



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX DEK 11.0064X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2011-07-25)

Status: **Current** Issue No: 1

Date of Issue: 2019-11-29

Applicant: **Yokogawa Process Analyzers Europe B.V.**
Euroweg 2
3825 HD Amersfoort
Netherlands

Equipment: **pH Sensors Types FU20, FU24, SC24V and SC25V**

Optional accessory:

Type of Protection: **Ex i**

Marking: **Ex ia IIC T3...T6 Ga**

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:

2019-11-29

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands





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Manufacturer: **Yokogawa Process Analyzers Europe B.V.**
Euroweg 2
3825 HD Amersfoort
Netherlands

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[NL/DEK/ExTR11.0068/01](#)

Quality Assessment Report:

[NL/DEK/QAR13.0015/04](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

pH sensor series FU20, FU24, SC24V and SC25V for connection to a certified associated pH/ORP transmitter are used for measurement of pH, redox (ORP) and temperature.

For Type designation, see Annex 1.

Electrical data

For the models without ID-chip, available as a connector or permanently connected cable type, the I/O signals are from/to an associated intrinsically safe certified pH/ORP transmitter (e.g. Yokogawa transmitter Model FLXA21 series or Yokogawa transmitter Model PH202S series).

For the models with ID-chip, only available as a connector type, the I/O signals are from/to an associated intrinsically safe certified pH/ORP transmitter, Yokogawa Smart Adapter Model SA11-P1 or SA11-P2.

Sensor input circuits (connector or permanently connected cable): in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 18 \text{ V}$; $I_i = 170 \text{ mA}$; $P_i = 0.4 \text{ W}$;

- Permanently connected cable: $L_i = 0.1 \text{ mH}$ and $C_i = 150 \text{ nF}$

- Connector type: $L_i = 0 \text{ mH}$ and $C_i = 0 \text{ nF}$ (without ID-chip) or $C_i = 0.4 \text{ nF}$ (with ID-chip).

SPECIFIC CONDITIONS OF USE: YES as shown below:

Ambient temperature range:

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

-40 °C to +55 °C for temperature classes T4 and T5 and

-40 °C to +105 °C for temperature class T3.

Electrostatic charges of the sensor enclosure parts and label shall be avoided, especially in the case that the process medium is non-conductive. Use a damp cloth for cleaning the equipment.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Minor constructional changes
- Removed type PH20
- Assessed per latest edition of the standards

Annex:

[224034200PH-Annex 1.pdf](#)

**Annex 1 to: Certificate of Conformity IECEx DEK 11.0064X
Report NL/DEK/ExTR11.0068/01**

Type designation

FU20–ab-cd-efg /h

ab = Connection type

- VP: Connector without ID-chip
- VS: Connector with ID-chip
- xx: Permanent cable, max. length 100 meter, no ID-chip
("x" is alphanumeric character, each character from 0 to 9)

cd = Temperature sensor + Region code

- T1 : Pt1000, IS for ATEX/IECEx

efg = Type

- NPT : PPS body / Tapered Thread / Dome shaped
- FSM: PPS body / Tapered Thread / Flat surface
- FTD: PVDF body / Tapered Thread / Dome shaped
- FTS: PVDF body / Tapered Thread / Dome shaped / Sodium ions sensitive membrane /
Silicone and EPDM sealings
- MTS: PVDF body / Tapered Thread / Dome shaped / Sodium ions sensitive membrane /
FFKM and EPDM sealings
- RTS: PPS body / Tapered Thread / Dome shaped / Sodium ions sensitive membrane /
Silicone and EPDM sealings

h = Optional specifications (not safety relevant)

- Up to ten alphanumeric characters (each of characters is from A to Z, 0 to 9 or a hyphen)

FU24–ab-cd-efg /h

ab = Connection type

- VP: Connector without ID-chip
- VS: Connector with ID-chip
- xx: Permanent cable, max. length 100 meter, no ID-chip
("x" is alphanumeric character, each character from 0 to 9)

cd = Temperature sensor + Region code

- T1 : Pt1000, IS for ATEX/IECEx

efg = Type

- NPT : PPS body / Tapered Thread / Dome shaped
- FSM: PPS body / Tapered Thread / Flat surface

h = Optional specifications (not safety relevant)

- Up to ten alphanumeric characters (each of characters is from A to Z, 0 to 9 or a hyphen)

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Report NL/DEK/EXTR11.0068/01

SC25V--abcde-fgh /i

abcde = T type

AGP25: Glass body / Straight Thread / Bulb shaped G-glass / without ID-chip, IS for ATEX/IECEx
ALP25: Glass body / Straight Thread / Bulb shaped L-glass / without ID-chip, IS for ATEX/IECEx
BGP25: Glass body / Straight Thread / Bulb shaped G-glass / with ID-chip, IS for ATEX/IECEx
BLP25: Glass body / Straight Thread / Bulb shaped L-glass / with ID-chip, IS for ATEX/IECEx

fgh = Sensor length

three alphanumeric characters (each of characters is from 0 to 9)

i = Optional specifications (not safety relevant)

Up to ten alphanumeric characters (each of characters is from A to Z, 0 to 9 or a hyphen)

SC24V--abcde-fgh /i

abcde = T type

ALN26: Glass body / Straight Thread / Dome shaped / Sodium ions sensitive membrane

fgh = Sensor length

three alphanumeric characters (each of characters is from 0 to 9)

i = Optional specifications (not safety relevant)

Up to ten alphanumeric characters (each of characters is from A to Z, 0 to 9 or a hyphen).