

Sensors for Conductivity Measurement

Chem

Energy



SE 604 Conductivity Sensor

Robust 2-electrode sensor, for precise and reliable measurement of low and very low conductivities, particularly in ultrapure water

Robust, coaxially arranged electrodes made of stainless steel. Large measuring range from ultrapure water to 1000 $\mu\text{S}/\text{cm}$ with only one sensor model (cell constant).

Integrated temperature detector for exact temperature compensation. Easy to clean thanks to replaceable outer electrode.

Reliable and easy checking of the measurement using PortaSim simulators.

Applications

Boiler feed water, feed water, boiler water, cooling water, water vapor cycle, pure water, condenser monitoring

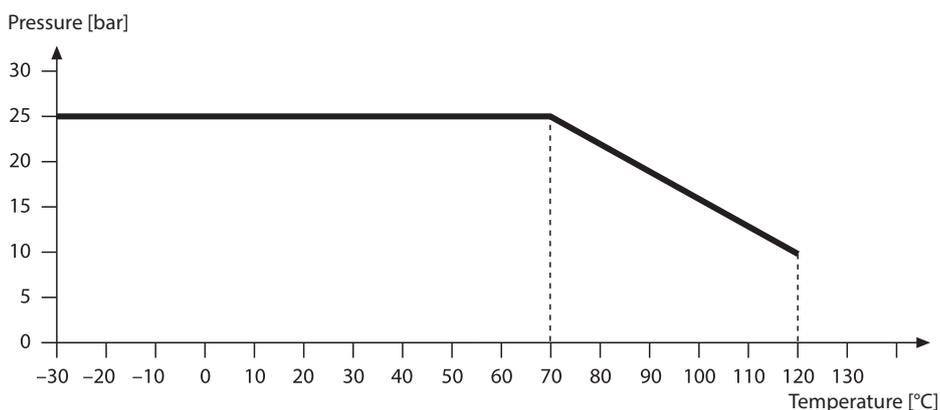
Facts

- Large measuring range from 1 nS/cm to 1,000 $\mu\text{S}/\text{cm}$
- Coaxially arranged electrodes
- Independent of installation conditions
- Integrated temperature detector
- High level of process safety due to durable materials and robust design
- Easy to clean thanks to detachable outer electrode
- Particularly suitable for monitoring ultrapure water in power plants
- Calibration Certificate
- Suitable PortaSim simulators

Specifications

Cell constant:	0.029/cm
Measuring range:	0.001 ... 1000 $\mu\text{S}/\text{cm}$
Material:	Cell and electrodes: 1.4571 stainless steel; insulator: PVDF; gaskets: FKM (Viton)
Temperature detector:	Pt 1000 Class A, $T_{90} < 2 \text{ min}$
Temperature:	Medium: -30 ... +120 °C; Environment: -25 ... +80 °C
Pressure:	Max. 25 bar (-30 ... +70 °C) Max. 10 bar (120 °C)
Process adaptation:	G 1" thread
Sensor cap:	7-pin

Pressure/Temperature Diagram



Product Range

SE 604 conductivity sensor

G 1"

Order No.

SE 604

Accessories

Measuring cable with plug

Sensor connection: 7-pin socket

1.5 m

Device connection: ferrules

3 m

Temperature: -20 ... +80 °C

5 m

10 m

15 m

20 m

30 m

Order No.

ZU 0743

ZU 0645

ZU 0569

ZU 0570

ZU 0589

ZU 0590

ZU 0660

6-hole flange

ZU 0278

Conductivity standard

KCl 300 ml 15 µS/cm ± 1 %

ZU 0350

KCl 500 ml 147 µS/cm ± 1 %

ZU 0702

Calibration Certificate

ZU 0320

Conductivity simulator
(cell constant 0.029/cm
(Details from page 86))

PortaSim Cond A*) 0.055 µS/cm 25 °C

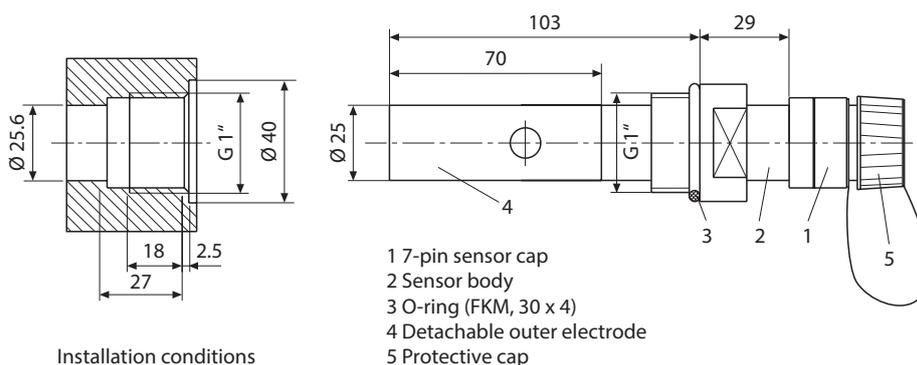
ZU 0308

PortaSim Cond B*) 5 µS/cm 100 °C

ZU 0309

*) Conductivity simulator; checking the meter and cable by simulating the sensor.
High-precision comparison resistors, traced to NIST standard. Used for measurement to USP <645>.
Check by simply replacing the sensor by the simulator

Dimension drawing



Installation conditions

All dimensions in mm