CERTIFICATE

(1) EC-Type Examination

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **DEKRA 11ATEX0109 X** Issue Number: **1**

(4) Equipment: **Two wire analyzer Model FLXA21 series, Housing assembly and Sensor modules pH, SC, DO and ISC.**

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

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

(7) This equipment 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 test report number NL/DEK/ExTR11.0036/**.

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

EN 60079-0 : 2009 **EN 60079-11 : 2007** **EN 60079-26 : 2007**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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

II 1 G Ex ia IIC T4...T6 Ga

This certificate is issued on 11 August 2011 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.

C.G. van Es
Certification Manager

PRODUCTS RvA C 001

All testing, inspection, auditing and certification activities of the former KEMA Quality are an integral part of the DEKRA Certification Group

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(13) # SCHEDULE

(14) **to EC-Type Examination Certificate DEKRA 11ATEX0109 X** Issue No. **1**

(15) **Description**

The Model FLXA21 Series two wire analyzer is a water quality analyzer that consists of a common functionality part (Housing Assembly) with 4 to 20 mA dc supply and communication unit, LCD and touch panel with two slots for insertion of one or two measuring modules (Sensor modules). The following Sensor modules are available: pH module, Contact Conductivity (SC) module, Inductive conductivity (ISC) module and Dissolved Oxygen (DO) module. The housing assembly can contain up to two sensor modules, except for the ISC module, where only one module can be installed at a time. Appropriate sensors can be connected to the Sensor modules.

The Housing Assembly can also be used with other separately certified modules. The Sensor modules may also be used in other certified equipment, providing a degree of protection of at least IP20.

Ambient Temperature range: -20 °C to 55 °C (for T4)
-20 °C to 40 °C (for T6)

Electrical data

Main communication unit (Housing assembly: K9698NA, PA, QA, RA, QB, RB, QC, RC)

Supply and output circuit (terminals + and –):
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 100 mA; P_i = 0,75 W; C_i = 13 nF; L_i = 0 mH, linear power source only.

Connectors for insertion of Sensor modules:
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_o = 13,65 V; I_o = 50 mA; P_o = 0,372 W; C_o = 80 nF; L_o = 7,7 mH.

Sensor modules: pH, SC, ISC, DO

Sensor modules pH (K9698EA), SC (K9698FA), and DO (K9698HA), suitable for insertion in a sensor slot of the Housing assembly (connector):
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_i = 13,92 V; I_i = 50 mA; P_i = 0,374 W; C_i = 40 nF; L_i = 2,9 mH.

Sensor circuit of Sensor modules pH (terminals 11, 12, 13, 14, 15, 16, 17, 18, 19), SC (terminals 11, 12, 13, 14, 15, 16) and DO (terminals 11, 12, 13, 14, 15, 16, 17, 18):
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_o = 11,76 V; I_o = 116,5 mA; P_o = 0,342 W; C_o = 100 nF; L_o = 1,7 mH.

Sensor module ISC (K9698GA), suitable for insertion in a sensor slot of the Housing assembly (connector):
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_i = 13,92 V; I_i = 50 mA; P_i = 0,374 W; C_i = 40 nF; L_i = 7,7 mH.

Sensor circuit of Sensor module ISC (terminals 11, 12, 13, 14, 15, 16 and 17):
in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
U_o = 11,76 V; I_o = 60,6 mA; P_o = 0,178 W; C_o = 100 nF; L_o = 8 mH.

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate DEKRA 11ATEX0109 X** Issue No. **1**

Installation instructions

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

(16) **Test Report**

No. NL/DEK/ExTR11.0036/**.

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

For applications in an area where the use of category 1G equipment is required, electrostatic charges on the non-metallic parts of the analyzer shall be avoided.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. NL/DEK/ExTR11.0036/**.

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