

General Specifications

Model SC25V
Combined pH electrode

General

Having a stable, reliable and accurate measurement is of vital importance for pH measurement and control. The SC25 pH sensor has been developed and designed to make sure that this sensor will deliver these results in every application.

The build-in temperature sensor is located close to the pH measuring glass. This will result in an increased accuracy of the temperature compensation and therefore also the pH measurement. The integrated large Titanium liquid earth will improve the stability measurement countering any stray or ground loop currents that can destroy the reference sensor.

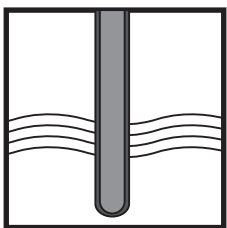
Features

- External titanium Liquid Earth
- Pt1000 integration in pH compartment giving highly accurate temperature compensation
- ATEX certified: ATEX II1G Ex ia IIC T3...T6 Ga
- CIP and Steam cleaning possible*
- Useable up to 130°C *
- Measuring in applications from 10 μ S/cm
- SC25V-*LP25 for chemically harsh applications and high temperatures
- SC25V-*GP25 for all General-Purpose applications
- Variopin connector meets IP67

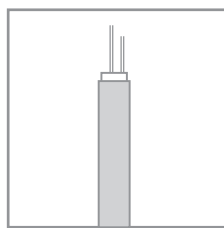
*note: SC25V-*LP25



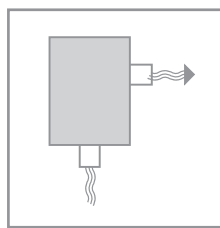
1. System Configuration



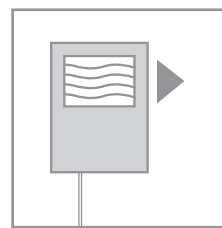
Sensors



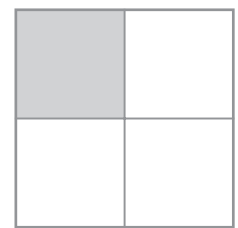
Cables



Fittings



Transmitters



Accessories

1. General Specifications SC25V

1-1 Measuring elements

- pH glass electrode
- Silver Chloride reference
- Pt1000 temperature sensor

1-2 Wetted parts construction materials

Sensor body	: PEEK and AR-Glass
O-rings	: Viton (backed-up with EPDM)
Measuring sensor	: G-Glass
Reference junction	: PTFE
Liquid Earth	: Titanium

1-3 Functional Specifications (@25°C)

Isothermal point	: pH 7
Reference system	: Ag/AgCl with saturated KCl
Glass impedance	
• *GP25	nominal 200MΩ
• *LP25	nominal 700MΩ
Junction resistance	: 1 to 15 kΩ
Temperature element	: Pt1000 to IEC 751
Asymmetry potential	: 8 ± 15 mV
Linearity PH (Slope)	: > 96 % (of theoretical value)

1-4 Dynamic specifications (at 25°C)

Response time pH step (7 to 4)	: < 15 sec for 90%
Response time temp step (10°C)	
• *GP25	< 90 sec.
• *LP25	< 90 sec.
Stabilization time (0.02 pH unit/10 sec.)	: < 2 minutes

1-5 Operating range

pH	0 to 14
Temperature	
• *GP25	: -10°C to 80°C (14°F to 176°F)
• *LP25	: 15°C to 130°C (59°F to 266°F)
Pressure	: 0 to 10 bar (0 to 142 PSIG)

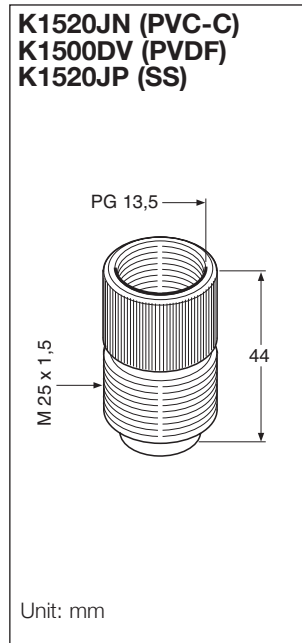
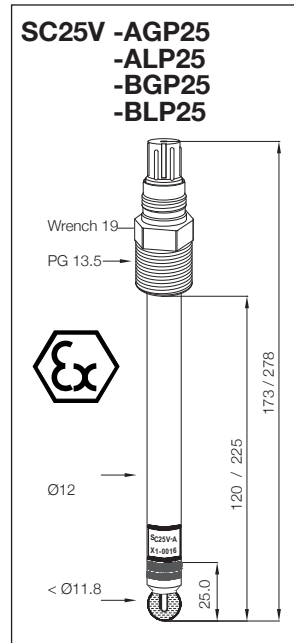
ATEX: II 1 G Ex ia IIC T3...T6 Ga
EU-type Ex. Cert. Nr: DEKRA 11ATEX0014 X

IECEX: Ex ia IIC T3...T6 Ga
IECEX Certificate of Conformity Cert. No: IECEX DEK 11.0064X
pH sensor series SC25V for connection to a certified associated pH transmitter are used for measurement of pH and temperature

Ambient temp. 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

1. Specifications Combined pH electrodes with Temperature + Liquid earth

Type	Membrane	Resistance in MΩ/25°C	pH-range	Temp. range (°C)	Pressure range kPa	Reference liquid	Ref.	Diaph. system	Atex
SC25V-*GP25	Universal pH-glass bulb	140-260	0-14	-10 - 80	0-1000	Oversaturated KCl	Ag/AgCl (wire)	PTFE	Yes
SC25V-*LP25	Chem. Res. pH-glass dome	650-900	0-14	+15 - 130	0-1000	Oversaturated KCl	Ag/AgCl (wire)	PTFE	Yes



Model Code	Suffix Code	Description
SC25V		Combined 12mm sensor: pH, Ref, LE, Temperature Equipped with Variopin connector
Sensor type	-AGP25	General purpose, Analog, IS for ATEX/IECEX
	-ALP25	High temp. Chemical resistant, Analog, IS for ATEX/IECEX
	-BGP25	General purpose, SENCOM ID-chip, IS for ATEX/IECEX
	-BLP25	High temp. Chemical resistant, SENCOM ID-chip, IS for ATEX/IECEX
Sensor length	-120	120 mm
	-225	225 mm

1-6 Cables

For details concerning the cables please consult the respective General specifications

- Single and Dual Coax WU10 - GS12B06W02
- Extension cable WE10 - GS12B06W02

2. Spare parts

2-1 Sealings

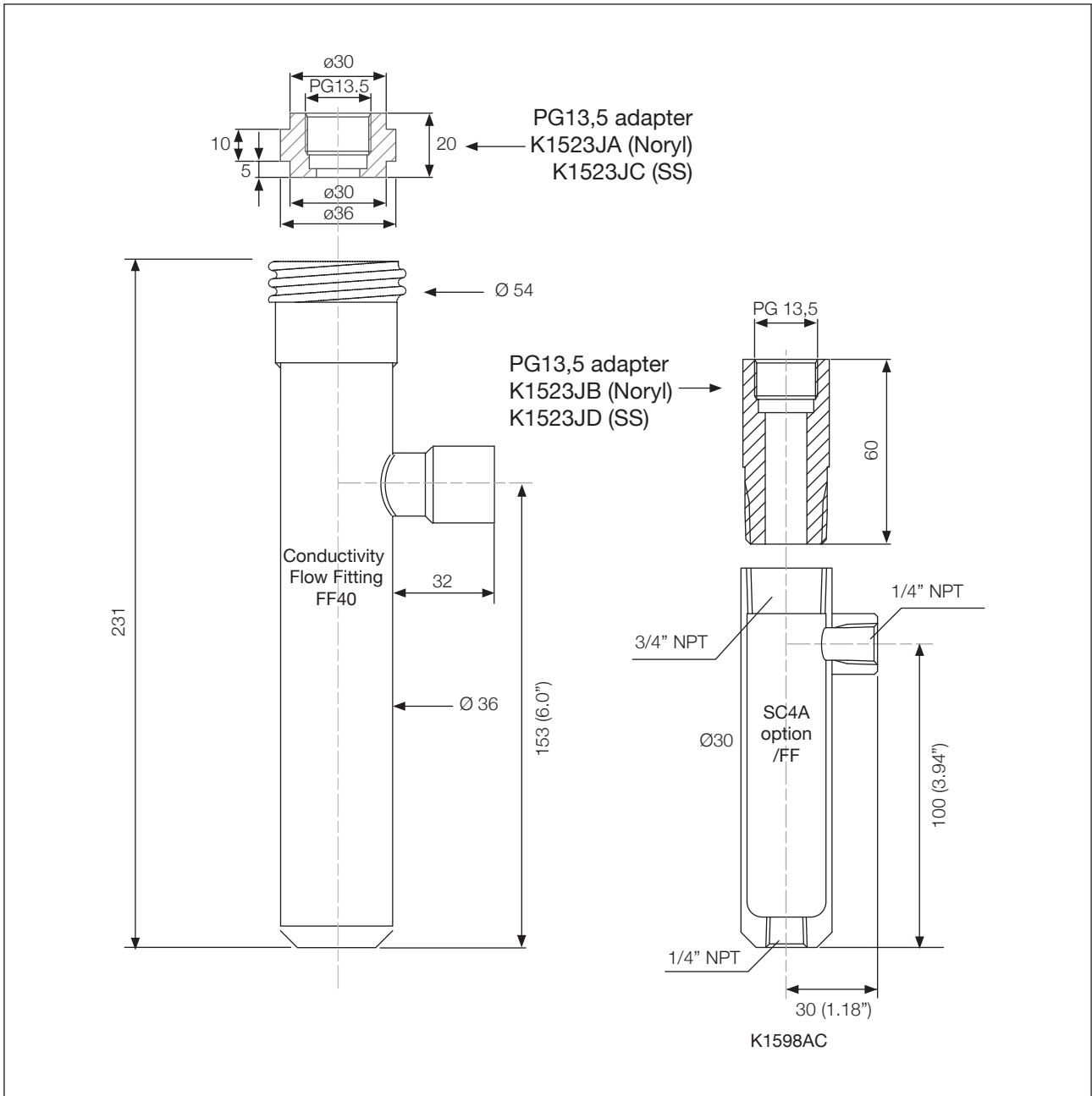
Prod. No.	Description
K1500BV	O-RINGS EPDM 11X3 (6 PCS.)
K1500BZ	O-RINGS VITON 11X3 (6 PCS.)
K1500GR	O-RINGS SILICON 11X3 (8PCS)
K1524AA	Set of O-ring 11x3 and slide ring Ryton
FP20-R12	Blind plug set for 1-hole

2-2 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

2-3 Consumable parts

Part no.	Description
K1520BB	Three bottles with NIST buffer 2.68 pH
K1520BC	Three bottles with NIST buffer 4.01 pH
K1520BD	Three bottles with NIST buffer 6.86 pH
K1520BE	Three bottles with NIST buffer 9.18 pH



**Adapter to fit sensors with a PG13.5 process connection in FF40/FS40 and FD40 fittings. Material: Polypropylene
K1523JA Noryl adapter PG13.5
K1523JC Stainless Steel adapter PG13.5**

Stainless Steel Flow fitting option /FF K1598AC (incl. 3.1 B certificate) with Adapter K1523JB (Noryl) or K1523JD (SS) to fit sensors with PG13.5 process connection

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