

CERTIFICATE

(1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 10ATEX0083X** Issue Number: **9**

(4) Product: **Gas Detector, Type SD-1, SD-1D, SD-1GH and SD-1DGH**

(5) Manufacturer: **RIKEN KEIKI Co., Ltd.**

(6) Address: **2-7-6, Azusawa, Itabashi-ku, Tokyo, 174-8744, Japan**

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

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of 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 confidential test report number NL/KEM/ExTR10.0031/08.

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

EN IEC 60079-0 : 2018

EN 60079-1 : 2014

except in respect of those requirements listed at item 18 of 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 specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive 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:



II 2 G Ex db IIC T5 Gb

Date of certification: 9 December 2024

DEKRA Certification B.V.

L.G. van Schie
Certification Manager



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 10ATEX0083X**

Issue No. **9**

(15) **Description**

Gas detectors, Type SD-1, SD-1D, SD-1GH and SD-1DGH are fixed mount, continuous monitoring detectors and provide a 4 - 20 mA current output signal (with or without HART communication). One or two contact outputs (relays) are provided for alarm assignment.

The sensor of Type SD-1 and Type SD-1GH monitors the surrounding atmosphere and is protected by a guard. The sensor of Type SD-1D and Type SD-1DGH is protected by a cover with process connections to monitor the connected atmosphere at atmospheric pressure and a temperature not exceeding the ambient temperature range.

The examination of the gas detector does not include a judgement of the functional performance of the apparatus.

Ambient temperature range -20 °C to +60 °C.

Electrical data

Supply SD-1 and SD-1D: 24 Vdc, max. 125 mA (HART)

Supply SD-1GH and SD-1DGH: 24 Vdc, max. 130 mA (HART)

Analogue output

- 4 - 20 mA: 24 Vdc, max. 22 mA or
- 4 - 20 mA with HART communication: 24 Vdc, max. 22 mA

Contact output

- with 1 contact output: max. 30 Vdc / 250 Vac, 0.5 A
- with 2 contact outputs: max. 30 Vdc, 1 A per contact

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

NL/KEM/ExTR10.0031/08.

(17) **Specific conditions of use**

- The equipment is submitted to tests corresponding to the low risk of mechanical danger, it shall be protected from a high risk of mechanical danger.
- Fasteners from stainless steel property class A*-70 are used. The fasteners shall only be replaced with identical ones.
- The flameproof joints are not intended to be repaired.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/KEM/ExTR10.0031/08.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 10ATEX0083X**

Issue No. **9**

(20) **Certificate history**

Issue 1 - 213240400	Initial certificate.
Issue 2 - 214233400	Addition of two types of cable entry adapter, 1/2-14NPT & 3/4-14NPT; An additional Gas Sensor-C for use with main unit SD-1GH.
Issue 3 - 215418000	Extension with electronics with HART communication.
Issue 4 - 510001400	Assessment according to the new edition of EN 60079-0:2012+A11; An addition of types SD-1D and SD-1DGH; Assessment of minor constructional changes.
Issue 5 - 219252700-1	Assessment of minor constructional changes.
Issue 6 - 510013300	Assessment according to latest edition of EN 60079-1:2014; Assessment of minor constructional changes.
Issue 7 - 224649000	Assessment per EN IEC 60079-0 : 2018.
Issue 8 - 228482000-11	Minor change on the label drawings and instructions.
Issue 9 - 227745400-1	Assessment of constructional changes; Introduction of an alternative material for the thread adapter.