

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: **KEMA 02ATEX1026 X** Issue Number: **3**

(4) Equipment: **Temperature Transmitter series Model YTA**

(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/KEM/ExTR09.0037/**

(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...T5 Ga

This certificate is issued on 18 November 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

Page 1/2

IKE014-C08 P.1

° Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.



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

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 02ATEX1026 X**

Issue No. 3

(15) **Description**

Temperature Transmitters Model YTA series convert the measurement signal of temperature sensors into a 4 - 20 mA current signal with digital communication.

Ambient temperature range: -40 °C ... +50 °C for temperature class T5,
 -40 °C ... +70 °C for temperature class T4.

Electrical data

Supply/output circuit (terminals C, + and -) in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:
 $U_i = 30 \text{ V}$, $I_i = 165 \text{ mA}$, $P_i = 900 \text{ mW}$, $C_i = 20 \text{ nF}$, $L_i = 730 \text{ }\mu\text{H}$.

Sensor input circuit (terminals 1, 2, 3, 4 and 5) in type of protection intrinsic safety Ex ia IIC, with the following maximum values:
 $U_o = 9,0 \text{ V}$, $I_o = 40 \text{ mA}$, $P_o = 90 \text{ mW}$, $C_o = 0,7 \text{ }\mu\text{F}$, $L_o = 10 \text{ mH}$.

Installation instructions

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

(16) **Test Report**

No. NL/KEM/ExTR09.0037/**..

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

Because the enclosure of the Temperature Transmitter is made of aluminium, if it is mounted in an area where the use of category 1 G apparatus is required, it must be installed such, that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. NL/KEM/ExTR09.0037/**.



(1) **EC-TYPE EXAMINATION CERTIFICATE**

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

(3) EC-Type Examination Certificate Number: **KEMA 07ATEX0130** Issue Number: 1

(4) Equipment: **Temperature Transmitter type YTA...**

(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) 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 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 2107662.

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

**EN 60079-0 : 2006
EN 61241-1 : 2004**

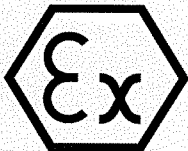
EN 60079-1 : 2007

EN 61241-0 : 2006

(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 2 G Ex d IIC T6/T5
II 2 D Ex tD A21 IP67 T 70 °C / T 90 °C**

This certificate is issued on 30 November 2007 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.

KEMA Quality B.V.

T. Pijpker
Certification Manager

DKE034-C02 P.1 / 41

Page 1/2



® Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 07ATEX0130** Issue No. 1

(15) **Description**

The Temperature Transmitter type YTA..., with or without display, converts a measurement input signal of separately approved temperature sensors into an analogue and/or digital output signal.

Ambient temperature range:

-40 °C to +65 °C for maximum surface temperature T 70 °C

-40 °C to +75 °C for temperature class T6

-40 °C to +80 °C for maximum surface temperature T 90 °C and for temperature class T5

The enclosure provides a degree of protection of at least IP67 in accordance with EN 60529.

Electrical data

Power supply: 42 Vdc max. (4 to 20 mA type)

32 Vdc max. (fieldbus type)

Input signal:..... one or two thermocouples or 2-, 3- or 4-wire RTD's

Output circuit:..... 4 to 20 mA dc (4 to 20 mA type)

17,5 mA (fieldbus type)

Installation instructions

Certified cable glands and blanking elements shall be used that are suitable for the application and correctly installed.

For an ambient temperature exceeding 70 °C, heat resistant cables suitable for at least 90 °C shall be used.

Routine tests

Routine tests according to clause 16 of EN 60079-1 are not required since the type test has been made at a static pressure of four times the reference pressure.

(16) **Test Report**

KEMA No. 2107662.

(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. 2107662.

DKE034-C02 P 2

EC DECLARATION OF CONFORMITY [ATEX]

We **Yokogawa Electric Corporation**
2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750 JAPAN

declare under our sole responsibility that the product

Model YTA Series Temperature Transmitter

to which this declaration relates is in conformity with the following directives, standards, or other normative documents.

European Community Declaration of Conformity for Group II Category 3 G Equipment in accordance with Directive 94/9/EC Equipment intended for use in Potentially explosive Atmospheres as amended by the CE Mark Directive (93/68/EEC).

EN 60079-0:2009

Explosive atmospheres - Part 0: Equipment - General requirements

EN 60079-0:2012

Explosive atmospheres - Part 0: Equipment - General requirements

EN 60079-11:2012

Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

The design is fully documented in Yokogawa Technical File No. IKE048-A01 to A70 and APP.1 to APP.2.2. The required marking of the apparatus is specified in Yokogawa Technical File No. IKE048-A60 including the distinctive community mark:



II 3 G Ex ic IIC T5...T4 Gc

The other Community Directives which have been applied are as follows:

EMC Directive 2004/108/EC

Subject products are manufactured and tested according to appropriate quality control procedure.

Signature: *H. Yamamoto*.....

Name: Hiroyuki Yamamoto

Title: General Manager

New Products D&E Dept.

Field Instruments Business Division

IA Platform Business Headquarters

Yokogawa Electric Corporation

Tokyo, March 25, 2013