5**

Applicant: **Flexelec S.A.**

Apparatus: **Motor Anti-Condensation Heaters / RSV**

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

Conditions of Manufacture

1. 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.

Full certificate change history

Issue 1 – this Issue introduced the following change:

1. Following appropriate re-assessment, the previous standards were replaced by those currently listed.

Issue 2 – this Issue introduced the following changes:

1. The reference to CE 0518 on the label was amended.
2. To include 18 AWG and 20 AWG copper cold tail options with either silicon or fluoropolymer insulation.

Issue 3 – this Issue introduced the following change:

1. 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 2, will be identified as RSV UL.

Issue 4 – this Issue introduced the following changes:

1. To allow changes to the ambient temperature range from -20°C/+40°C to -40°C/+60°C.
2. After appropriate assessment, the standards were upgraded to the latest versions IEC 60079-0:2011 Ed.6 and IEC 60079-7:2006 Ed.4 were upgraded to IEC 60079-0:2017 Ed.7 and IEC 60079-7:2015 Ed.5.1 the marking was amended accordingly
3. To recognise drawing CEX21.001/00/24.3.2021 for the RSVUL variant.

Issue 5 – this Issue introduced the following change:

1. Issued to correct the missing standard IEC 60079-0:2017 Ed.7.

Date: **09 September 2021**

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