

Conductivity Sensors **ACS-X3K**

Two-Electrode Sensors with Cell Constant $k = 0.01/\text{cm}$ or $k = 0.1/\text{cm}$



Sensors with a Pt 100 temperature sensor usually are used together with the conductivity measuring instruments, which are equipped with automatic temperature compensation.

The compact conductivity sensors have been designed specifically for measurement in ultrapure and pure water.

The measuring range of the sensors depends on the cell constant k .

- $k = 0.01/\text{cm}$: 0.04 ... 20 $\mu\text{S}/\text{cm}$
- $k = 0.1/\text{cm}$: 0.1 ... 200 $\mu\text{S}/\text{cm}$

Areas of application

- Monitoring of ion exchangers
- Reverse osmosis

Benefits at a glance

- Mounting in pipes or flow chambers
- Pt 100 temperature sensor for temperature compensation
- Compact design



Operating principle

The two-electrode sensor ACS-X3K is supplied with an alternating measuring voltage by the conductivity measuring transmitter.

The alternating current flowing through the measuring electrodes and medium is determined by the conductivity of the medium.

The coaxially arranged measuring surfaces are made of stainless steel 1.4571 / SS 316Ti, the sensor shaft is made of PES (polyethersulfone).

The sensor is connected via a four-pin plug connector, which can be secured with a screw. The measuring cable is introduced through a Pg 9 cable gland.

The sensor can be used at temperatures up to 60 °C. It can be easily screwed in and is pressure-proof up to max. 6 bar.

When installing the sensor, ensure that the measuring surfaces are completely wetted by the medium during operation.

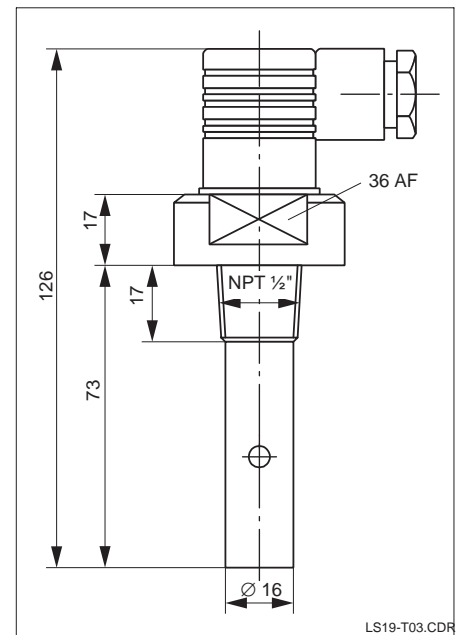
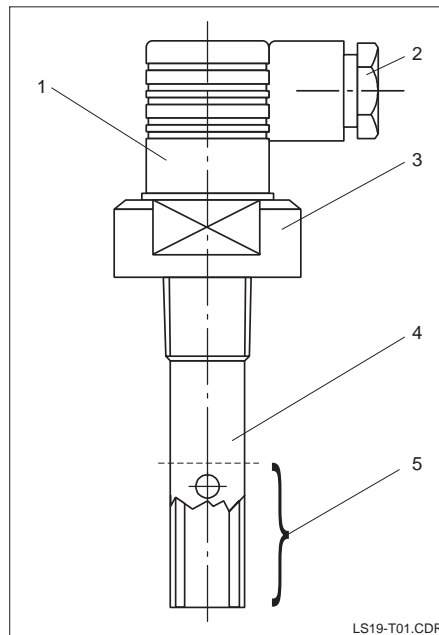
Dimensions

left:

- 1 Plug-in connection
- 2 Measuring cable outlet
- 3 Threaded shaft
Material: PES
- 4 Coaxial measuring electrodes
Material: stainless steel 1.4571 / SS 316Ti
- 5 Measuring surface

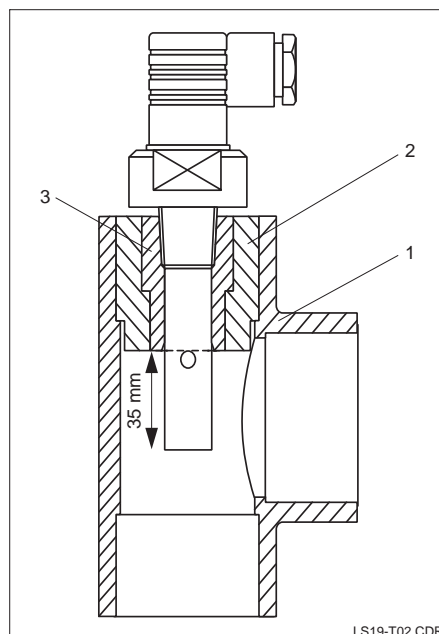
right:

Dimensions



Mounting

Mounting in cross or T-pieces DN 20 requires a PVC threaded coupling. Mounting in standard cross or T-pieces DN 32, 40 or 50 is achieved by a cemented adapter coupling.

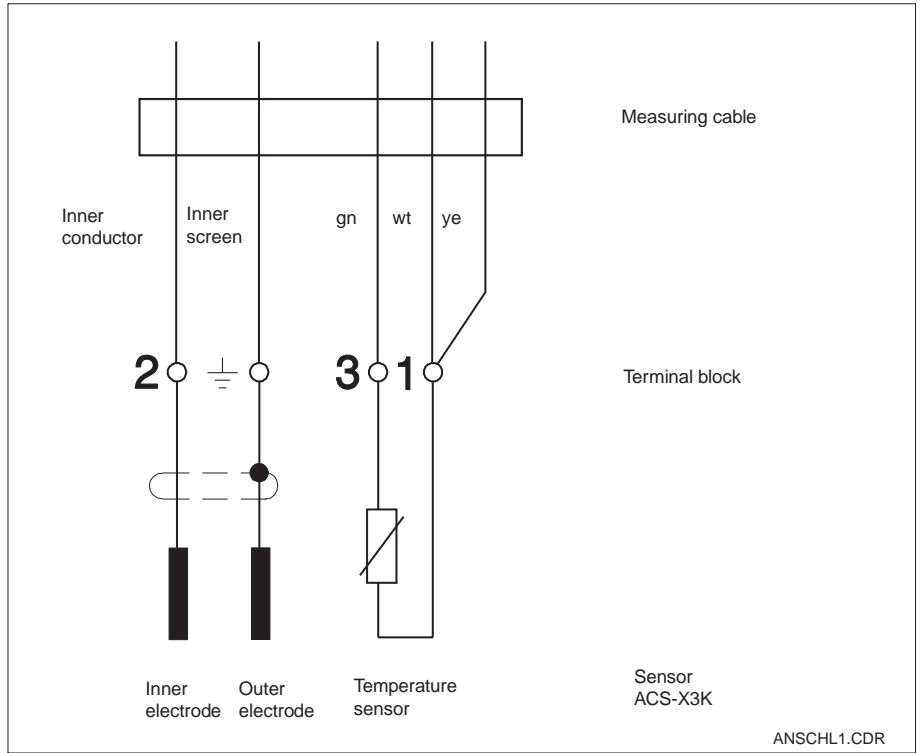


ACS-X3K mounted in a T-piece:

- 1 T- or cross piece DN 32, 40 or 50
- 2 Adapter coupling for cementing for DN 32, 40 or 50
- 3 PVC threaded coupling

Electrical connection

Electrical connection
ACS-X3K



Technical data

Material

Sensor shaft	PES (polyethersulfone)
Electrodes	stainless steel 1.4571 / SS 316Ti

Cell constant k	0.01/cm or 0.1/cm
Measuring range for $k = 0.01/cm$	0.04 $\mu S/cm$... 20 $\mu S/cm$
Measuring range for $k = 0.1/cm$	0.1 $\mu S/cm$... 200 $\mu S/cm$
Connection	four-pin plug with Pg 9 cable gland for measuring cable connection
Temperature sensor	Pt 100

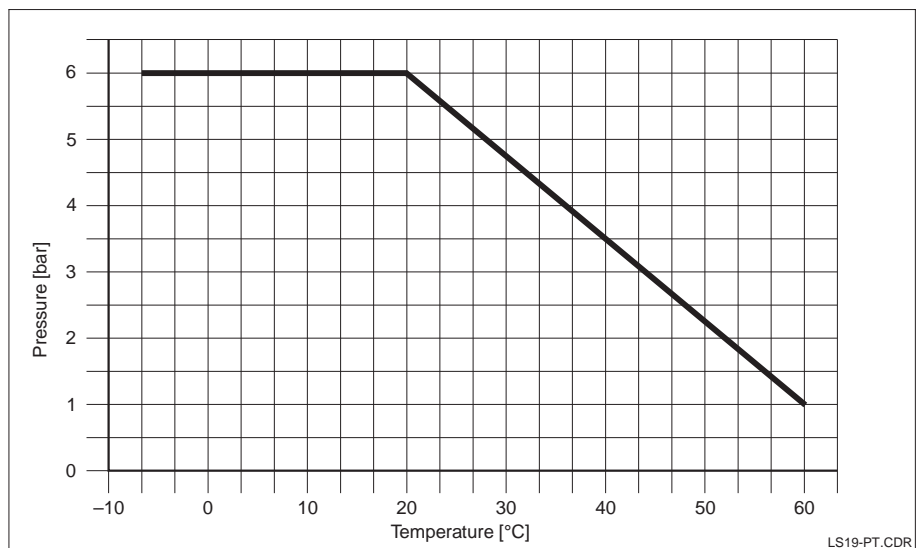
Operating data

Max. temperature	60 °C
Max. pressure	6 bar (20 °C)
Ingress protection	IP 65

Subject to modifications.

Pressure/temperature load diagram

Pressure/temperature
load diagram



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