



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

Certificate No.: **IECEX CML 22.0001X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-02-15

Applicant: **Calex Electronics Ltd**
Leedon House
Billington Road
Leighton Buzzard
Bedfordshire
LU7 4TN
United Kingdom

Equipment: **Infrared Temperature Sensor, ExTempMini and OSAT-Mini Series**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia" / "ia [ia Ga]"**

Marking: **Main enclosure:**
Ex ia [ia Ga] IIC T4 Gb
Ta = -20°C to 70°C

Sensing Head:
Ex ia IIC T4 Ga
Ta = -20°C to 115°C

Ex ia IIC T3 Ga
Ta = -20°C to 180°C

Approved for issue on behalf of the IECEx
Certification Body:

R C Marshall

Position:

Operations Manager

Signature:
(for printed version)

Date:

2022-02-15

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **Calex Electronics Ltd**
Leedon House
Billington Road
Leighton Buzzard
Bedfordshire
LU7 4TN
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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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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 Report:

[GB/CML/ExTR22.0007/00](#)

Quality Assessment Report:

[GB/CML/QAR14.0001/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The ExTempMini Series (alternatively known as OSAT-Mini Series) is intrinsically safe, 4-20 mA two-wire, non-contact, infrared temperature sensors. They consist of a remote sensing head connected by a permanently attached cable to a main enclosure housing the main PCB. The sensing head is approved for use in Zone 0 and the main enclosure is approved for use in Zone 1.

Refer to Annex for full description and conditions of manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex for specific conditions of use.

Annex:

[IECEX CML 22.0001X Iss. 0 Certificate Annex.pdf](#)

Annexe to: IECEx CML 22.0001X Issue 0
Applicant: Calex Electronics Ltd
Apparatus: Infrared Temperature Sensor, ExTempMini and OSAT-Mini Series

Description

The ExTempMini Series (alternatively known as OSAT-Mini Series) is intrinsically safe, 4-20 mA two-wire, non-contact, infrared temperature sensors. They consist of a remote sensing head connected by a permanently attached cable to a main enclosure housing the main PCB. The sensing head is approved for use in Zone 0 and the main enclosure is approved for use in Zone 1.

The ExTempMini and OSAT-Mini are supplied in a number of configurations defined by the model number as follows,

EXM8-aaa-bb-cc-ddd or OSATM8-aaa-bb-cc-ddd

Where:

aaa = Field of view
bb = Measurement temperature range
cc = Sensing Head Cable Length (25 m maximum)
ddd = Other options

The equipment has the following safety parameters,

Ui = 28 V
Ii = 93 mA
Pi = 0.651 W
Ci = 5.17 nF
Li = 1.99 uH

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Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A routine dielectric strength test shall be carried out on the sensing head in accordance with IEC 60079-11:2011 Clause 6.3.13 at a test voltage of 500 Vrms for a minimum of 60 seconds. Alternatively, a voltage of 20 % higher may be applied for 1 second. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The main enclosure does not meet the dielectric strength test of IEC 60079-11:2011 Clause 6.3.13. This shall be taken into account when installing the equipment.