

Conductivity Sensors

OLS 19

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 .

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

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 OLS 19 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.

For simple installation of the sensor in cross or T-pieces with DN 32, 40 or 50, the adapter couplings (made of PVC for cementing) and a stainless steel 1½" clamp adapter are available as accessories.

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

Dimensions

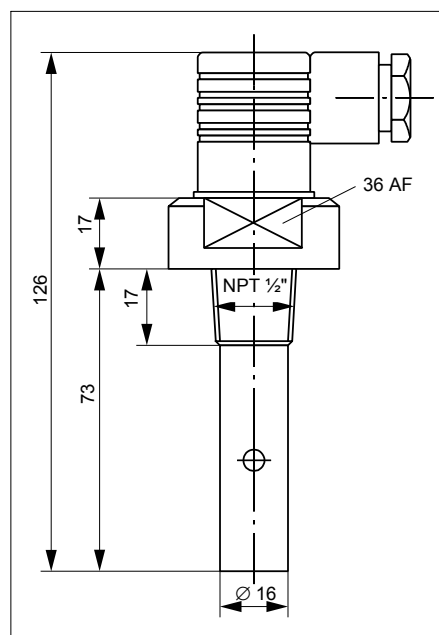
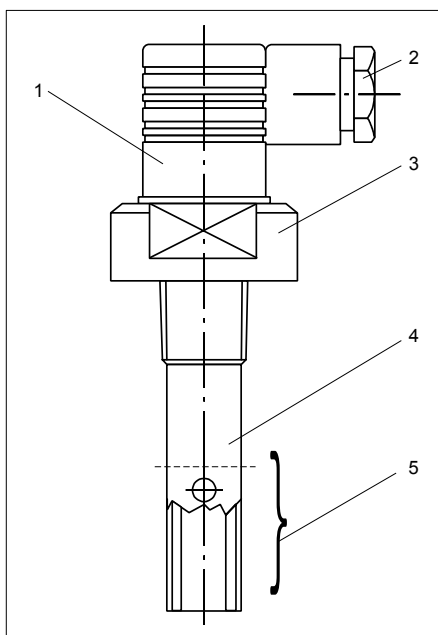
Conductivity sensor
OLS 19

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:

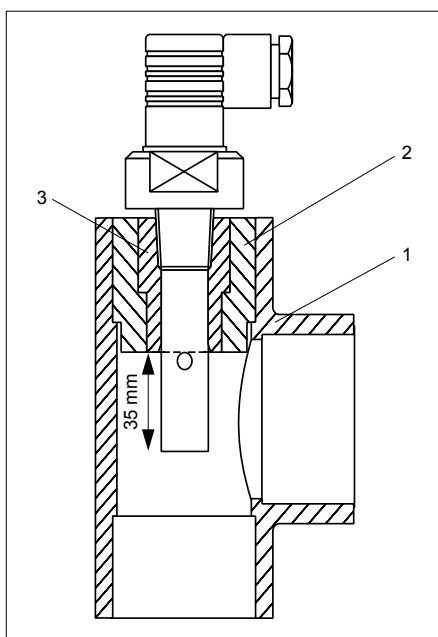
Dimensions
OLS 19 with
NPT ½" thread



Mounting

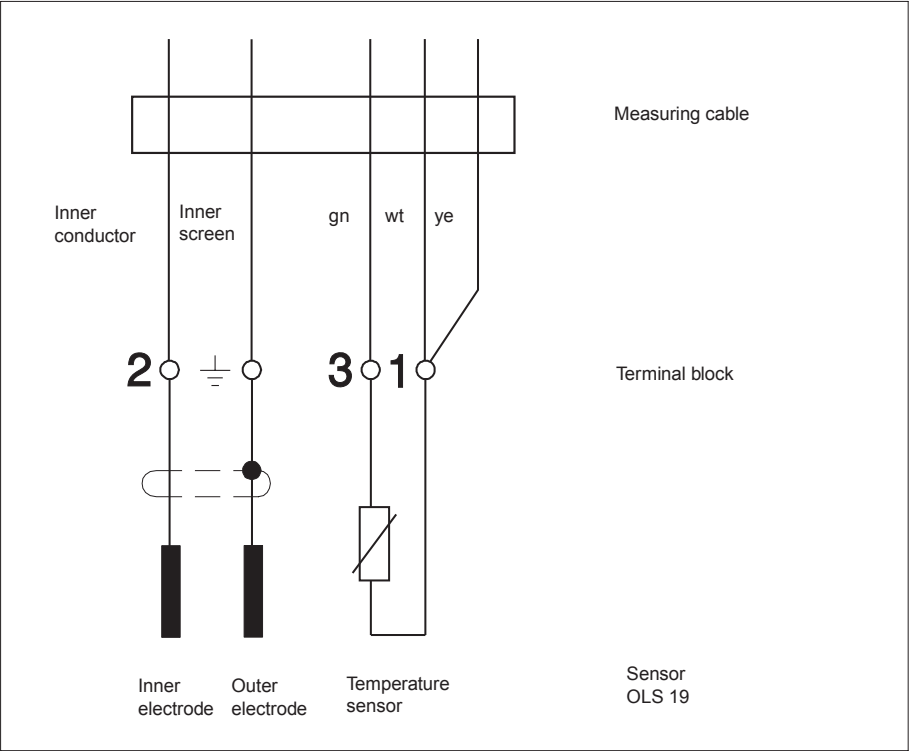
OLS 19 mounted
in a T-piece:

- 1 T- or cross piece
DN 32, 40 or 50
- 2 Adapter coupling
for cementing
for DN 32, 40 or 50
(see accessories
AM 32, 40 or 50)
- 3 PVC threaded coupling



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.

Electrical connection



Technical data

Material

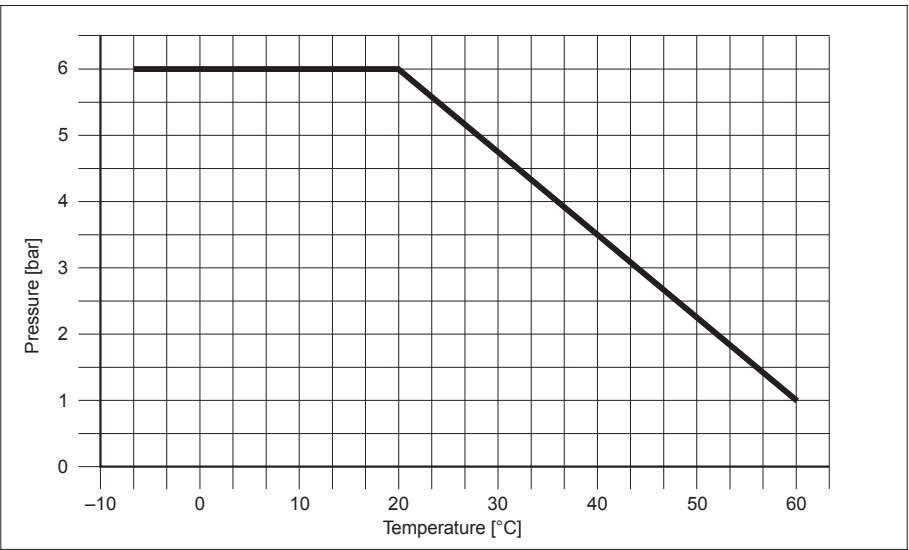
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|--|--|
| Sensor shaft | PES (polyethersulfone) |
| Electrodes | stainless steel 1.4571 / SS 316Ti |
| Cell constant k | 0.01/cm or 0.1/cm |
| Measuring range for $k = 0.01/\text{cm}$ | 0.04 $\mu\text{S}/\text{cm}$... 20 $\mu\text{S}/\text{cm}$ |
| Measuring range for $k = 0.1/\text{cm}$ | 0.1 $\mu\text{S}/\text{cm}$... 200 $\mu\text{S}/\text{cm}$ |
| Connection | four-pin plug with Pg 9 cable gland for measuring cable connection |
| Temperature sensor | Pt 100 |

Operating data





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

Pressure/temperature load diagram

Pressure/temperature load diagram



Product structure

-  **PVC threaded coupling**
with NPT ½" internal thread for
cementing in standard PVC cross
or T-pieces DN 20
-  **Adapter AM 32**
PVC adapter coupling for
PVC threaded coupling DN 20,
for cementing in standard T-90
or cross pieces DN 20
-  **Adapter AM 40**
As AM 32, but for DN 40
-  **Adapter AM 50**
As AM 32, but for DN 50

