

(1) EC-TYPE EXAMINATION CERTIFICATE

(2) Equipment or protective system intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 04ATEX2156**

(4) Equipment or protective system: **Oxygen Detector Type ZR22S and Oxygen Analyzer Type ZR202S**

(5) Manufacturer: **Yokogawa Electric Corporation**

(6) Address: **2-9-32 Naka-cho, Musashino-shi, Tokyo, 180-8750 Japan**

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

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential report no. 2074823.

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

EN 50014 : 1997 + A1, A2 EN 50018 : 2000 + A1 EN 50281-1-1 : 1998 + A1

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:



II 2 GD EEx d IIB + H₂ T2 T 300 °C

Arnhem, 25 April 2005
KEMA Quality B.V.



C.G. van Es
Certification Manager

* This Certificate may only be reproduced in its entirety and without any change

DKE031-C02

P.1/P.197

SCHEDULE

(13)

(14)

to EC-Type Examination Certificate KEMA 04ATEX2156

(15) **Description**

The Oxygen Detector Type ZR22S and the Oxygen Analyzer Type ZR202S are used for continuous oxygen measurement. The Oxygen Detector Type ZR22S consists of a probe and a terminal compartment for connection to a separate converter. The Oxygen Analyzer Type ZR202S consists of a probe and an enclosure with the converter electronics. Optionally, the Oxygen Analyzer Type ZR202S can be provided with an auto calibration unit.

Ambient temperature range: -20 °C to +60 °C (ZR22S)
-20 °C to +55 °C (ZR202S)

The maximum surface temperature T 300 °C is based on the maximum ambient temperature as mentioned above.

The enclosure provides a degree of protection of at least IP66 according to EN 60529.

Electrical data

ZR22S

Only for connection to converter type ZR402G or AV550G according to the user manual.

ZR202S

Supply: 240 Vac, 300 W
Output: 4 - 20 mAdc

Installation instructions

The cable entry devices and stopping plugs shall be in type of protection flameproof enclosure "d", suitable for the conditions of use and correctly installed. The devices shall provide a degree of ingress protection of at least IP66 according to EN60529.

Routine tests

Each welded probe shall be subjected to a routine overpressure test according to EN 50018, clause 16, using a test pressure of 4,4 MPa during at least 10 seconds. The probe shall withstand the pressure without suffering permanent deformation of the joints or damage to the enclosure.

Routine overpressure tests are not required for the other parts since the type test has been carried out at four times the reference pressure.

(16) **Report**

KEMA No. 2074823.

(17) **Special conditions for safe use**

None.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 2074823.