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 18.0030X**

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Certificate history:
Issue 4 (2022-04-12)
Issue 3 (2021-07-20)
Issue 2 (2019-12-19)
Issue 1 (2019-01-28)
Issue 0 (2018-09-28)

Status: **Current**

Issue No: 5

Date of Issue: 2025-09-04

Applicant: **ExRobotics B.V.**
Delftechpark 26,
Delft 2628 XH,
Netherlands

Equipment: **ExR-1 Robot Operator, ExR-1 Robot Operator Revision 2 and ExR-1 Robot Operator Revision 3**

Optional accessory:

Type of Protection: **Flameproof "db", Increased safety "eb", Intrinsic safety "ib", Encapsulation "mb", Powder filling "qb"**

Marking: Ex db eb ib mb qb IIB T4 Gb

-20°C ≤ Ta ≤ +50°C

Approved for issue on behalf of the IECEx Certification Body: **Lucy Frieders**

Position: **Staff Engineer**

Signature:
(for printed version)

Date:
(for printed version)

2025-09-04

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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 Solutions (US)
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

IECEx Certificate of Conformity

Certificate No.: **IECEx UL 18.0030X**

Date of issue: 2025-09-04 Issue No: 5

Manufacturer: **ExRobotics B.V.**
Delftechpark 26,
Delft 2628 XH,
Netherlands

Manufacturing locations: **ExRobotics B.V.**
Delftechpark 26,
Delft 2628 XH,
Netherlands

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

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-5:2015 Explosive atmospheres –Part 5: Equipment protection by powder filling “q”
Edition:4.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Reports:

US/UL/ExTR18.0036/00 US/UL/ExTR18.0036/01 US/UL/ExTR18.0036/02
US/UL/ExTR18.0036/03 US/UL/ExTR18.0036/04 US/UL/ExTR18.0036/05

Quality Assessment Report:

DK/ULD/QAR18.0002/10

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The ExR-1 Robot Operator, ExR-1 Robot Operator Revision 2 and ExR-1 Robot Operator Revision 3 are remotely operated robotic vehicles that are used to inspect oil and gas facilities. The ExR-1 Robot Operator, ExR-1 Robot Operator Revision 2 and ExR-1 Robot Operator Revision 3 are constructed of certified components including cameras, lights, motors, and various sensors. The various components are interconnected with certified cable glands and suitable cables.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Do not repair the flameproof joints of the robot or any of the accessories.
- The flameproof joint of the R Stahl FX15 series beacon will only be secured using fasteners supplied by R Stahl. Where fasteners are used to secure other flameproof joints they have a yield stress ≥ 450 Nmm^2.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Updates to the Electronics Box and the addition of new sensor options.

Issue 2: Minor drawing updates, the addition of Model ExR-1 Robot Operator Revision 2, a Battery Management System, and the addition of the Infrared Leak Detection Module.

Issue 3: Minor drawing updates, the addition of Model ExR-1 Robot Operator Revision 3, addition of an HP Induction Charger, addition of alternate cable glands, addition of an optional inspection module with thermal camera, and alternate gas detector options. There are no differences between IEC 60079-7, Edition 5.0 and IEC 60079-7, Edition 5.1 that affect this product.

Issue 4: Update of manufacturing location address.

Issue 5: Manufacturer's address changed from Effenseweg 1, Breda, 4838 BA, The Netherlands to Delftechpark 26, Delft 2628 XH, Netherlands.

Annex:

Annex to IECEx UL18.0030X Issue 5.pdf

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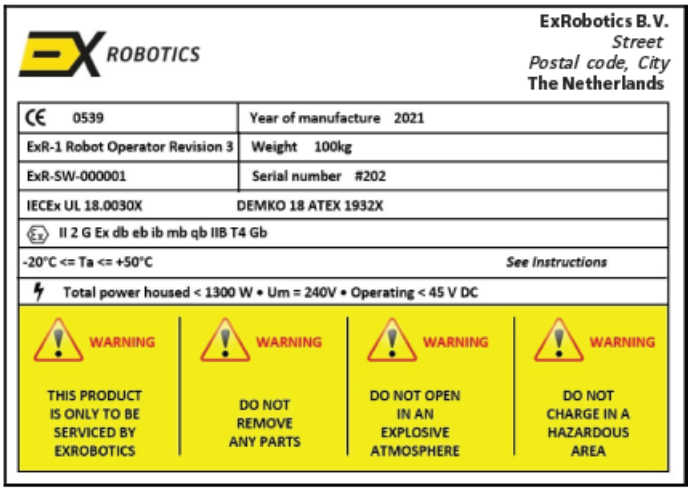
PARAMETERS RELATING TO THE SAFETY

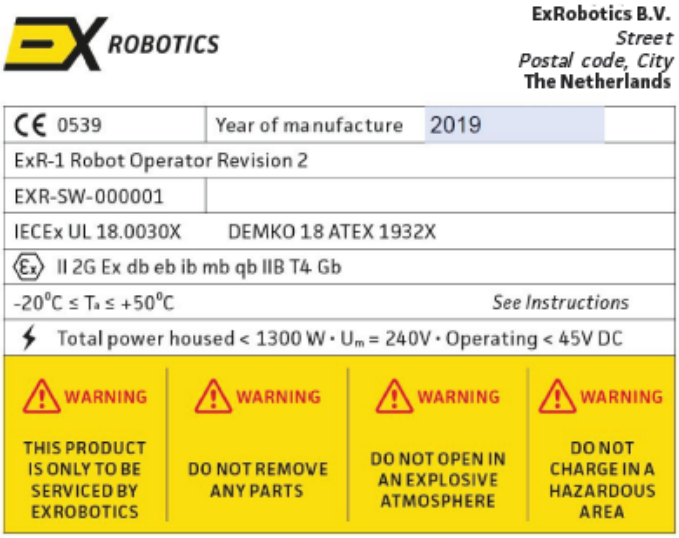
Maximum Wattage 1300W

Um = 240VAC

MARKING

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





EX ROBOTICS

ExRobotics B.V.
Street
Postal code, City
The Netherlands

CE 0539	Year of manufacture	2019
ExR-1 Robot Operator		
EXR-SW-000002	01	
IECEx UL 18.0030X	DEMKO 18 ATEX 1932X	
Ex II 2G Ex db eb ib mb qb IIB T4 Gb		
-20°C ≤ Ta ≤ +50°C	*See Instructions*	
Total power housed < 1300 W • Um = 240V • Operating < 45V DC		

WARNING	WARNING	WARNING	WARNING
THIS PRODUCT IS ONLY TO BE SERVICED BY EXROBOTICS	DO NOT REMOVE ANY PARTS	DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE	DO NOT CHARGE IN A HAZARDOUS AREA

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above has to have successfully passed; before delivery:

- Routine Surface Resistance test in accordance with Clause 4.2.3 of IEC 60079-32-2 shall be conducted on each Thistle Track Centipede. Reference Drawing 20180716IP1 for further details.
- Routine Dielectric Strength Test in accordance with Clause 5.2.2 of IEC 60079-5 shall be performed on each lot of Swarco glass beads. Reference Drawing 20180720RS1 for further details.
- Routine Pressure Test in accordance with Clause 5.2.1 of IEC 60079-5 shall be performed on each Electronics Box at a pressure of 50kPa for a duration of not less than 10 seconds. No permanent deformation of the enclosure is to exceed 0.5mm in any dimension. Reference Drawing 20180710IP1 for further details.

The following clauses from IEC 60079-14 Ed. 5 were verified as part of the Ex equipment assembly: 4.1, 4.4.1.1, 4.4.1.2, 4.4.2, 5.12, 5.14.2, 6.1, 6.2, 6.5.1, 6.5.2, 6.7.1, 6.7.2, 7, 8.1, 8.2, 8.3, 9.1, 9.3.1, 9.3.2, 9.3.8, 9.5, 9.6.2, 10.1, 10.2, 10.3, 10.5, 10.6.1, 10.6.2, 11.1, 14.1, 15.1, 16.1, 16.2.1, 16.2.2.1, 16.2.2.2, 16.2.2.5.1, 16.2.2.5.2, 16.2.2.6, 16.2.3, 16.4, 20, and 21.

The following clauses from IEC 60079-14, Ed. 5, were considered not applicable: 4.4.3, 5.4.3, 5.4.5, 5.6.3, 5.8, 5.10.3, 5.11.4, 5.11.5, 5.13.1, 5.13.2, 5.13.3, 5.15 , 5.16, , 6.3 , 6.4, 6.5.3, 6.8, 9.2, 9.3.3, 9.3.4, 9.3.5, 9.3.9, 9.4, 9.6.1, 9.6.3, 9.6.4, 9.6.5, 10.4, 10.7, 10.8, 11.2.1, 11.2.2, 11.3, 11.4, 11.5, 11.6, 12, 13, 14.2, 14.4, 15.2, 15.3, 15.4, 16.2.2.3, 16.2.2.4, 16.2.2.5.3, 16.2.2.7, 16.2.2.8, 16.2.4, 16.3, 16.5, 16.6, 17, 18, 19, 22, 23, and Annex H.

The following clauses from IEC 60079-14, Ed. 5, need to be verified on site: 4.2, 4.3, 4.5, 5.1, 5.2, 5.3, 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.5, 5.6.1, 5.6.2, 5.7, 5.9, 5.10.1, 5.10.2, 5.11.1, 5.11.2, 5.11.3, 5.14.1, 6.6, 6.9, 9.3.6, 9.3.7, 9.6.6, 14.3, Annex A, Annex C, Annex G, and Annex K.

LIST OF CERTIFIED COMPONENTS

The following additional previous editions of Standards noted under the "Standards" section of this Certificate were applied to integral Components as itemized below. There are no significant safety related changes between these previous editions and the editions noted under the "Standards" section.

Product	Certificate Number	Standards
R. Stahl Switches 8003/121-015 and 8003/131-726-2r	IECEx PTB 06.0065X	IEC 60079-0:2004 Ed.4.0 IEC 60079-1:2001 Ed.4.0 IEC 60079-7:2001 Ed.3.0
Multibox Terminal Boxes MBA Ex 202311 and MBA Ex 332311	IECEX IBE 14.0020U	IEC 60079-0:2011 Ed.6.0 IEC 60079-7:2006 Ed 4.0
Multibox Terminal Boxes MBA-EX 101080	IECEX IBE 14.0020U	IEC 60079-0:2011 Ed.6.0 IEC 60079-7:2006 Ed 4.0
Raxton Breather Drain CTE1300YU	IECEx ITS 13.0018X	IEC 60079-0:2011 Ed. 6 IEC 60079-1 Edition 2007
Honeywell, Gas Sensor, Series 3000 MkII	IECEx UL 11.0011X	IEC 60079-0:2011 Ed. 6.0 IEC 60079-1:2014 Ed. 7.0
Honeywell, Gas Sensor, S3KXSF1SS S3KXSH1SS	IECEx UL 08.0013X	IEC 60079-0:2011 Ed. 6.0 IEC 60079-1:2014 Ed. 7.0
Ion Science Ltd Gas Detector Falco 1.1	IECEx FTZU 16.0011X	IEC 60079-0:2011 Ed. 6.0 IEC 60079-1:2007 Ed.6.0
R. Stahl FX15 Beacon	IECEx BAS 13.0003	IEC 60079-0:2011 Ed.6.0 IEC 60079-1:2014 Ed.6.0
Crowcon Detection Instruments Limited Gas Detector IR Gas Detector	IECEx BAS 09.0109X	IEC 60079-0:2007 Ed. 5.0 IEC 60079: 2007 Ed. 6.0
Pepperl+Fuchs Switch PMP.E4 or E5	IECEx CML 16.0046X	IEC 60079-0:2011 Ed. 6.0 IEC 60079-1:2007 Ed. 6.0 IEC 60079-7:2006 Ed. 6.0
Teledyne Oldham Simtronics Gas Detector GD10-P00	IECEx PRE 19.0015X	IEC 60079-0:2017 Ed 7.0 IEC 60079-1:2014 Ed 7.0 IEC 60079-7:2015 Ed 5.0
Simtronics Gas Detector GD10P and GD10PE	IECEx NEM 07.0006	IEC 60079-0:2011 Ed. 6.0 IEC 60079-1:2007 Ed. 6.0 IEC 60079-7:2006 Ed. 4.0
R.Stahl Panel Socket 8573/15-210 241387	IECEx PTB 16.0030U	IEC 60079-0:2017 Ed .7.0 IEC 60079-1:2014 Ed. 6.0 IEC 60079-7:2015 Ed. 5.0
Ziztel Microphone XIMIC	IECEx BAS 18.0026X	IEC 60079-0:2011 Ed. 6.0 IEC 60079-11:2011 Ed. 6.0

The following additional previous editions of Standards noted under the “Standards” section of this Certificate were applied to integral Components as itemized below. There are no significant safety related changes between these previous editions and the editions noted under the “Standards” section.

Product	Certificate Number	Standards
Hummel Terminal Box for Panel Socket Cable Gland HSK-K-Ex-ACTIVE 1.292.1611.30	IECEx BVS 14.0020X	IEC 60079-0:2017 Ed. 7.0 IEC 60079-7:2015 Ed. 5.0