
Instruction Manual

Model SC25V
Combined 12mm sensor;
pH, Ref, LE and Temperature



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1. PREFACE

1.1 Introduction

This instruction manual provides information for the installation and use of the SC25V, combined 12mm glass sensor; pH, Ref, LE and Temperature. The SC25V is the best choice for the majority of typical process- and waste water applications. The sensor is designed with titanium liquid earth, increased electrolyte reservoir and large surface area PTFE diaphragm combined with a long pathway inner junction resulting in a longtime stability and prolonged lifetime.

1.2 ATEX/IECEx compliance

The model SC25V is intended for use in potentially explosive atmospheres. A number of restrictions apply on the use of this sensor. All varieties of SC25V are ATEX certified: II1G Ex ia IIC T3...T6 Ga (see chapter 2.7).

EC-type Examination Certificate Number:

DEKRA 11ATEX0014 X

IECEx-type Examination Certificate Number:

IECEx DEK 11.0064x

Special conditions for safe use:

For ambient temperature see chapter 2.7.

Electrostatic charges on the enclosure and cable shall be avoided.

1.3 Unpacking & Checking

Upon delivery, unpack the sensor carefully and inspect it to ensure it was not damaged during shipment. If damage is found, retain the original packing materials (including outer box) and immediately notify the carrier and the relevant Yokogawa sales office. Make sure the Model Code on the sensor is the same as on the packing list. The Model Code and Serial Number are found on the VP-connector of the sensor. Check that option(s) that were ordered are also included.

1.4 Warranty & Service

Yokogawa products and parts are guaranteed free from defects in workmanship and materials under normal use and service for a period of twelve months from the date of shipment from

the manufacturer. Individual sales organizations can deviate from the typical warranty period, and the conditions of sales relating to the original purchase order should be consulted. Damage caused by wear and tear, inadequate maintenance, corrosion, or by the effects of chemical processes are excluded from this warranty coverage. In the event of warranty claim, the defective goods should be sent (freight paid) to the Service Department of the relevant sales Organization for repair or replacement (at Yokogawa's discretion).

The following information must be included in the letter accompanying the returned goods:

- Model Code and Serial Number.
- Original Purchase Order and Date.
- Length of time in service and description of the process.
- Description of the fault and circumstances of the failure.
- Process/environmental conditions that may be related to the failure of the sensor.
- Statement as to whether warranty or nonwarranty service is requested.
- Complete shipping and billing instructions for return of material, plus the name and phone number of a contact person that can be reached for further information.

Returned goods that have been in contact with process fluids must be decontaminated and disinfected prior to shipment. Goods should carry a certificate to this effect, for the health and safety of our employees. Material Safety Data sheets must be included for all components of the process to which the sensors/fittings have been exposed.

1.5 Serial Number definition

The Serial Number is defined by nine (9) alphanumeric characters:

X ₁ X ₂	Production Location
X ₃ X ₄	Year/Month code
X ₅ X ₆ X ₇ X ₈ X ₉	Tracking number

Example: N3P600028

Method used for year/month numbering

Table 1: Production Year code

Year	Year code	Year	Year code
2014	P	2026	3
2015	R	2027	4
2016	S	2028	5
2017	T	2029	6
2018	U	2030	7
2019	V	2031	8
2020	W	2032	9
2021	X	2033	A
2022	Y	2034	B
2023	Z	2035	C
2024	1	2036	D
2025	2	2037	E

Table 2: Production Month code

Month	Month code
January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	A
November	B
December	C

2. GENERAL SPECIFICATIONS

2.1 Measuring elements

pH glass electrode
 Silver/Silver Chloride reference
 Titanium liquid earth
 Pt1000 temperature sensor.

2.2 Construction materials

Wetted materials:

O-ring : Viton
 Earth Ring : Titanium
 Reference Junction : Porous PTFE
 Measuring Sensor : Glass
 Body Sensor : Glass, PEEK

2.3 Functional specifications

Isothermal point : pH 7
 Glass impedance G-Glass : 500 M Ω
 Glass impedance L-Glass : 775 M Ω
 Reference system : Double junction, Ag/AgCl with saturated KCl, including Ag+ ion trap
 Junction resistance : 0.2 to 10 k Ω
 Temp. element : Pt1000 to IEC 751
 Asymmetry potential: 8 \pm 15 mV
 Slope : > 96 %
 (of theoretical value)
 Sensor length : 120 mm and 225 mm

Note: The temperature sensor included in the SC25V is intended to provide indication and cell compensation. The construction

has not been tested to the pressure vessel standards required for plant temperature control.

2.4 Operating range

pH : 0 to 14
 Temperature
 Type G-glass : -10 to 80°C
 (14 to 176°F)
 Type L-glass : +15 to 130°C
 (59 to 266°F)
 Pressure : 0 to 10 bar (0 to 145 psi)*
 Conductivity : > 10 μ S/cm
 Storage temp. : -10 to 50°C (14 to 122°F)

* Damaging the screw thread might influence the max process pressure.

Note: Specifications should not be considered in isolation. For example the pH range can be 2-12pH, where the measurement is at elevated temperatures. For advice about specific applications please contact your local sales office.

2.5 Dynamic specifications

Response time pH step (7 to 4)
 : < 5 sec for 90%
 Response time temp step (25°C)
 : < 90 sec for 90%
 Stabilization time (0.02 pH unit/10 s)
 : < 120 seconds

2.6 Sensor Dimensions

Dimension according to DIN 19263:2007-05

Criteria	: 120 mm version
L (below plug head)	: 120 ± 2 mm
Ø shaft	: 11.9 ± 0.1 mm
Criteria	: 225 mm version
L (below plug head)	: 225 ± 2 mm
Ø shaft	: 11.9 ± 0.1 mm
Concentricity	: < 0,25 mm (centerline plug head - 25 mm from tip)
Perpendicularity	: < 0,5 mm (plug head - 25 mm from tip)
Cilindricity	: < 0,5 mm (centerline sensor)
Criteria	: All types
All measuring elements within 25mm from tip.	

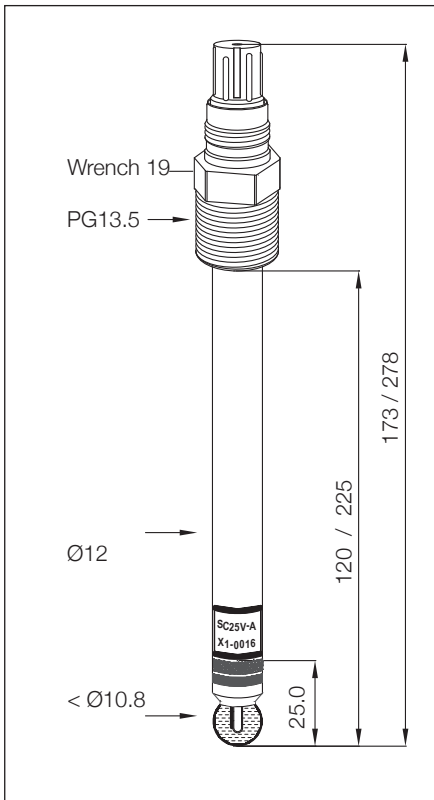


Figure 1

IM12B6J1-40E-E

2.7 Equipment and protective systems intended for use in potentially explosive atmospheres

ATEX II1G Ex ia IIC T3...T6 Ga.

EC-type Examination Certificate Number:

DEKRA 11ATEX0014 X

IECEx-type Examination Certificate Number:

IECEx DEK 11.0064x

Description

pH sensor series SC25V for connection to a certified associated pH transmitter are used for measurement of pH and temperature.

Ambient temperature range:

-40°C to +40°C for temp. class T6,

-40°C to +55°C for temp. class T4 and T5,

-40°C to +105°C for temp. class T3,

Electrical data

Sensor input circuits (connector):

In type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 18V$; $I_i = 170$ mA; $P_i = 0,4$ W; $C_i = 0$ nF (connector) or 3,6 nF (permanently connected cable); $L_i = 0$ mH;

Or for connection to the certified intrinsically safe YOKOGAWA pH Transmitter Model FLXA21 series or Model PH202S series.

Special conditions for safe use:

For ambient temperature see above.

Electrostatic charges on the enclosure and cable shall be avoided.

pH sensor series SC25V is suitable for use with the PH202S, FLXA21-EA conform to ATEX.

Note: When the sensor has been connected to none intrinsically safe equipment or equipment which exceeds the restrictions regarding the sensor input circuit, the sensor is not suitable for intrinsically safe use anymore.

3. INSTALLATION

3.1 Typical installation

The SC25V sensor can be installed in-line, in a bypass loop or in an immersion assembly. For best results the SC25V should be mounted with the process fluid flowing towards the sensor and positioned at least 15° above the horizontal plane to eliminate air bubbles in the glass bulb. See fig. 6 section 3.3

3.2 Preparing the sensor for use

Remove the sensor from its shipping box and slide off the “wet pocket” (the flask including the rubber ring). This wet pocket is filled with a weak acid and saline solution to prevent the sensor from drying out during storage and making sure it is ready for immediate use.

During shipment, electrolyte in the sensor could be dislocated. To correct this, place the sensor upright for 24 hours.

Before mounting the sensor, it should be validated with buffer solutions and calibrated when necessary. The specific calibration procedure is described in the Instruction Manual of the pH transmitter, but a general procedure is also provided in section 5 of this manual.

3.3 Mounting the sensor

The SC25V can be mounted using:

- PR10 retractable fitting (see fig 2).
- FF20 flow fitting / FS20 subassembly / FD20 immersion fitting (see fig 4)
- For mounting in Yokogawa fittings, a PG13.5 to M25 adapter is available in different materials (see fig 3) more information in chapter 7.
- PD20 immersion fitting / PF20 flow fitting / PS20 flow fitting (see fig 5)
- FF40 fitting with PG13,5 adapter (K1523JA/JC) or the small flow fitting K1598AC with PG13,5 adapter (K1523JB/JD), (see fig 7).

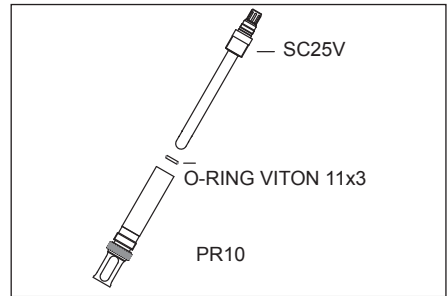


Figure 2

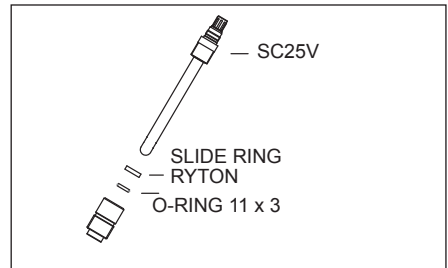


Figure 3

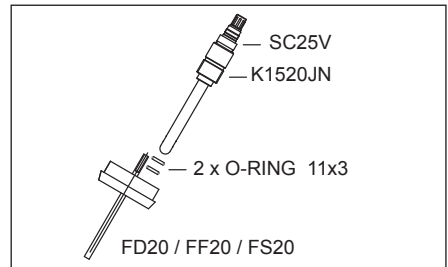


Figure 4

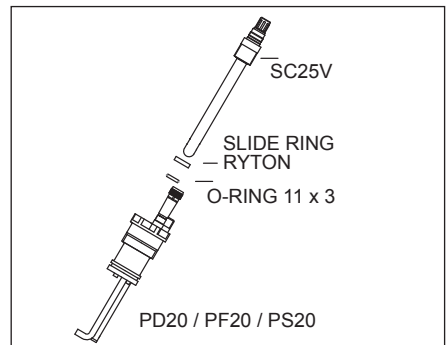
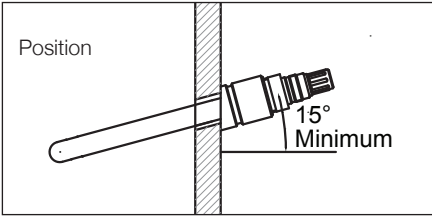
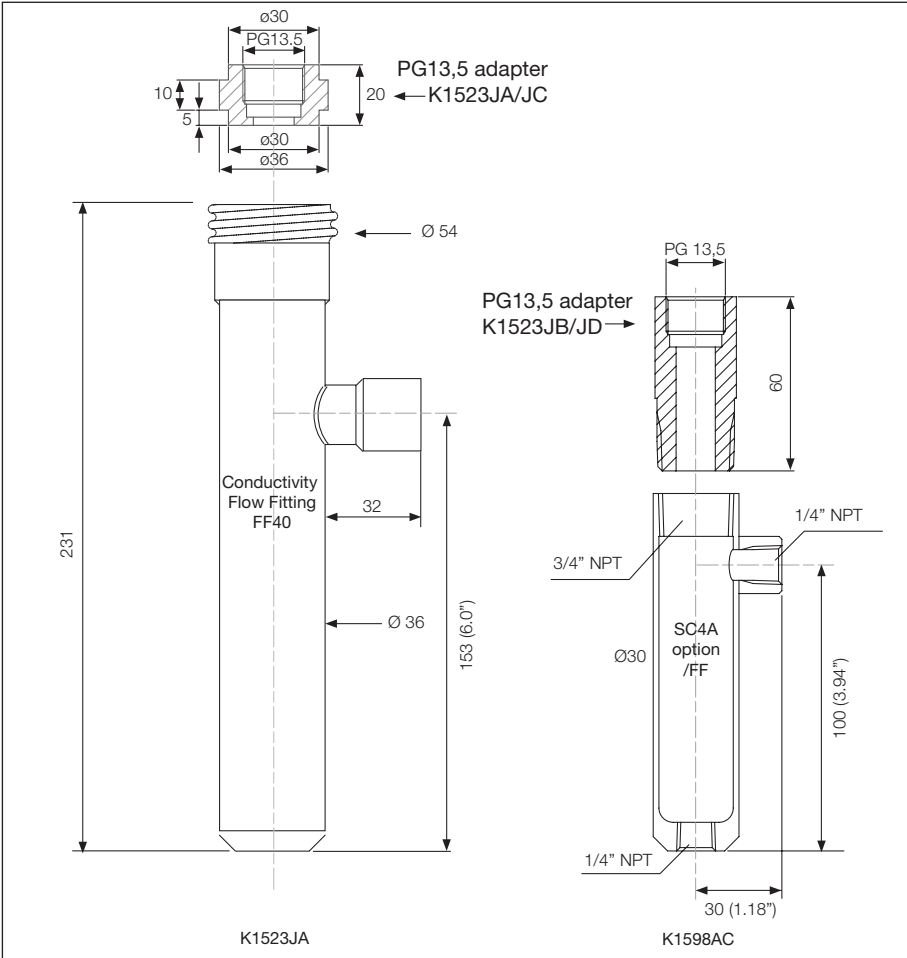


Figure 5



▲ Figure 6

▼ Figure 7



Flow fitting FF40 with K1523JA/JC Adapter to fit sensors with a PG13,5 process connection in FF40/FS40 and FD40 fittings.

Flow fitting option /FF K1598AC (incl. 3.1 certificate) with Adapter K1523JB/JD to fit sensors with PG13,5 process connection.

4. WIRING TO THE PH ANALYZER

4.1 Cable marking, pin allocation and instrument connection of sensor

Signal description	VP connector	Cable Wire Colour (Using WU10-V-S)	Instrument Terminal for Measurement
pH	A	Transparent (core coax)	15
pH-shield	C	Black	16
Reference	B	Brown (shield coax)	13
Liquid earth	D	Yellow (cable shield)	14
Temp -1	E	Red	11
Temp -2	F	Blue	12

The settings for the pH instruments should follow the instruction Manual of the instrument

4.2 Sensor VP connection

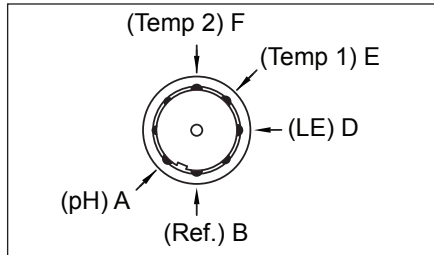


Figure 8

5. GENERAL CALIBRATION AND MAINTENANCE PROCEDURE

5.1 Calibration for pH measurement

To calibrate a pH sensor, at least two buffer solutions with known pH values are required. It is recommended to use one buffer solution with a value of pH=7. The second buffer solution should be either acidic (pH<7) or alkaline (pH>7), depending on the process value to be measured. Example buffer solutions are the IEC buffers with pH=4.01, pH=6.87 and pH=9.18.

The following is a general 2-point calibration procedure:

- 1 Clean the sensor (deposits may be removed using a 5% HCl-solution).
- 2 Rinse sensor thoroughly with clean water. Carefully slap out residual fluid drops.
- 3 Immerse the sensor in the first buffer (pH=6.87 buffer is recommended).
- 4 Refer to appropriate Instrument Instruction Manual for detailed instrument calibration input settings (Auto; Manual; Sample, etc.),
- 5 Rinse sensor thoroughly with clean water. Carefully slap out residual fluid drops.
- 6 Immerse the sensor in the second buffer (pH=4.01 buffer or pH=9.18 buffer recommended).
- 7 Repeat Step 3.

Most instruments automatically correct the measured pH value at process temperature to a pH-value at a standard temperature of 25°C. After the calibration is complete, replace or re-install the sensor into the process.

5.2 Maintenance

Cleaning the electrodes

When the sensitivity of the electrode has decreased or the response has slowed down, the electrode should be cleaned. If cleaning with hot water is not sufficient, more aggressive water based agents should be used.

Examples:

- Deposits of lime, hydroxides or carbonates can be removed by immersing the sensor in or a dilute solution of hydrochloric acid (5% is recommended). Afterwards rinse with water.
- Deposits of oils and fats can be removed with hot water in conjunction with a detergent.

When the results are unsatisfactory, a mild (carbonate based) abrasive can be used.

5.3 Chemical cleaning HCN

The chemical cleaning system is effective in processes where deposits can be removed by a suitable solvent. Good cleaning effects can be obtained from periodically spraying of an electrode. EXA PH450G has a built-in wash timer with programmable wash time, interval time and relaxation time for automatic cleaning of the electrodes, preventing pollution of the pH sensitive parts. After washing, it is possible to check the response time of the electrodes. A built-in (no return) nozzle in the spray unit prevents penetration of the process liquid in the cleaning system. The standardized dimensions allow mounting in all flow-, insertion- and immersion fittings of Yokogawa as well as back-end mounting on the 4-in-one pH/Redox electrodes.

Specifications

Materials

Nozzle	: Hastelloy
O-rings	: EPDM rubber
Mounting set	: Stainless steel
Tubing	: 1/4" (OD Ø) Nylon tubing
Process cond.	: Max. 1 MPa (10 bar) at 100 °C

Part no.

K1547PA	: /HCN3, 3-hole flow-, insertion-, immersion fitting
K1547PB	: /HCN4, 4-hole flow-, insertion-, immersion fitting

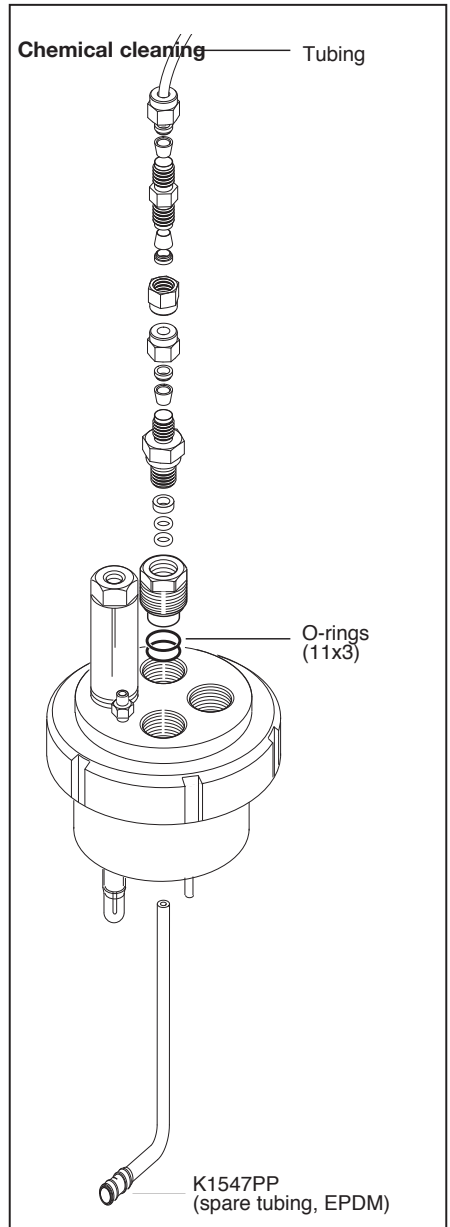


Figure 9

6. MODEL AND SUFFIX CODES

6.1 SC25V sensor

Model	Suffix Code	Option code	Description
SC25V			Combined 12mm sensor: pH, Ref, LE, Temp. Equipped with Variopin connector
Sensor type	-AGP25		General purpose
	-ALP25		High temp: Chemical resistant.
Sensor length		-120	120 mm
		-225	225 mm

6.2 Cable for Sensor with Variopin Connector

Cable Model	Suffix code	Description
WU10-V-S		Cable-Variopin-Single COAX
Cable length	-02	2 meters
	-05	5 meters
	-10	10 meters
	-15	15 meters
	-20	20 meters

7. SPARE PARTS

Sealings

Prod. No.	Description
K1500BV	O-RINGS EPDM 11X3 (6 PCS.)
K1500BZ	O-RINGS VITON 11X3 (6 PCS.)
K1500GR	O-RINGS SILICON 11X3 (8PCS)
K1524AA	O-ring 10.77X2.62 SILICON 70°sh
FP20-R12	Blind plug set for 1-hole
FP20-R12M	Blind plug set for 1-hole (x12)

Adapters

Prod. No.	Description
K1523JA	Adapter Pg13.5 in F*40 PPO
K1523JC	Adapter Pg13.5 in F*40 SS
K1520JN	Adapter M25x1.5 - PG13.5 PVC
K1520JP	Adapter M25x1.5 - PG13.5 RVS
K1500DV	Adapter M25x1.5 - PG13.5 PVDF
K1523JB	Adapter PG13.5 to ¼"NPT PPO
K1523JD	Adapter PG13.5 to ¼"NPT SS
K1598AC	Flow fitting (3.1), for SC4A (In combination with K1523JB/JD)
K9148NA	Adapter for mounting Pg13,5-sensors in HA405-120-S3
K9148NB	Adapter for mounting Pg13,5-sensors in HA405-120-PP
K9148NC	Adapter for mounting Pg13,5-sensors in HA405-120-PV

8. APPENDIX

CHEMICAL COMPATIBILITY CHART		Conc. %	Temp. °C	Material			Ti			PTFE (teflon)			PEEK			Glass											
				Viton			EPDM			20			60			100			20			60			100		
				20	60	100	20	60	100	20	60	100	20	60	100	20	60	100	20	60	100						
Inorganic acid	Sulfuric acid	10	o	o	o	o	o	o	-	-	-	o	o	o	o	o	o	o	o	o							
		50	o	o	o	o	x	-	-	-	-	o	o	o	o	o	o	o	o	o							
		95	o	o	o	x	-	-	-	-	-	o	o	o	-	-	-	o	o	o							
		fuming	o	o	o	-	-	-	-	-	-	o	o	o	-	-	-	o	o	o							
	Hydrochloric acid	10	o	o	o	o	o	o	-	-	-	o	o	o	o	o	x	o	o	o							
		sat.	o	o	o	x	x	x	-	-	-	o	o	o	o	o	x	o	o	o							
	Nitric acid	25	o	o	x	o	x	-	o	o	o	o	o	o	o	o	o	o	o	o							
		50	-	-	-	-	-	-	o	o	o	o	o	o	x	x	x	o	o	o							
		95	-	-	-	-	-	-	o	o	o	o	o	o	-	-	-	o	o	o							
	Phosphoric acid	fuming	-	-	-	-	-	-				o	o	o	-	-	-	o	o	o							
		25	o	o	o	o	o	o	x	x	-	o	o	o	o	o	o	o	o	o							
		50	o	o	o	o	o	o	x	-	-	o	o	o	o	o	o	o	o	o							
Hydrofluoric acid	95	x	x	-	o	o	o	x	-	-	o	o	o	o	o	o	o	o	o								
	40	o	o	o	-	-	-	-	-	-	o	o	o	-	-	-	x	x	x								
	75	o	o	x	-	-	-	-	-	-	o	o	o	-	-	-	-	-	-								
Organic acid	Acetic acid	10	-	-	-	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
		glacial	-	-	-	x	x	x	o	o	o	o	o	o	o	o	x	o	o	o							
	Formic acid	80	-	-	-	o	o	x	x	x	-	o	o	o	x	x	x	o	o	o							
	Citric acid	50	o	o	o	o	o	o	x	x	x	o	o	o	o	o	o	o	o	o							
Alkali	Calcium hydroxide	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Potassium hydroxide	50	o	o	o	o	x	-	o	x	-	o	o	o	o	o	o	o	o	x							
	Sodium hydroxide	40	x	x	x	o	x	-	x	x	-	o	o	o	o	o	o	o	o	x							
	Ammonia in water	30	x	x	x	o	o	o	x	x	-	o	o	o	o	o	o	o	o	x							
Acid salt	Ammonium chloride	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Zinc chloride	50	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Iron(III) chloride	50	o	o	o	o					o	o	o	o	o	o	o	o	o								
	Sodium sulfite	sat.	-	-	-	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
Basic salt	Sodium carbonate	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Potassium chloride	sat.	o	o	o	o	o	o	o	o	x	o	o	o	o	o	o	o	o	o							
	Sodium sulfate	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Calcium chloride	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
Neutral salt	Sodium chloride	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Sodium nitrate	50	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Aluminium chloride	sat.	o	o	o	o	o	o	o	o	x	o	o	o	o	o	o	o	o	o							
Oxidizing agent	Hydrogen peroxide	30	o	o	o	o	o	x	o	o	o	o	o	o	o	o	o	o	o	o							
	Sodium Hypochloride	50	o	o	x	o	o	o	x	-	-	o	o	o	o	o	o	o	o	o							
	Potassium dichromate	sat.	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Chlorinated lime											o	o	o	x	x	x	o	o	o							
Organic acid	Ethanol	80	x	-	-	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o							
	Cyclohexane		o	o	o	-	-	-	o	o	o	o	o	o	o	o	o	o	o	o							
	Toluene		-	-	-	-	-	-	o	o	o	o	o	o	o	o	o	o	o	o							
	Trichloroethane		x	x	x	-	-	-	o	o	o	o	o	o	o	o	o	o	o	o							
	Water		o	o	o	o	o	o	o	o	o	o	o	x	o	o	o	o	o	o							

o = can be used / x = shortens useful life / - = cannot be used / Blank = no data currently available
Note: Information in this list is based on our general experience and literature data and given in good faith. However Yokogawa is unable to accept responsibility for claims related to this information.

EC DECLARATION OF CONFORMITY**YOKOGAWA** 

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

herewith declare under our sole responsibility that the product, model: **SC25V**
 further specified with model suffix- and option codes: **As listed in Annex-1 in this document**
 is manufactured in accordance with the requirements for CE-marking of products as stated in EC Decision:


768/2008/EC on a common framework for the marketing of products

by applying the following standards:

EN-ISO 9001: 2008 Quality management systems - Requirements

Subject product is:

- In compliance with the essential requirements of the specific product legislation:
 - **Pressure Equipment Directive 97/23/EC (PED)**
 As amended by Regulation (EC) no. 1882/2003, by applying:
Article 3.3: Sound Engineering Practice
 - **RoHS Directive 2011/65/EU**
 by applying:
Category 9: Industrial monitoring and control instruments, ion selective electrode
 - **Explosive atmospheres Directive 94/9/EC (ATEX)**
 As amended by Regulation (EC) no. 1882/2003, by applying the following standards:
EN 60079-0: 2009 Explosive atmospheres – Part 0: Equipment – General requirements
EN 60079-11: 2007 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
EN 60079-26: 2007 Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga

The provisions fulfilled are:  II 1 G Ex ia IIC T3...T6 Ga

Number of the EC-type Examination Certificate: **DEKRA 11 ATEX 0014 X**

Name of the notified body: DEKRA Certification B.V.

Identification number of the notified body: 0344

Address of the notified body: Meander 1051, 6825 MJ Arnhem, The Netherlands

- Produced according to appropriate quality control procedures.

The CE-mark has been affixed on the product in 2011 for the first time.

If applicable, the product is checked against the latest official released revision of the standards mentioned above; differences do not affect the certified product identified on this declaration.

Amersfoort - July 01, 2014



H. Leijten
General Manager
Yokogawa Process Analyzers Europe B.V.

Annex-1

Model Code	Suffix Code	Option	Description
SC25V			Combined 12mm pH sensor with Variopin connector
Type	- AGP25 - ALP25		General purpose High temperature chemical resistant
Sensor length	- 120 - 225		120 mm 225 mm

Further specifications can be found in General Specification Sheet GS 12B6J1- 40E- E
 IM12B6J1-40E-E

APPLICATION DATA SHEET SC25V COMBINED PH SENSOR

Customer _____ Address _____ _____ Contact _____ Telephone _____ Fax _____ _____	Please complete a separate form for each process stream to be analyzed and return, marked for the attention of:																				
1. Process data	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Serial no.</td> <td style="width: 33%;">Date received</td> <td style="width: 33%;">Date returned</td> </tr> </table>	Serial no.	Date received	Date returned																	
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Description _____ _____ _____																					
Application <table style="margin-left: 100px;"> <tr> <td><input type="checkbox"/> Pulp & Paper</td> <td><input type="checkbox"/> Power</td> <td><input type="checkbox"/> Chemical</td> </tr> <tr> <td><input type="checkbox"/> Pharmaceutical</td> <td><input type="checkbox"/> Other</td> <td></td> </tr> </table>		<input type="checkbox"/> Pulp & Paper	<input type="checkbox"/> Power	<input type="checkbox"/> Chemical	<input type="checkbox"/> Pharmaceutical	<input type="checkbox"/> Other															
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Operation <table style="margin-left: 100px;"> <tr> <td><input type="checkbox"/> Batch</td> <td><input type="checkbox"/> Continuous</td> <td><input type="checkbox"/> Monitor</td> <td><input type="checkbox"/> Control</td> </tr> </table>		<input type="checkbox"/> Batch	<input type="checkbox"/> Continuous	<input type="checkbox"/> Monitor	<input type="checkbox"/> Control																
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Type of solution _____ _____																					
<table style="width: 100%;"> <tr> <td style="width: 30%;">pH Value</td> <td style="width: 20%;">Nor</td> <td style="width: 20%;">Min</td> <td style="width: 30%;">Max</td> </tr> <tr> <td>Temperature (°C, °F)</td> <td>Nor</td> <td>Min</td> <td>Max</td> </tr> <tr> <td>Pressure (psig, bar, kg/cm²)</td> <td>Nor</td> <td>Min</td> <td>Max</td> </tr> <tr> <td>Flow Rate (m/s : ft/s)</td> <td>Nor</td> <td>Min</td> <td>Max</td> </tr> <tr> <td>Conductivity (mS/cm)</td> <td>Nor</td> <td>Min</td> <td>Max</td> </tr> </table>		pH Value	Nor	Min	Max	Temperature (°C, °F)	Nor	Min	Max	Pressure (psig, bar, kg/cm ²)	Nor	Min	Max	Flow Rate (m/s : ft/s)	Nor	Min	Max	Conductivity (mS/cm)	Nor	Min	Max
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Concentration of salts _____ Type(s) _____																					
Concentration of organics _____ Type(s) _____																					
Problems with Present measuring procedure <table style="margin-left: 100px;"> <tr> <td><input type="checkbox"/> Fouling</td> <td><input type="checkbox"/> Poisoning</td> <td><input type="checkbox"/> Coating</td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td></td> <td></td> </tr> </table>		<input type="checkbox"/> Fouling	<input type="checkbox"/> Poisoning	<input type="checkbox"/> Coating	<input type="checkbox"/> Other																
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YOKOGAWA ◆
YOKOGAWA EUROPE B.V.
 Euroweg 2
 3825 HD Amersfoort
 The Netherlands
www.yokogawa.com/eu

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YOKOGAWA ELECTRIC CORPORATION

World Headquarters

9-32, Nakacho 2-chome, Musashino-shi
Tokyo 180-8750
Japan
www.yokogawa.com

YOKOGAWA CORPORATION OF AMERICA

2 Dart Road
Newnan GA 30265
USA
www.yokogawa.com/us

YOKOGAWA EUROPE B.V.

Euroweg 2
3825 HD Amersfoort
The Netherlands
www.yokogawa.com/eu

YOKOGAWA ELECTRIC ASIA Pte. LTD.

5 Bedok South Road
Singapore 469270
Singapore
www.yokogawa.com/sg

YOKOGAWA CHINA CO. LTD.

3F Tower D Cartelo Crocodile Building
No.568 West Tianshan Road Changing District
Shanghai, China
www.yokogawa.com/cn

YOKOGAWA MIDDLE EAST B.S.C.(c)

P.O. Box 10070, Manama
Building 577, Road 2516, Busaiten 225
Muharraq, Bahrain
www.yokogawa.com/bh

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