

Conductivity Measuring Cells *ConduMax W 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

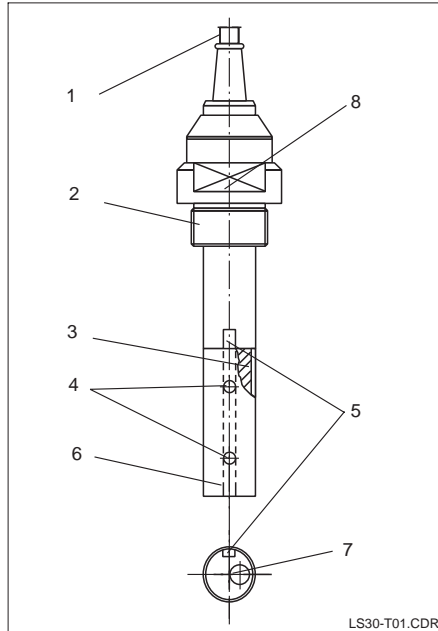
Benefits at a glance

- 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.

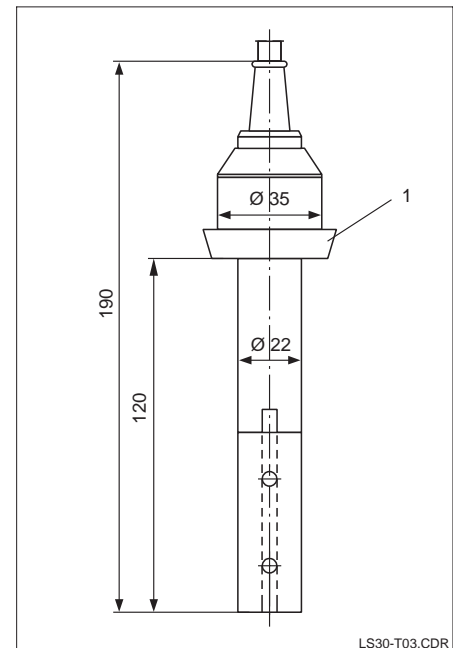
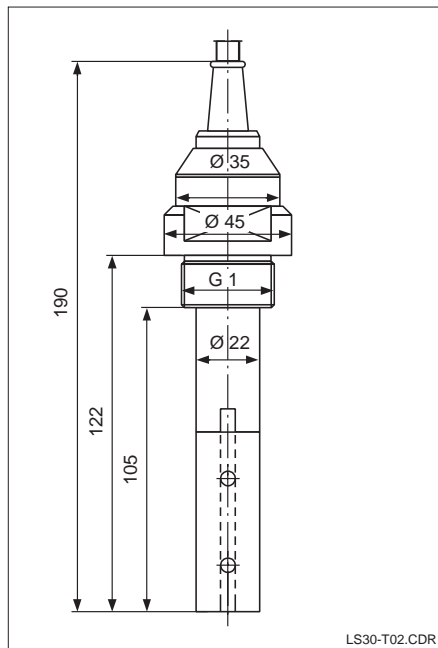
The cell shaft is made of polypropylene or PTFE and is usable at temperatures of up to 90 °C (PP) or 135 °C (PTFE) and under pressures of up to 16 bar (PP) or 6 bar (PTFE).

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

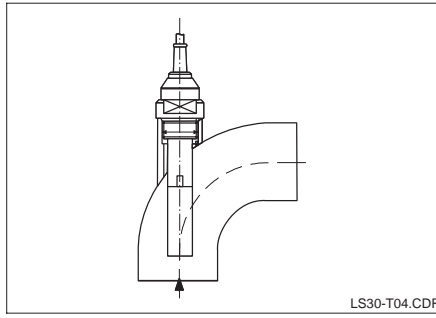
- CLS 30
 1 41 mm AF
 left:
 CLS 30-1
 right:
 CLS 30-2
 1 Tapered collar
 to DIN 11851,
 for dairy fitting
 connection DN 25



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

Installation notes

Installation CLS 30

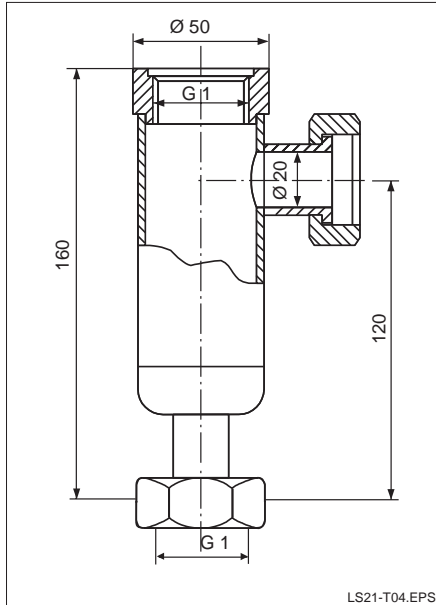


To ensure correct readings, the cell should always be installed as follows: It is absolutely essential that the flow is directed into the measuring duct, filling and venting the duct completely and thereby ensuring exact measurement. For this reason, the flow direction must be taken into account when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

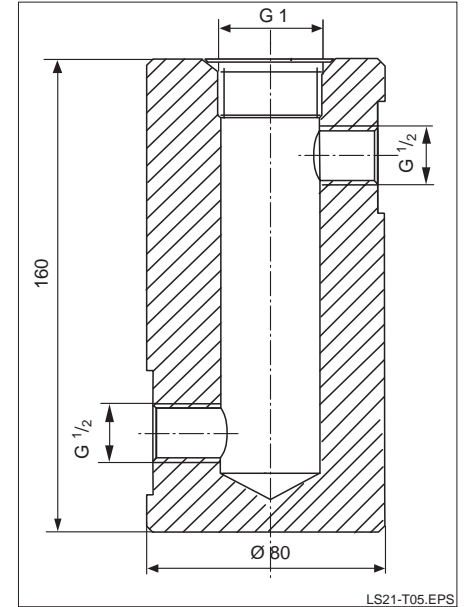
Accessories

left
Flow chamber CLA 751

right:
Flow chamber CLA 752

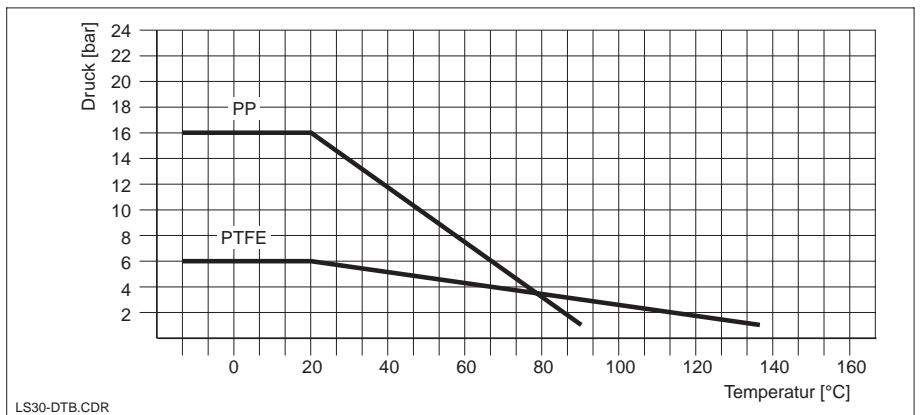


For installation of conductivity measuring cells with a G 1 thread. Inlet (bottom) and outlet (lateral) DN 20 with G 1 union nuts
Order no. 50004201



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 | ConduMax W 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 |
| Process connection | |
| Einschraubgewinde | G 1, dairy fitting DN 25, DN 40 |

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 1/2, G 1 |

Subject to modifications.

Product structure

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

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Endress + Hauser

Nothing beats know-how

