



EU-TYPE EXAMINATION CERTIFICATE

Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

EU-Type Examination Certificate Number: **CSANe 24ATEX1322X** Issue: **1**

Equipment: **ExR-2.5 Robot Operator and Docking Station**

Manufacturer: **ExRobotics B.V.**

Address: Delftechpark 26
Delft 2628 XH
Netherlands

This product and any acceptable variation thereto, is specified in the schedule to this certificate and the documents therein referred to.

CSA Group Netherlands B.V., Notified Body No. 2813 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 reports listed in item 16.2.

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

PD IEC/TS 60079-46:2017 EN ISO 80079-36:2016 EN ISO 80079-37:2016 EN 60079-5:2015
EN IEC 60079-0:2018 EN IEC 60079-7: 2015 +A1:2018 EN 60079-18:2015 + A1:2017

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

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed in item 17 of this certificate.

This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with 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 this certificate.

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

See Schedule

Signed: Michelle Halliwell
Title: Senior Director of Operations
Date: 03 June 2026



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SCHEDULE

14 **EU-Type Examination Certificate Number:** CSANe 24ATEX1322X Issue: 115 **Description:****ExR-2.5 Robot Operator and Docking Station**

II 2G
Ex 60079-46 II** T4 Gb
*-40°C to +55°C

HP Induction Charger TX

II 2G
Ex mb IIC T4 Gb
*-40°C to +55°C

Electronics Box

II 2G
Ex qb IIC T4 Gb
*-40°C to +55°C

HP Induction Charger RX

II 2G
Ex mb IIC T4 Gb
*-40°C to +55°C

Battery Pack ExR-2

II 2G
Ex eb IIC T4 Gb
*-40°C to +55°C

Robot Ladder

II 2G
Ex h IIC T4 Gb
*-40°C to +55°C

* See Document 20250416TV1, Section 1.2.

- The minimum ambient temperature range is between -40°C and -20°C
- The maximum ambient temperature of the equipment is between +45°C and +55°C

**See Document 20250416TV1, Section 1.1:

The equipment Gas Group can be IIB, IIB+H₂ or IIC, depending on options installed.

The ExR-2.5 Robot Operator is a remotely operated vehicle that is used to inspect oil and gas facilities. The ExR-2.5 Docking Station is provided as a method of charging the ExR-2.5 Robot Operator and is permissible for charging within the Hazardous (Explosive) Atmosphere. The vehicle is constructed of certified components including cameras, lights, motors, and various sensors. The various components are interconnected with certified cable glands and suitable cables.

The overall equipment is intended for use in Zone 1, EPL Gb, Gas Group IIB, IIB+H₂ or IIC with a temperature class T4.

The equipment is assessed as an assembly and consists of different devices employing types of protection as follows:

Equipment protection by flameproof enclosures "d"

Equipment protection by increased safety "e"

Equipment protection by intrinsic safety "i"

Equipment protection by encapsulation "m"

Equipment protection by powder filling "q"

Equipment protection by constructional safety "h"

The equipment ratings:

ExR-2.5 Robot Operator: Um= 240V, 48Vdc max, 1300W max

Docking Station: Um= 240V, 1300W max



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QD-1589 Issue Date: 2025-06-20

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Variation 1 - This variation introduced the following changes:

- i. Upgrade the ExR-2.5 Robot Operator and Docking Station to IIC certification.
- ii. Introduction of new devices
 - Sorama Acoustic Monitor
 - Gas sensor Falco 2.1
 - DR4 connector
 - Alternative cable entry devices
- iii. Minor modifications.
- iv. Drawing updates

16 Drawings and documents:

16.1 Technical documents:

Refer to Certificate Annex.

16.2 Associated reports and certificate history:

Issue	Date	Report number	Comment
0	21 February 2025	R80220454A	The release of the prime certificate.
1	03 June 2026	R80281846A	The introduction of Variation 1.

17 Specific conditions of use (denoted by "X" after the certificate number):

- 17.1 The Dome PTZ, when fitted, may be used only in locations with a low risk of mechanical impact.
- 17.2 Potential electrostatic charging hazard – see instructions.
- 17.3 Do not repair the flameproof joints of robots or any of their components.
- 17.4 Flameproof joints are closed using fasteners with a yield stress $\geq 450 \text{ N/mm}^2$ except for:
 - The Dome PTZ Module, use fasteners with a yield stress of $\geq 640 \text{ N/mm}^2$.
 - Det-tronics Hydrocarbon Gas Module, use fasteners with a yield stress of $\geq 65000 \text{ psi}$ (448 N/mm^2).
- 17.5 In accordance with clause 7 of IEC TS 60079-46 below is a list of clauses from IEC 60079-14 which have been satisfied by the installation of the associated certified equipment.

4.1	General requirements	This assembly is for Zone 1 applications. At manufacture the equipment assembly is inspected and tested for compliance with non-hazardous area electrical safety requirements Equipment used in this assembly are rated at Docking Station 100V to 240Vac, 1300W max ExR-2 Robot Operator: Um = 240V, 48Vdc max, 1300W max as stated in the user instructions. Clauses 5 to 13 have been applied where applicable. No extreme circumstances are likely or considered. All equipment is suitably certified.	Pass
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4.2	Documentation	This assessment and supporting information and data will form a verification dossier. Supporting information included lists of the equipment forming the assembly as well as information regarding installation of the same.	Pass
4.3	Initial inspection	In this application it was considered acceptable to review documentation defining the assembly. Subsequent production items being controlled by a relevant QAN/QAR	Pass
4.4	Assurance of conformity of equipment	All equipment forming the assembly is subject to IECEx certificates to IEC 60079 and ISO 80079 series standards	Pass
4.5	Qualifications of personnel	Qualifications of the personal manufacturing the assembly is a matter for the related QAN/QAR	Pass
5	Selection of equipment	The assembly is intended for Zone 1, groups IIC, IIB+H2, and IIB, Gb applications.	Pass
6.1	Light metals as construction materials	All equipment forming the assembly is certified to IEC 60079-0 and ISO 80079, as such light metal requirements are satisfied by default	Pass
6.7	Electromagnetic radiation	Electromagnetic radiation has been evaluated in accordance with IEC 60079-0.	Pass
7	Electrical protection	The motor is protected by a fuse.	Pass
10	Cable entry systems and blanking elements	Cable glands and blanking elements provided are certified and used within their ratings.	Pass
11	Rotating electrical machines	The motor is protected by a fuse.	Pass
14.3	Protection of flameproof joints	Molykote can be used on the Flame paths	Pass
15	Additional requirements for type of protection "e" – Increased safety	The equipment uses certified parts. The assessment was carried out under the ExTR US/UL/ExTR21.0025/00.	Pass
16	Additional requirements for types of protection "i" – Intrinsic safety	Associated apparatus are provided within the certified electronics box. The other intrinsically safe devices are wired within the protective hull. The installation meets the requirements of IEC 60079-11.	Pass
20	Additional requirements for type of protection "q" – Powder filling	The Electronics Box of the ExR-2 utilizes protection type "q".	Pass
21	Additional requirements for type of protection "m" – Encapsulation	The equipment uses certified type "m" components.	Pass
Annex C (normative)	Initial inspection – Equipment-specific inspection schedules	The requirement for an initial inspection of the assembly and related installation is included in the certificate.	Pass

17.6 The protective cap of the Rota DR4 connector shall be fitted immediately following separation.



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18 Essential health and safety requirements of Annex II (EHSRs):

The relevant EHSRs that are not addressed by the standards listed in item 9 of this certificate have been identified and conformity of the product demonstrated in the reports listed in item 16.2.

19 Remarks and additional information:

The use of this certificate is subject to the regulations applicable to holders of CSA Group Netherlands B.V. certificates.

Compliance of the product with the applicable safety requirements of the relevant industrial standards has not been verified and is not covered by this certificate.

19.1 Conditions of manufacture:

- 19.1.1 Routine Dielectric Strength Test in accordance with Clause 5.2.2 of IEC/EN 60079-5 shall be performed on each lot of Swarco glass beads.
- 19.1.2 Routine visual inspection of the encapsulant shall be performed on the chargers of the EXR-2 Robot Operator and Docking Station.
- 19.1.3 Inspection and testing of the entire equipment assembly after assembly shall be performed and documented by the manufacturer.
- 19.1.4 The manufacturer shall continually monitor the status of the certified components and inform the Certification Body of changes which may affect the equipment certification.



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Certificate Annexe

Document History

Issue - 0

Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
20241124TV1	1 to 19	01	29 Jan 25	ExR-2.5 Electrical Overview
ExR-SW-003377(2.5)	1 to 8	00	29 Jan 25	ExR-2.5 Robot Operator Ex Certification Details
BAT-SW-003762	1 to 6	02	29 Jan 25	Battery Pack ExR-2 Ex Certification Details
CHG-SW-003962	1 to 5	02	29 Jan 25	HP Induction Charger Rx Ex Certification Details
CHG-SW-003733	1 to 5	02	29 Jan 25	HP Induction Charger Tx Ex Certification Details
DCK-SW-003721	1 to 4	02	29 Jan 25	Docking Station Ex Certification Details
ELB-SW-004696	1 to 7	01	29 Jan 25	Electronics Box Ex Certification Details
MLO-SW-005354	1 to 1	00	29 Jan 25	Robot Ladder Assembly Ex Certification Details
20241129TV1	1 to 2	03	30 Jan 25	Label
20180720RS1	1 of 1	05	29 Jan 25	Dielectric Strength Test Procedure
20241217IP1	1 to 15	02	30 Jan 25	Ignition Hazard Assessment
PB.0013.0815	1 to 13	-	29 Jan 25	ExR-2.5 Motherboard PCB 2.27
20230510TV1	1 of 1	1	11 Feb 25	ELB Electronics Box Filling Procedure
TMB-SW-004744	1-2	01	29 Jan 25	Terminal Box Ex Certification Details
SKT-SW-002854	1-2	03	29 Jan 25	Power Socket Ex Certification Details
Item List 1	1 to 3	-	29 Jan 25	Overview of Ex components in the ExR-2.5 docking station
Item List 2	1 to 6	-	29 Jan 25	Ex components in the ExR-2.5 This document list the components on sheet 1 of ExR-SW-003377(2.5)
Item List 3	1 to 8	-	29 Jan 25	Ex components in the ExR-2.5 This document list the components on sheet 4 of ExR-SW-003377(2.5)

Issue - 1

Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
20241124TV1	1 to 19	03	07 May 26	ExR-2.5 Electrical Overview
ExR-SW-003377(2.5)	1 to 8	01	22 May 26	ExR-2.5 Robot Operator Ex Certification Details
BAT-SW-003762	1 to 6	03	22 May 26	Battery Pack ExR-2 Ex Certification Details
CHG-SW-003962	1 to 5	03	22 May 26	HP Induction Charger Rx Ex Certification Details
CHG-SW-003733	1 to 5	03	22 May 26	HP Induction Charger Tx Ex Certification Details
DCK-SW-003721	1 to 4	03	22 May 26	Docking Station Ex Certification Details
ELB-SW-004696	1 to 9	02	22 May 26	Electronics Box Ex Certification Details
MLO-SW-005354	1 of 1	01	22 May 26	Robot Ladder Complete Assembly Ex Certification Details
TMB-SW-004744	1 to 2	02	07 May 26	Terminal Box Ex Certification Details
SKT-SW-002854	1 to 2	04	07 May 26	Power Socket Ex Certification Details
20250415PV1	1 to 4	04	01 Jun 26	Overview Ex components Docking Station
20250415PV2	1 to 10	04	07 May 26	Overview Ex components Basic ExR2.5 Robot
20250415PV3	1 to 14	04	01 Jun 26	Overview Ex components ExR2.5 Robot Options
PB.0013.0815	1 to 13	-	07 May 26	ExR-2.5 Motherboard PCB
20250416TV1	1 to 9	4	28 May 26	ExR-2.5 and Docking Station Certification Description

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