

Conductivity Sensors

OLS 20

Two-electrode Sensor
with cell constant $k=1/\text{cm}$



The compact conductivity sensor has been designed especially for measurement in medium and high conductivities.

The measuring range for sensors with a cell constant of $k = 1/\text{cm}$ is from $50 \mu\text{S}/\text{cm}$ to $500 \mu\text{S}/\text{cm}$.

Areas of application

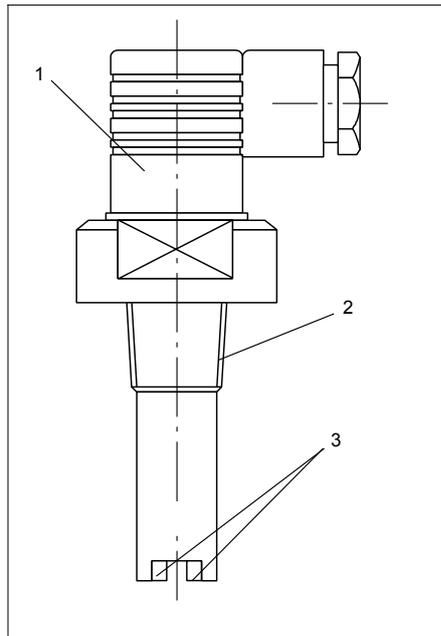
- Service water
- Waste water treatment

Benefits at a glance

- High chemical, thermal and mechanical stability
- Compact design
- Installation in pipes or flow chambers

Operating principle

- OLS 20
1 Four-pin connector
2 NPT thread
3 Rod electrodes



The sensors can be used at temperatures up to 120 °C. The threaded PVC coupling supplied (max. temperature 60 °C) can be bonded to commercially available PVC crosses and tees (DN 25). The sensor can then be easily screwed in and is pressure proof up to 6 bar.

For simple sensor installation in crosses or tees with DN 32, 40 or 50, specially designed adapters (made of PVC and suitable for cementing) are available.

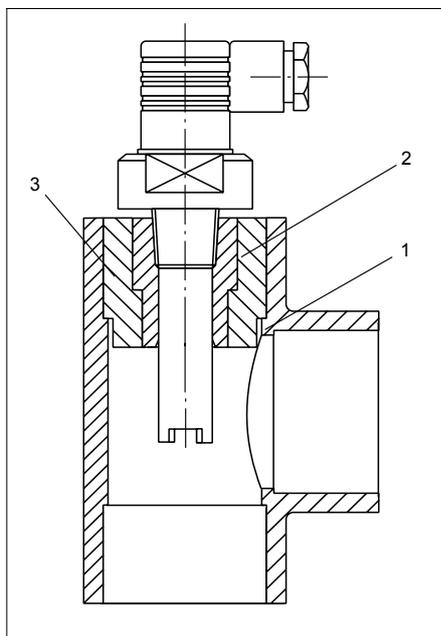
When installing the sensor, make sure that the rod electrodes are immersed completely into the medium during operation.

The two-electrode sensor OLS 20 is supplied with an alternating voltage by the conductivity measuring transmitter. The alternating current flowing through the measuring electrodes and the medium is determined by the conductivity of the medium. The rod electrodes in the sensor are made of stainless steel (SS 316Ti), the sensor shaft of PES.

The sensors are connected via a 4-pin plug connector which can be secured with a screw. The measuring cable is introduced through a Pg 9 cable gland.

Installation

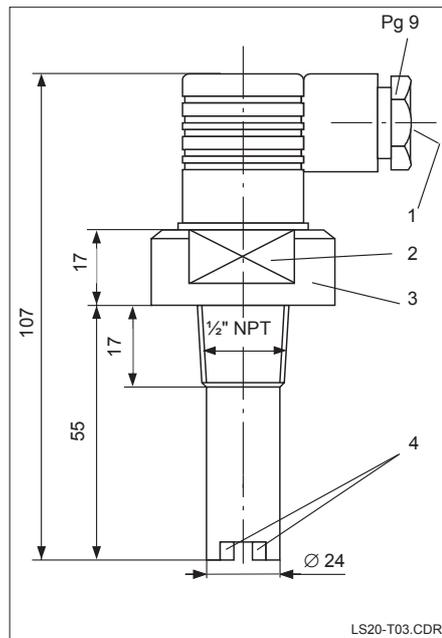
- 1 DN 32, 40 or 50
2 Adapter for cementing (for DN 32, 40 or 50)
3 Threaded coupling (for cementing) is supplied with the sensor



Installation of the sensor in a standard DN 32, 40 or 50 cross or T-piece by using a bonded adapter coupling. No adapter is required for installation in DN 25 crosses or tees.

Dimensions

Dimensions OLS 20
with thread 1/2" NPT
1 Cable entry
2 36 AF
3 PES shaft
4 SS 316Ti



Electrical connections

The conductivity measuring cable is connected to the plug connector terminals according to the following table:

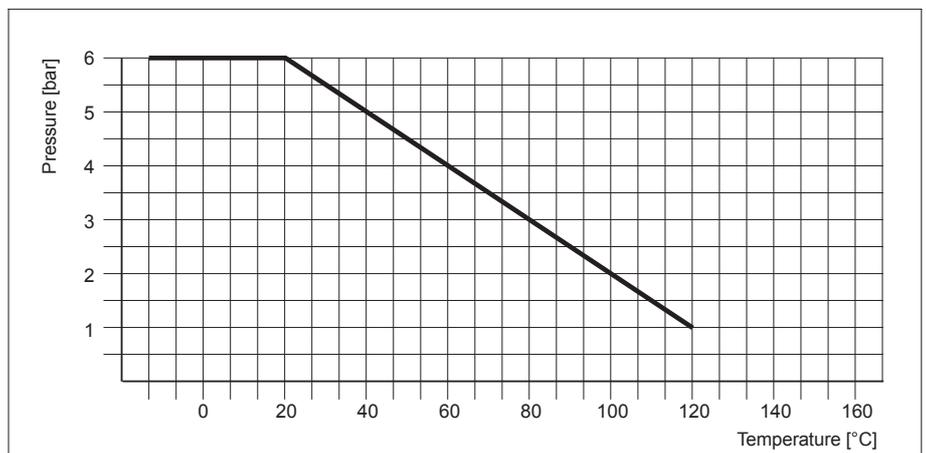
	Terminal	SMK cabel
Inner electrode	2	Inner conductor
Outer electrode	⊕	Screen

Accessories

- Adapter AM 32
PVC adapter coupling for cementing.
For installation of OLS 20 with thread in a commercial T 90 tee or DN 32 cross.
- Adapter AM 40
As AM 32, but for DN 40
- Adapter AM 50
As AM 32, but for DN 50

Pressure/temperature diagram

Pressure/temperature diagram



Technical data

Material	Sensor shaft	PES (polyethersulfone)
	Electrodes	stainless steel 316Ti
Conductivity measurement	Cell constant k	1/cm
	Measuring range	50 μ S/cm to 500 μ S/cm
Operating data	Ingress protection	IP 65
	Max. temperature	sensor: 120 °C sensor with threaded PVC coupling: 60 °C
	Max. pressure	6 bar (20 °C)
Process connection	Threaded coupling for cementing	PVC, max. temperature 60 °C
	Internal thread	$\frac{1}{2}$ " NPT
	Connection	four-pin plug with Pg 9 cable gland for measuring cable connection

Product structure

Measuring sensor OLS 20				
<p>Cell constant C 50,0 μS ... 500,0 μS/cm (k = 1)</p>				
<p>Process connection / material 1A Thread $\frac{1}{2}$" NPT / PES-sensor shaft</p>				
<p>Measuring cable connection 1 four-pin plug (DIN), Pg 9</p>				
<p>Temperature sensor D Without temperature sensor</p>				
OLS 20 -				
complete order code				