



EU Type Examination Certificate CML 22ATEX2007X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Infrared Temperature Sensor, ExTempMini and OSAT-Mini Series**
- 3 Manufacturer **Calex Electronics Ltd**
- 4 Address **Leedon House, Billington Road,
Leighton Buzzard,
Bedfordshire, LU7 4TN,
United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 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 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

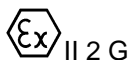
EN IEC 60079-0:2018

EN 60079-11:2012

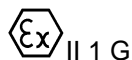
- 10 The equipment shall be marked with the following:

Main enclosure:

Sensing head:



II 2 G



II 1 G

Ex ia [ia Ga] IIC T4 Gb

Ex ia IIC T4 Ga

Ta = -20 °C to +70 °C

Ta = -20 °C to 115 °C

Ex ia IIC T3 Ga

Ta = -20 °C to 180 °C



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11 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

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	15 Feb 2022	R14832A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 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 EN 60079-11:2012 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.



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14 Specific Conditions of Use (Special Conditions)

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 EN 60079-11:2012 Clause 6.3.13. This shall be taken into account when installing the equipment.

Certificate Annex

Certificate Number CML 22ATEX2007X
Equipment Infrared Temperature Sensor, ExTempMini & OSAT-Mini
Manufacturer Calex Electronics Ltd



The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
IRI-00048-EX	1 of 1	02	15 Feb 2022	ExTemp-Mini, General arrangement drawing, Main enclosure
IRI-00049-EX	1 of 1	02	15 Feb 2022	ExTemp-Mini, General arrangement drawing, Sensing head
IRI-00050-EX	1 of 1	02	15 Feb 2022	ExTemp-Mini, Main schematic
IRI-00051-EX	1 of 1	01	15 Feb 2022	ExTemp-Mini, Main PCB
IRI-00052-EX	1 of 1	03	15 Feb 2022	ExTemp-Mini, Main PCB BOM
IRI-00053-EX	1 of 1	02	15 Feb 2022	ExTemp-Mini, Sensing head schematic and bill of materials
IRI-00054-EX	1 of 1	03	15 Feb 2022	ExTemp-Mini, Product marking