



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 UL 20.0132X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-03-19

Applicant: **ExRobotics B.V.**
Effenseweg 1
Breda, 4838 BA
Netherlands

Equipment: **LiDAR Module, Model LDR-SW-003226**

Optional accessory:

Type of Protection: **Flameproof "db"**

Marking: **Ex db IIB T4 Gb**
-40°C ≤ Ta ≤ +60°C

Approved for issue on behalf of the IECEx
Certification Body:

Andrew Moffat

Position:

Project Engineer

Signature:
(for printed version)

Date:

2021-03-19

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:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





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Date of issue: 2021-03-19

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Manufacturer: **ExRobotics B.V.**
Effenseweg 1
Breda 4838 BA
Netherlands

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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:

[US/UL/EXTR20.0149/00](#)

Quality Assessment Report:

[DK/ULD/QAR18.0002/03](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Do not repair the flameproof joints.

Annex:

[Annex to IECEx UL 20.0132X Issue 0.pdf](#)



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TYPE DESIGNATION

LiDAR Module





PARAMETERS RELATING TO THE SAFETY

Voltage = 12 V DC

Current = 1.5 A

MARKING

Marking has to be readable and indelible; it has to include the following indications:

		ExRobotics B.V. Effenseweg 1 4838 BA Breda The Netherlands	
CE 0539	Year of manufacture 2021		
LiDAR Module			
LDR-SW-003226	Serial number #001		
IECEx UL 20.0132X		UL 20 ATEX 2465X	
II 2 G Ex db IIB T4 Gb			
-40°C ≤ Ta ≤ +60°C		See Instructions	
 WARNING	 WARNING	 WARNING	
OPEN ONLY IN NON-HAZARDOUS AREA	DO NOT OPEN WHEN ENERGISED	USE FASTENERS WITH YIELD STRESS ≥ 700 Nmm⁻²	

ROUTINE EXAMINATIONS AND TESTS

The routine overpressure testing of the LiDAR Module per IEC 60079-1 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.