[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **UL 20 ATEX 2465X Rev. 2**

[4] Product: **LiDAR Module**

[5] Manufacturer: **ExRobotics B.V.**

[6] Address: **Delftechpark 26, Delft 2628 XH, Netherlands**

[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 Demko A/S, notified body number 0539 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in the confidential report no. **US/UL/ExTR20.0149/02.**

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

EN IEC 60079-0:2018 EN IEC 60079-0:2018/A11:2024 EN 60079-1: 2014

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10] If the sign "**X**" is placed after the certificate number, it indicates that the product is subject to the “Specific Conditions of Use” listed under item 17 of this certificate.

[11] This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

II 2 G Ex db IIB T4 Gb

Certification Manager
Thomas Wilson

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 ATEX 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 Directives. The test results may not be used, in whole or in part, in any other document without UL’s prior written approval.

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Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[13] [14]

Schedule
EU-TYPE EXAMINATION CERTIFICATE No.
UL 20 ATEX 2465X Rev. 2

[15] Description of Product

The LiDAR Module, LDR-SW-003226, is a flameproof enclosure with a window that contains a LiDAR puck. The LiDAR Modules are factory wired with a cable leaving the enclosure through a cable gland.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 3) to the scope of EN 60079-28:2015..

Temperature range

The ambient temperature range is -40 °C ≤ Ta ≤ +60 °C.

Electrical data

12V DC, 1.5 A

Routine tests

The routine overpressure testing of the LiDAR Module per EN 60079-1:2014 is replaced by a batch test. The required overpressure for batch testing is 10.56 bar (154 PSI), 1.5 times the reference pressure.

- For a production batch up to 100, a sampling of 8 needs to be tested at 1.5 times the reference pressure with no failures.
- For a production batch from 101 to 1,000, a sampling of 32 needs to be tested at 1.5 times the reference pressure with no failures.
- For a production batch from 1,001 up to 10,000 a sampling of 80 needs to be tested at 1.5 times the reference pressure with no failures.
- Batches above 10,000 must be subdivided into smaller batches.

If there are any non-compliant test results, 100 % of all remaining samples in the batch shall be tested at 10.56 bar (154 PSI), 1.5 times the reference pressure. Also, 100% of future batches shall be routine tested at 1.5 times the reference pressure until confidence is established to reconsider batch testing.

[16] Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17] Specific conditions of use:

- Do not repair the flameproof joints.

[18] Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

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

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.