

Conductivity Sensor *ConduMax W CLS 19*

**Two-electrode measuring cells with
cell constant $k = 0.01/\text{cm}$ or $k = 0.1/\text{cm}$**



Measuring cells with a Pt 100 temperature sensor usually are used together with the conductivity measuring instruments. Liquisys M CLM 223/253, which are equipped with automatic temperature compensation.

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

The measuring range of the cells 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 measuring cell ConduMax W CLS 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 cell shaft is made of PES (polyethersulfone).

The cell 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 measuring cell 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 measuring cell 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 measuring cell, ensure that the measuring surfaces are completely wetted by the medium during operation.

Dimensions

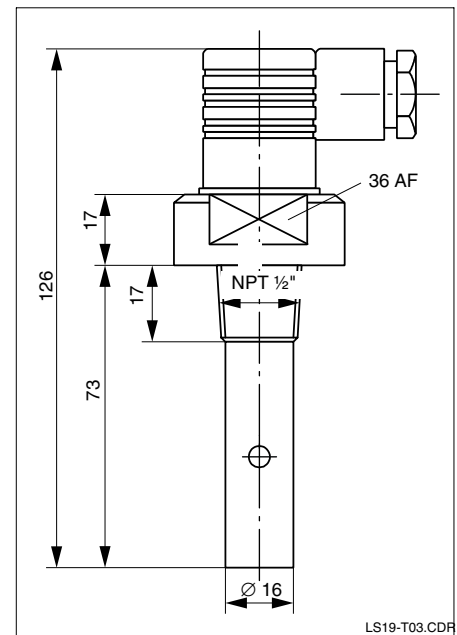
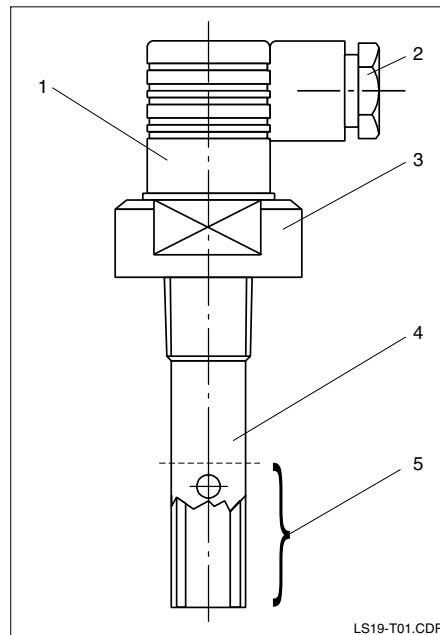
Conductivity measuring cell CLS 19

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

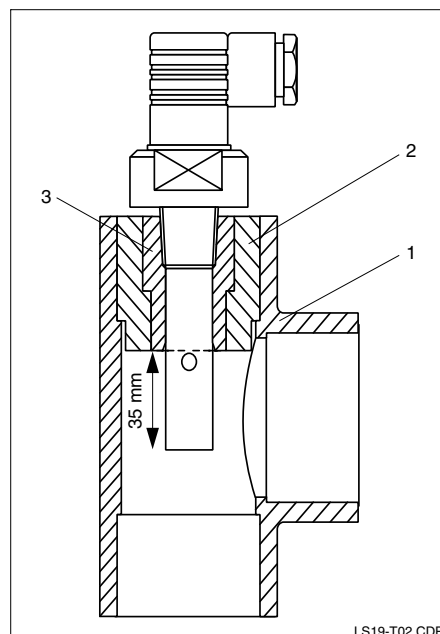
right:

CLS 19 with
NPT ½" thread



Mounting

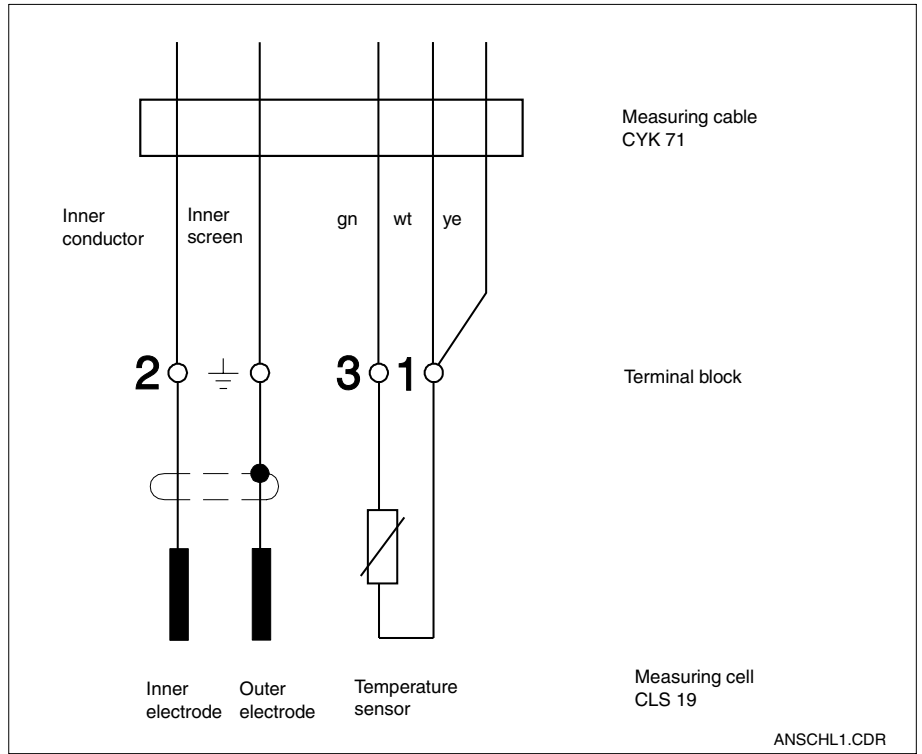
Mounting in cross or T-pieces DN 20 requires a PVC threaded coupling. Mounting in standard cross or T-pieces DN 32, 40 or 50 is achieved by a cemented adapter coupling.



CLS 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

Electrical connection



Technical data

General data

Manufacturer	Endress+Hauser GmbH+Co.
Product designation	ConduMax W CLS 19

Material

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

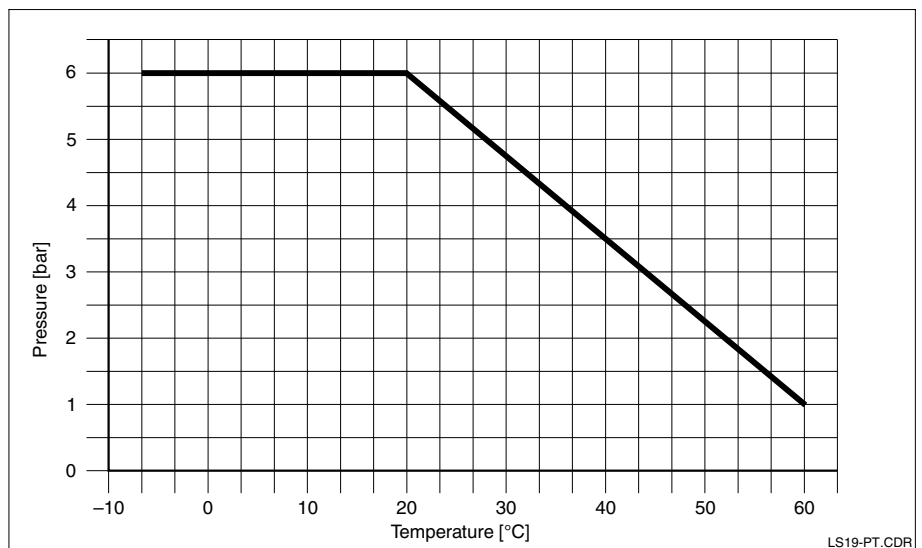
Cell constant k	0.01/cm or 0.1/cm
Measuring range for $k = 0.01/cm$	0.04 $\mu S/cm$... 20 $\mu S/cm$
Measuring range for $k = 0.1/cm$	0.1 $\mu S/cm$... 200 $\mu S/cm$
Connection	four-pole plug with Pg 9 cable gland for measuring cable connection
Temperature sensor	Pt 100

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

Accessories

- PVC threaded coupling**
with NPT 1/2" internal thread for cementing in standard PVC cross or T-pieces DN 20
Order no. 50066536
- Adapter AM 32**
PVC adapter coupling for PVC threaded coupling DN 20, for cementing in standard T-90 or cross pieces DN 20
Order no. 50004738
- Adapter AM 40**
As AM 32, but for DN 40
Order no. 50004739
- Adapter AM 50**
As AM 32, but for DN 50
Order no. 50004740
- Clamp adapter 1 1/2"**
made of stainless steel 1.4571 / SS 316Ti for mounting of the conductivity measuring cell in a clamp adapter
Order no. 50043781

Product structure

Conductivity sensor ConduMax W CLS 19				
<p>Measuring range and cell constant</p> <p>A 0.04 ... 20 µS/cm (k = 0.01) B 0.1 ... 200 µS/cm (k = 0.1)</p> <p>Process connection / material</p> <p>1A Thread NPT 1/2" / cell shaft made of PES</p> <p>Measuring surfaces</p> <p>1 Measuring surfaces made of 1.4571 / SS 316Ti</p> <p>Temperature sensor</p> <p>A Integrated temperature sensor Pt 100 D Without temperature sensor</p>				
CLS 19-				
complete order code				

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Endress + Hauser
Nothing beats know-how

