

Conductivity Measuring Cells *CLS 30*

**Two-electrode measuring cells
with constant $k = 10/\text{cm}$**



**With
quality certificate**



The compact conductivity measuring cells have been designed especially for measurement in high conductivities. The measuring cells with a Pt 100 temperature sensor are used together with conductivity measuring instruments of the Mycom, Liquisys and MyPro families, equipped with the automatic temperature compensation.

The measuring range for cells with a constant of $k = 10/\text{cm}$ is from 0.1 mS/cm to 200 mS/cm.

Areas of application

- Service water
- Waste water treatment
- Concentrate monitoring

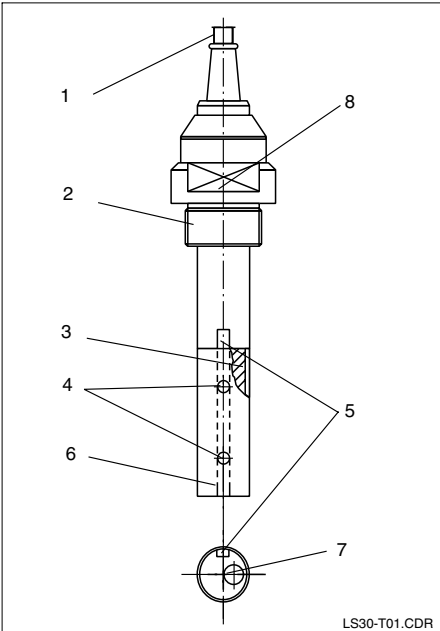
Benefits at a glance

- Different designs guarantee optimal adaptation to the process conditions and method of installation
- Installation in pipes or flow chambers
- Different temperature sensors allow adaptation to a variety of measuring instruments.
- High chemical, thermal and mechanical stability



Operating principle

- CLS 30
- 1 Connecting line, length 3 m, screened
 - 2 G 1 thread
 - 3 Outer screen sleeve of PTFE, removable for cleaning
 - 4 Electrodes, special graphite
 - 5 2 openings for media circulation
 - 6 Lateral measuring duct
 - 7 Pt 100 sensor built into front end for automatic temperature compensation



The salient features of these well-proven measuring sensors are their high chemical, thermal and mechanical resistances. The measuring surfaces are made of special low-polarisation graphite. The measuring electrodes are mounted in a lateral measuring duct and are protected by a Teflon sleeve. This prevents electrical leakage and ensures consistent and accurate measurement.

All cells are equipped with a built-in Pt 100 temperature sensor for automatic temperature compensation. The special design features ensures optimal temperature adaptation. This includes exact concentration measurement over a wide range of temperatures.

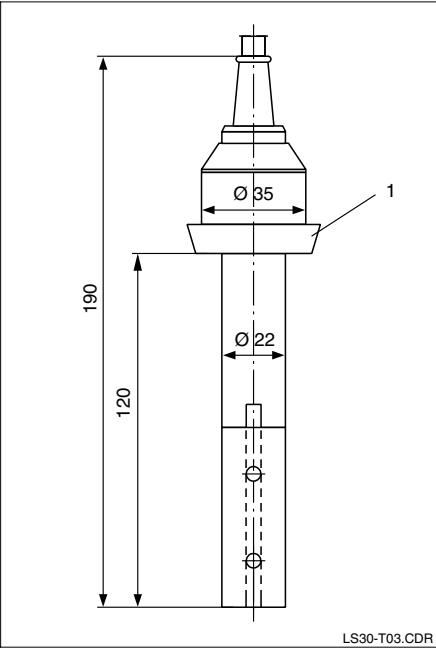
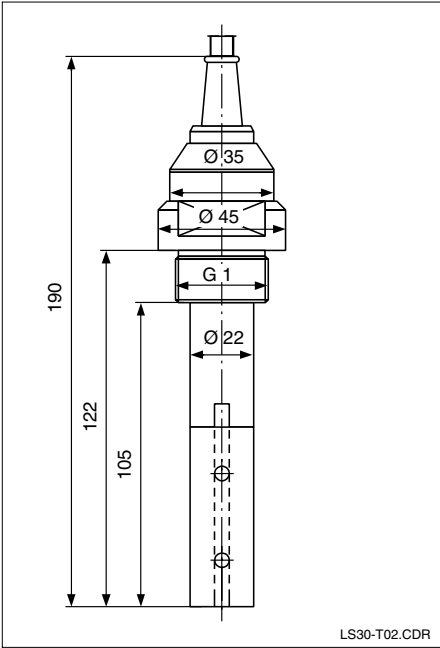
The cell shaft is made of polypropylene or PTFE and is usable at temperatures of up to 90 °C (PP) or 135 °C (PTFE) and under pressures of up to 16 bar (PP) or 6 bar (PTFE).

The cells can be supplied with a G 1 internal thread or with a tapered collar for DN 25 and DN 40 dairy fitting connection according to DIN 11851.

These high-precision cells are particularly suitable for industrial applications where elevated conductivities must be measured, e.g. for monitoring automatic tank and pipe systems in the food and beverage industries with the purpose of measuring and controlling the concentrations of the alkalis and acids used in these industries.

Dimensions and electrical connections

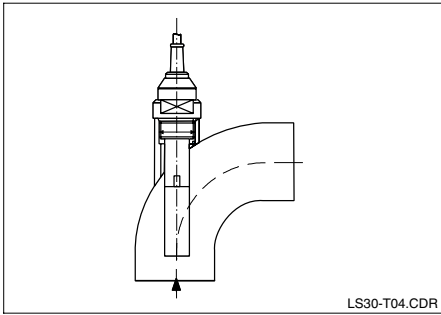
- CLS 30
- 1 41 mm AF
- left:
- CLS 30-1
- right:
- CLS 30-2
- 1 Tapered collar to DIN 11851, for dairy fitting connection DN 25



	Connection with fixed cable
Electrode	white
	yellow (screen)
temperature sensor	brown
	green

Installation notes

Installation CLS 30

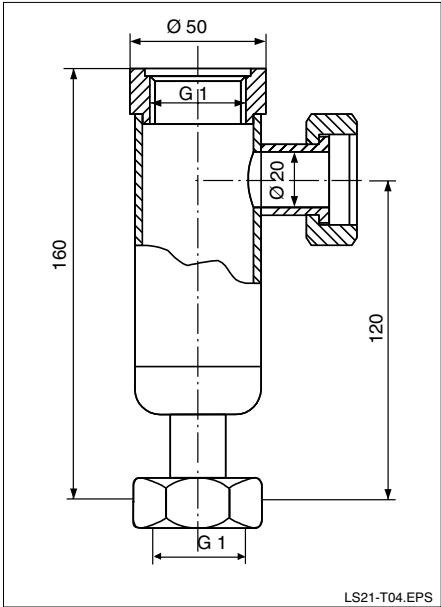


To ensure correct readings, the cell should always be installed as follows:
It is absolutely essential that the flow is directed into the measuring duct, filling and venting the duct completely and thereby ensuring exact measurement.
For this reason, the flow direction must be taken into account when installing the cell, which must receive the flow from the front.

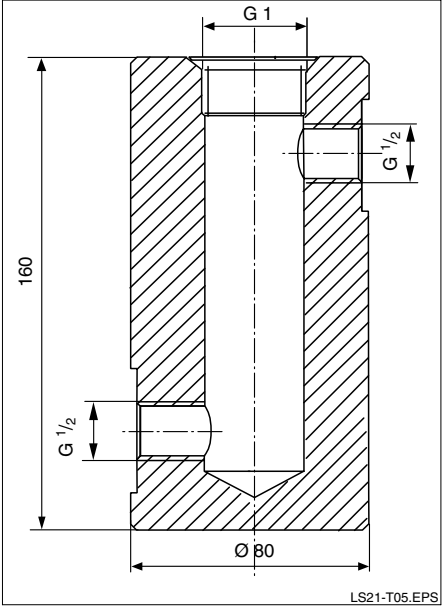
Accessories

left
Flow chamber CLA 751

right:
Flow chamber CLA 752

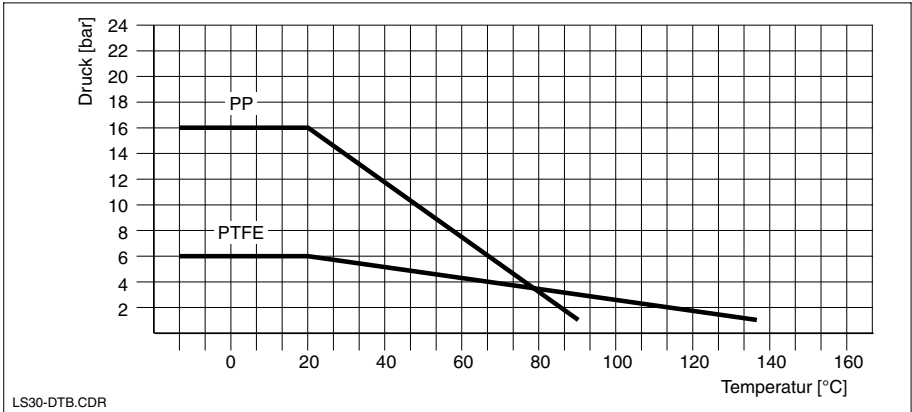


For installation of conductivity measuring cells with a G 1 thread. Inlet (bottom) and outlet (lateral) DN 20 with G 1 union nuts
Order no. 50004201



Flow chamber CLA 752
For installation of conductivity measuring cells with a G 1 thread. Inlet (bottom) and outlet (lateral) with G 1/2.
Order no. 50033772

Pressure/temperature diagram



Technical data

General data

Manufacturer	Endress+Hauser
Product designation	Measuring cell CLS 30

Material

Cell shaft	PTFE / PP
Electrodes	graphite / titanium

Technical data (continued)

Conductivity measurement

Cell constant k	10/cm
Measuring range	0.1 mS/cm to 200 mS/cm
Temperature sensor	PTC, Pt 100
Einschraubgewinde	G 1, dairy fitting DN 25, DN 40

Process connection

Operating data

Max. temperature	125 °C (PTFE), 90 °C (PP)
Max. pressure	6 bar (20 °C) PTFE, 16 bar (20 °C) PP
Ingress protection	IP 65

Flow chamber CLA 751

Material	stainless steel 1.4571
Permissible temperature	160 °C
Permissible pressure	12 bar (20 °C)
Connection	2 x DN 20, G 1

Flow chamber CLA 752

Material	PP
Permissible temperature	90 °C
Permissible pressure	6 bar (20 °C)
Connection	2 x G 1½, G 1

Subject to modifications.

Product structure

Measuring cell CLS 30				
<div><div>Cell constant</div><div>D Cell constant 0.1 ... 200 mS/cm (k = 10)</div><div>Process connection / material</div><div>1C Thread G1 / PP</div><div>1F Thread G1 / PTFE</div><div>2G Dairy fitting DN 25 / PP</div><div>2K Dairy fitting DN 40 / PP</div><div>2L Dairy fitting DN 25 / PTFE</div><div>2M Dairy fitting DN 40 /PTFE</div><div>Measuring surfaces / sealing</div><div>4 Measuring surfaces graphite / titanium</div><div>Temperature sensor</div><div>A With Pt 100</div><div>B With PTC</div></div>				
CLS 30 -				complete order code

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