[1] UNITED KINGDOM CONFORMITY ASSESSMENT

# UK-TYPE EXAMINATION CERTIFICATE

[2] **Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

[3] UK-Type Examination Certificate No.: **UL23UKEX2827X Rev. 2**

[4] Product: **Elexant 5010i & Elexant 5010i-LIM**

[5] Manufacturer: **Chemelex Belgium NV**

[6] Address: **Research Park Haasrode – Zone 2, Romeinse straat 14, B-3001 Leuvan, Belgium**

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

[8] UL International (UK) Ltd, Approved Body number 0843, 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 report **US/UL/ExTR22.0039/03.**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018**
**EN 60079-7:2015**
**EN 60079-7:2015/A11:2024**
**EN 60079-18:2015**
**EN 60079-31:2014**
**EN IEC 60079-0:2018/A11:2024**
**EN IEC 60079-7:2015/A1:2018**
**EN 60079-11:2012**
**EN 60079-18:2015/A1:2017**

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the Schedule to this certificate.

[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 the product shall include the following:

**Ex II 2 G Ex eb ib mb [ib] IIC T4 Gb**

**Ex II 2 D Ex tb [ib] IIIC T67°C Db IP66**

**Certification Officer**
Andrew Moffat



This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

**Date of issue:** 2023-05-31
**Re-issued:** 2026-03-06

**Approved Body** UL International (UK) Ltd Unit 1-4 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100


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# Schedule
# UK-TYPE EXAMINATION CERTIFICATE No.
## UL23UKEX2827X Rev. 2

[15] Description of Product

The Elexant 5010i-LIM Heat-Tracing Temperature Control Unit with Intelligent Safety Limiter, rated at 100V to 250V and up to 25A, comprises a certified eb tb IP66 plastic enclosure into which are encapsulated a number of printed circuit boards. Termination facilities are provided within the enclosure, above the level of the encapsulation, for the connection of power supply, external RTDs, alarm and data transmission facilities.

The encapsulated parts are divided into intrinsically safe and non-intrinsically safe circuits, with their associated segregated Ex ib and Ex eb termination facilities above the encapsulant.

Internal connections provided from the encapsulated printed circuit boards for three external resistance thermal detectors (RTDs), are made to Ex ib (RTD) terminals situated at the other side of the enclosure and are segregated from the non-intrinsically safe terminals. Internal connections from the encapsulated printed circuit boards supply a four-digit seven segment LED display, five indicator LEDs and two internal push button switches. All are mounted on a separate unencapsulated display printed circuit board behind a window in the lid of the enclosure.

An internal plastic cover provides an IP30 separation between the intrinsically safe display printed circuit board and the non-intrinsically safe termination facilities located on the terminal printed circuit board. A common Earth Terminal is provided adjacent to the Ex ib (RTD) terminals for the termination of cable screens.

External connection is provided via cable entry threaded holes, which enter the enclosure above the level of the encapsulation. Internal and external earthing facilities are provided. For Safety Parameters, refer to Certificate Annex.

A variation on the Elexant 5010i-LIM Heat-Tracing Temperature Control Unit with the safety limiter components omitted is given the designation: Elexant-5010i Heat-Tracing Temperature Control Unit. This unit omits all components associated with RTD3 and its associated internal switches.

Temperature range
The ambient temperature range is -50 °C to +60 °C.

Electrical data
100-250Vac, 47/63Hz, 25A max

Intrinsically safe specifications:
$U_m$ : 250 V

RTD1, RTD2, or RTD3-LIMITER per channel:
$U_o$ : 5.88 V
$I_o$ : 0.089 mA
$P_o$ : 0.131 W
$L_o$ : 4488 uH
$C_o$ : 42.7 uF

Routine tests

- Each piece of “m” equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening.
- Each manufactured sample of equipment shall be subjected to an electric strength test using a test voltage per table below. The test voltage shall be increased steadily within a period of not less than 5 s until it reaches the prescribed value, and it shall then be maintained for at least 2 s.

| Description | Test Voltage |
|---|---|
| Input L&N, Output L&N and Alarm relay contact shorted together to grounding stud and RS-485 pins shorted together | 2200Vac or 3100Vdc |

[16] Test Report No. (associated with this certificate issue)

The test report no. is provided under item no. [ 8 ] on page 1 of this UK-Type Examination Certificate.

[17] Specific conditions of use:

- Cable entry shall be Ex eb and tb UKEx certified and rated minimum IP66 to maintain the IP66 rating of the enclosure. Cable entry devices must have a seal or gasket to provide sealing with the enclosure.
- Unused cable entries must be filled with Ex eb and tb UKEx certified and rated minimum IP66 stopping plugs to maintain the IP66 rating of the enclosure. Cable entry plugs must have a seal or gasket to provide sealing with enclosure.
- Not more than one single or multiple strand wiring lead shall be connected into either side of the terminals.
- Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1mm of the metal of the terminal throat.
- The maximum permitted current of the non-IS alarm contacts is 3A.
- The earth pillar adjacent to the RTD connectors must be used only for RTD cable screens. The external RTDs must be capable of withstanding a 500V test to earth.


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[13] **Schedule**

[14] **UK-TYPE EXAMINATION CERTIFICATE No.**

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[18] Conditions of certification:
Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.

[19] Essential Health and Safety Requirements (Regulations Schedule 1)
In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information

The trademark Raychem will be used as the company identifier on the marking label.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in UKSI 2016:1107 (as amended) – Schedule 3A, Part 1.



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# Schedule
# UK-TYPE EXAMINATION CERTIFICATE No.
## UL23UKEX2827X Rev. 2

[20] Drawings and Documents

| Title: | Drawing No.: | Rev. Level: | Date: |
|---|---|---|---|
| Display Board Non-Limiter Approval Schematic | 2000003136-A-SCH | A | 2021-09-20 |
| Display Board Non-Limiter Approval BOM | 2000003136-A-BOM | A | 2021-09-14 |
| Display Board Limiter Approval Schematic | 2000003137-A-SCH | A | 2021-09-20 |
| Display Board Limiter Approval BOM | 2000003137-A-BOM | A | 2021-09-14 |
| Terminal Board Non-Limiter Approval Schematic | 2000003135-A-SCH | B | 2022-03-30 |
| Terminal Board Non-Limiter Approval BOM | 2000003135-A-BOM | B | 2022-03-29 |
| Terminal Board Limiter Approval Schematic | 2000002476-A-SCH | B | 2022-03-30 |
| Terminal Board Limiter Approval BOM | 2000002476-A-BOM | B | 2022-03-29 |
| Terminal PCB Fabrication/Layers (2000002271) | PCB0015463R001 | B | 2022-03-25 |
| Terminal Board Spacings Drawing | 2000002476-A-PCB | B | 2023-02-28 |
| Basis Board Non-Limiter Approval Schematic | 2000003134-A-SCH | A | 2021-09-20 |
| Basis Board Non-Limiter Approval BOM | 2000003134-A-BOM | E | 2026-01-23 |
| Basis Board Limiter Approval Schematic | 2000002472-A-SCH | A | 2021-09-20 |
| Basis Board Limiter Approval BOM | 2000002472-A-BOM | E | 2026-01-23 |
| Basis PCB Fabrication/Layers (2000002238) | PCB0015464R001 | A | 2021-09-09 |
| Basis Board Spacings Drawing | 2000002472-A-PCB | A | 2023-02-28 |
| Digital Board Non-Limiter Approval Schematic | 2000003133-A-SCH | A | 2021-11-22 |
| Digital Board Non-Limiter Approval BOM | 2000003133-A-BOM | A | 2021-11-17 |
| Digital Board Limiter Approval Schematic | 2000002473-A-SCH | A | 2021-11-22 |
| Digital Board Limiter Approval BOM | 2000002473-A-BOM | A | 2021-11-17 |
| Elexant 5010i Detailed Assembly | 2000002747-A | B | 2022-10-19 |
| 5010i Series Housing Kit | 2000002940-A | B | 2022-11-14 |
| Elexant 5010i-LIM Product Label, Side | 2000002139 | C | 2025-08-11 |
| Elexant5010i Product Label, Side | 2000002140 | C | 2025-08-11 |
| Elexant 5010i-LIM Label, Cover | 2000002138 | A | 2023-01-18 |
| Elexant 5010i-LIM Terminal Cover | 2000002902-A | A | 2023-01-20 |
| Elexant 5010, Elexant 5010i-LIM Instruction Manual | RAYCHEM-IM-EU1917-Elexant5010i-ML | 2508 | - |
| Elexant 5010i, Elexant 5010i-LIM Encapsulation Procedure | Z0162-F12-Oh | A | 2014-04-30 |


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