

## EXPERT-LINE



- Conductive Measuring System
- Two-electrode measuring cells
- Measuring ranges:
  - 0.04 ... 20  $\mu\text{S/cm}$  ( $K=0.01$ )
  - 0.1 ... 200  $\mu\text{S/cm}$  ( $K=0.1$ )
  - 50 ... 500  $\mu\text{S/cm}$  ( $K=1.0$ )
  - 10  $\mu\text{S/cm}$  ... 20  $\text{mS/cm}$  ( $K=1.0$ )
- Installation in pipes
- Integrated temperature sensor compensation available
- Compact size
- High chemical, thermal and mechanical resistance



### Description:

The compact measuring cells for determining the specific conductivity are based on the two-electrode principle. The measuring range of the cells depends on the materials used and the cell constant K.

The measuring cells can be fitted with temperature sensors (Pt 100) as an option, to compensate the influence of the medium temperature.

The conductivity measuring cells with cell constants  $K = 0.01$  and  $0.1 \text{ 1/cm}$  have been specially designed for measurements in high-purity and pure water applications

### Typical applications for these measuring cells are:

- Monitoring ion exchangers
- Inspecting reverse osmosis.

Measuring cells with cell constant  $K = 1.0 \text{ 1/cm}$  are used in industrial process water applications.

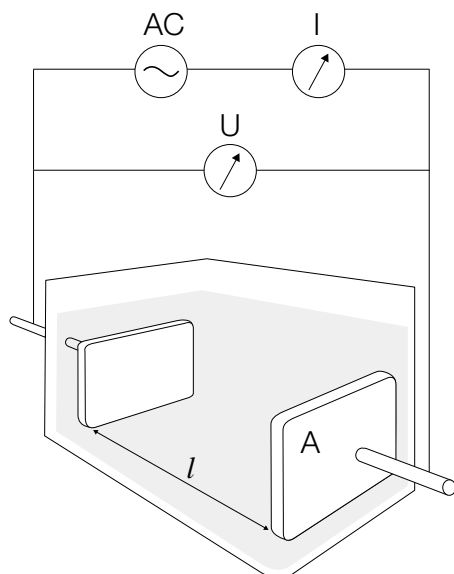
### Typical applications are:

- Media separation
- Drinking water treatment
- Waste water treatment

The measuring cells are connected with a 4-pin connector that can be fixed by a retaining screw. A cable gland (conduit thread 11) is available to lay the cable (ACK-X).

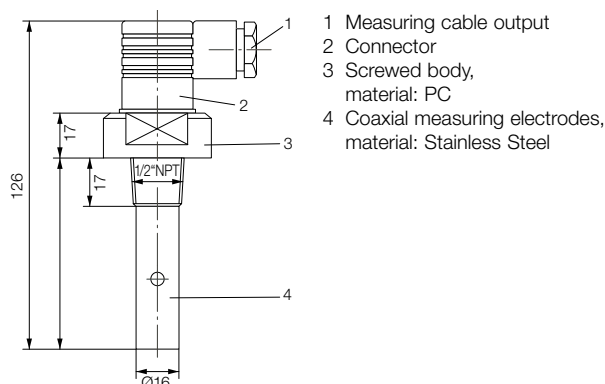
### Function principle of the two-electrode measuring cells

The two-electrode measuring cells are supplied with a.c. voltage from the conductivity transmitter ACM-X. The alternating current flowing through the measuring electrodes and the medium is determined by the conductivity of the liquid.



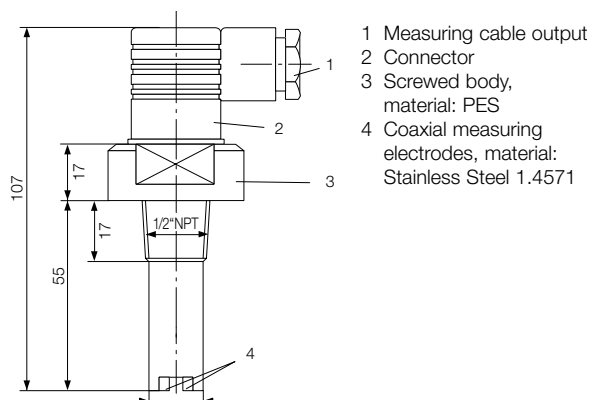
### Electrodes with cell constant $K = 0.01$ and $0.1 \text{ 1/cm}$ measuring range 1 and 2

- Measuring range 1:  $0.04 \dots 20 \text{ }\mu\text{S/cm}$  ( $K=0.01$ )
- Measuring range 2:  $0.1 \dots 200 \text{ }\mu\text{S/cm}$  ( $K=0.1$ )
- Measuring surfaces: Stainless Steel 1.4571, coaxial arrangement
- Cell body: PC (polycarbonate)
- Thermostability:  $60^\circ\text{C}$
- Rated pressure: 6 bar
- Process connection:  $1/2'' \text{ NPT}$
- Temperature sensor: Pt 100 (option)



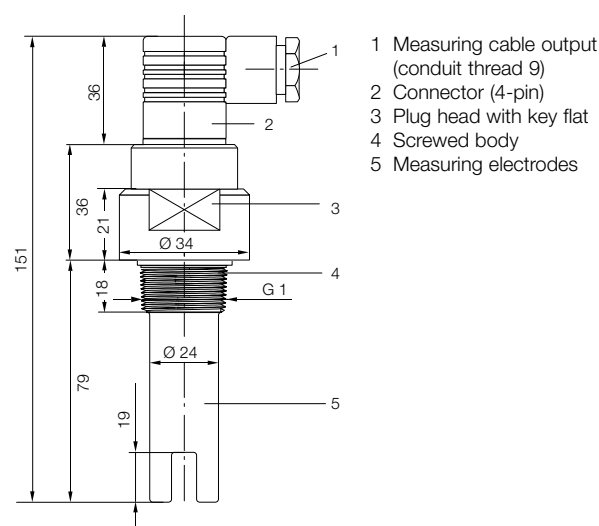
### Electrodes with cell constant $K = 1.0 \text{ 1/cm}$ measuring range 3

- Measuring range 3:  $50 \dots 500 \text{ }\mu\text{S/cm}$  ( $K=1.0$ )
- Measuring surfaces: Stainless Steel 1.4571, bar-shaped arrangement
- Cell body: PES (polyethersulfone)
- Thermostability:  $120^\circ\text{C}$ , (PVC-threaded sleeve max.  $60^\circ\text{C}$ )
- Rated pressure: 6 bar
- Process connection:  $1/2'' \text{ NPT}$



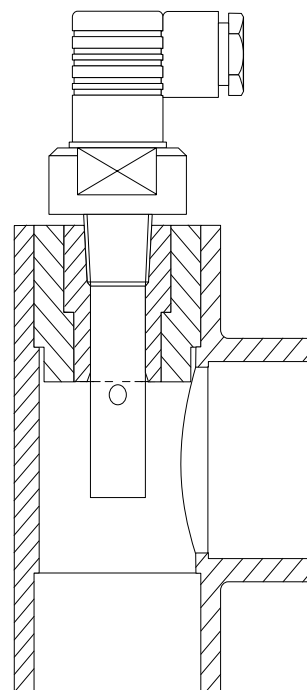
### Electrodes with cell constant $K = 1.0 \text{ 1/cm}$ measuring range 4

- Measuring range 4:  $10 \mu\text{S/cm} \dots 20 \text{ mS/cm}$  ( $K=1,0$ )
- Measuring surfaces: Graphite
- Cell body: PES (polyethersulfone)
- Thermostability  $150^\circ\text{C}$
- Rated pressure:  $16 \text{ bar}$  ( $20^\circ\text{C}$ )
- Process connection: G 1
- Temperature sensor: Pt 100 (option)

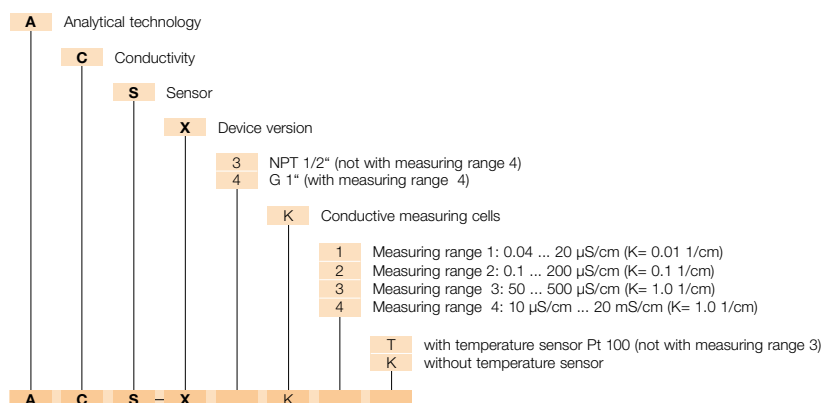


### Installation instructions:

Installation in a standard cross unit or T-piece with a threaded sleeve (NPT 1/2" or G1", depending on the measuring cell) and a compensating sleeve.



### Type code ACS-X



### Connection cable

Coaxial cable ACK-X is used to connect the conductivity measuring cells.



**INGENIEROS ASOCIADOS DE CONTROL S.L.**

Telf.: 913831390  
comercial@iac-sl.es

**Please refer to our brochure T1...**



**...for details on temperature sensors.**